Chapter 25
Finishing the Fifties

American aluminum producers faced a roller-coaster of supply and demand in the 1950s that was the result of a multitude of factors – demand outstripping supply, the long delay between new plant investment and increased production, and uncertain markets as new products were introduced and new producers entered the industry. Global markets were impacted by the introduction of cheap Soviet aluminum, and power shortages in the Pacific Northwest compounded problems for the new Anaconda Aluminum Co. smelter in Columbia Falls. After a great first two years, the Montana smelter operated at reduced capacity from 1957 to 1960, with up to 90 of its 240 reduction pots shut down as a result of a general decline in the aluminum market. [1] AAC had big plans for the aluminum business, and they moved forward despite or perhaps in response to the fluctuating aluminum market. Anaconda's ultimate goal was to achieve total vertical integration, just as it had done in copper and other metals – from mining, mineral processing and smelting to fabrication and even consumer products with the Anaconda name on the box. Downstream integration was achieved by merger and acquisition, but upstream integration at first relied on an investment aimed at converting U.S. clay deposits into alumina that never panned out. The sure winners from Anaconda's investment in the Flathead Valley were local and state governments, schools and the Flathead economy.

The smelter in Columbia Falls began producing metal in August 1955 and quickly surpassed all expectations. In 1955, the plant produced 30,000 to 32,500 tons of aluminum using two potlines with 120 pots each. The aluminum was shipped to Anaconda Company plants in Great Falls and Terre Haute, Ind., to produce rolled and foil material, wire and castings. [2] In August 1956, AAC Plant Manager H.G. Satterthwaite announced that production had exceeded installed capacity for every month since the plant started up. [3] To accommodate that production, construction was completed in October 1957 for two additional 86-foot high, 750-ton capacity, carbon anode briquette silos. [4] The briquettes were manufactured at the on-site paste plant facility using a mixture of anthracite coal, petroleum coke and coal tar pitch. The briquettes were added to the top of the monolithic Soderberg anodes to make up for carbon that burned during the reduction of alumina into aluminum.

The plant laboratory was considered among the most modern in the aluminum industry. The AAC lab's staff of 18 included five chemists, a chemical engineer, four technical assistants, three quantometer operators, a secretary, a custodian and four technical

supervisors. All aluminum produced at the plant was sampled and tested at the lab to establish levels of impurities, particularly silica and iron. Samples twice the size of a silver dollar were sent by pneumatic tube from the casting building to the lab for testing, and the results were immediately sent back to casting by teletype. Raw materials were also tested at the lab, including pitch, coke, coal, alumina, aluminum fluoride and cryolite. The most expensive piece of equipment at the lab was the $43,000 quantometer, which used spectrography to analyze samples. The quantometer had 14 channels, each with a separate phototube that tested for a different element's characteristic wavelength. The quantometer was capable of telling the operator the percentage of iron or silica in an aluminum sample within four minutes. The lab also had a spectrophotometer and equipment for testing density, conductivity and compressive strength. There was also a mock-up anode paste mixer that simulated the operation of the paste plant at a smaller scale. [5]

Beginning in April 1956, college and high school students from around Montana who came to the Flathead Valley to visit Glacier National Park and the Hungry Horse Dam also toured the new AAC plant. Children under 14 years of age were not allowed inside the plant. [6] In 1959, nearly 650 visitors from across the U.S. and Canada visited the plant. According to the Hungry Horse News, "Tourists remark about the cleanliness of the plant and the extensive grassed areas, sidewalks and paved streets within the grounds. They are also impressed by the mechanization of the operations, such as the automatic pig stacker, wirebar saw, alumina dispensing trucks, pin puller cranes and the box car unloader." [7] The free one-hour long guided tours were limited to 20 people per group. [8] In August 1959, twenty high school teachers attending summer school classes at Montana State University in Missoula traveled north to tour the plant. The teachers were particularly interested in the chemical phase of aluminum production. [9] In summer 1960, a total of 1,224 people toured the plant, a drop from 1,365 visitors in the previous year. The largest tour group for 1960 included 44 people from the chemical engineering department at Montana State College in Bozeman. The next largest was a group of 25 from a trailer caravan traveling through the Flathead from California. [10]

Early plant management

Many of the early plant managers came with technical backgrounds and sometimes past experience with mining and metal processing. In June 1956, Lee Smith graduated from Montana State University with a degree in chemical engineering and signed on with Anaconda to work at its new aluminum plant. "I was young and green and right out of school," he recalled in a 1994 interview. "When I came to work here, my goal was to get into plant work." He spent his first four years working in the laboratory, where he met his wife Joan, and then he worked his way up the ladder to paste plant superintendent,

potline engineer, potline superintendent, production manager, technical operations manager, operations manager, plant manager and finally vice president of external affairs. [11] Like many plant employees, Smith was active in local civic affairs. In February 1965, he was appointed to the Columbia Falls City Council by Mayor Bud Orndorff. [12]

Charles E. Taylor graduated from the University of Minnesota with a bachelor's in chemical engineering in 1938. He worked for Seagram's as a supervisor before moving on to Maytag, where he helped install a quantometer to test raw aluminum materials. Taylor next worked for the Anaconda Company at its zinc and copper electrolytic plant in Great Falls beginning in 1943. He moved to Columbia Falls in April 1955 to work at the new AAC plant, starting as a research engineer, then a potline engineer and then assistant potline superintendent. [13] He rose to production manager on July 1, 1958. Taylor was a member of the American Institute of Mining and Metallurgical Engineers and the Columbia Falls Chamber of Commerce. [14] He was appointed production manager in 1961, assistant general manager in June 1966 and general manager in January 1970. [15]

Robert A. Sneddon graduated from the Polytechnic College of Engineering in Oakland, Calif., in 1942 with a bachelor's in mechanical engineering and from Montana State College in Bozeman with a bachelor's in industrial engineering in 1950. He went to work for the Anaconda Company in 1950, spending time in Anaconda, Mont., and Potrerillos, Chile. He began working at the Columbia Falls smelter as assistant superintendent of the mechanical shops on Aug. 1, 1954. He was promoted to superintendent of the field maintenance department in 1959 and head of engineering in 1965. [16] Sneddon moved to Sebree, Ky., in 1970 to manage Anaconda's new aluminum smelter there. He returned to Columbia Falls in 1978 to take over as plant manager, a job he held until the plant was sold by ARCO in 1985. [17] Sneddon was a member of the Masons, Elks, Chamber of Commerce and Whitefish Rotary Club. He served on the Whitefish Memorial Hospital board of directors, as chairman of the District 6 School Board and as a member of the American Institute of Mining and Metallurgical Engineers. [18]

Lars A. Ryssdal graduated from college in Trondheim, Norway, with a degree in chemistry in 1947. He worked at aluminum reduction plants in Norway before coming to the Columbia Falls plant in August 1955. He was promoted to potline superintendent in July 1958. [19] Ryssdal resigned as potline superintendent in 1961 to become the assistant manager at the Harvey Aluminum Co. smelter at The Dalles, Ore. Ryssdal was a former secretary of the Northern Rocky Mountain Sportsmen's Association. [20] James H. Foreman graduated from the Montana School of Mines in Butte in 1953 with a degree in metallurgical engineering. He worked in the AAC plant laboratory before moving to a position as junior potline engineer. He was promoted to potline engineer in July 1958. [21]

Brown O. Lokken was a 1931 graduate of the University of North Dakota's School of Mines with a degree in metallurgy and was employed at Anaconda's lead-zinc smelter in Tooele, Utah, before coming to the AAC plant. Lokken was foreman at the paste plant when the plant started running. [22] He was promoted to paste plant superintendent two years later, potline engineer in June 1959 and potline superintendent in February 1961. [23] Lokken was promoted to production manager in June 1966. [24] Paul McMaster began working for Anaconda in 1951 as a timekeeper at the company's wire and cable plant in Great Falls. He was promoted to personnel manager at the AAC plant in October 1958. [25] Ross Luding worked as a maintenance electrician at the aluminum plant from 1955 to 1965. He and his wife operated the Sperry and Granite Park chalets in Glacier National Park during the summer. Luding was a member of the Flathead Electric Cooperative board of directors and was an active member in various civic groups. He ran for the District 6 School Board in 1966. [26]

George T. Hanson, a lifelong resident of Butte, graduated from Montana Tech in 1938 with a degree in metallurgy. He began working for Anaconda in 1940 as a sampler in the Butte mines. He served in the Navy during World War II and transferred to the new aluminum plant in Columbia Falls in 1954 where he worked as a control engineer. In 1963, Hanson left to work for one of Anaconda's subsidiaries, General Astrometals, as manager of electrochemical operations. He returned to Columbia Falls in 1971 and became a senior project engineer. He served as a city councilman and chairman of the Columbia Falls City-County Planning Board. [27] On Dec. 12, 1959, Hanson was elected chairman of the Montana section of the American Institute of Mining, Metallurgical and Petroleum Engineers during the association's annual meeting in Butte. [28]

Kenneth Hugh Fraser graduated from Montana State College in 1947 and went to work for the Montana Power Co. before coming to Columbia Falls in 1954. [29] He began working at the AAC plant on June 13, 1955, as a chemist in the laboratory, became a junior engineer in the potlines on March 1, 1957, then the paste plant superintendent on Oct. 1, 1960, before moving up to potlines engineer on Feb. 1, 1961. Fraser was an active member of the Columbia Falls City-County Planning Board and the Columbia Falls Jaycees, and he was elected secretary of the Overall Economic Development Board of Flathead County on Nov. 28, 1962. Fraser drowned while duck hunting on Dec. 15, 1962. [30] Following his death, Lee Smith was promoted from paste plant superintendent to potlines engineer to replace Fraser, and Don McMillan was promoted from junior potline engineer to paste plant superintendent. McMillan received a bachelor's of science degree in 1961 from the Montana School of Mines in Butte and came to the aluminum plant on June 13, 1961. Both Smith and McMillan were good friends of Fraser. [31] In March 1983, McMillan was promoted from planning and evaluation engineer to manager of special projects. [32]

Russell Glenn Kennedy, a native of Anaconda, started working in the drafting department at the Anaconda Copper Mining Co. smelter right after graduating from high school in 1941 before enrolling at Montana State College in Bozeman. He enlisted during World War II, serving in the intelligence section of the Seventh Cavalry in the Pacific Theater. Returning to the U.S., he finished his college education in 1949 and taught school in Wilsall and Fort Benton, Mont., before moving to Columbia Falls to work at the new aluminum plant. He was a supervisor for most of his career and then a superintendent before retiring in 1984. [33] Kennedy was elected to the District 6 School Board in April 1965. He was a past president of the Columbia Falls PTA. [34]

Donald A. Miller went to work for Kaiser's Mead smelter in Spokane, Wash., after serving during World War II. He came to the Columbia Falls plant in 1955 and was a production foreman in March 1963 when he ran for the District 6 School Board. Miller was a former president of the Rocky Mountain Sportsmen's Association and a charter member of the Columbia Falls Boosters Club, and he was active in starting the Pee Wee and Babe Ruth baseball programs. [35] Robert Adams began working in the potlines at the AAC plant from the day the power was first turned on, and he was one of the first 10 charter members of the Local 320 union representing production workers at the plant. He worked his way up to chief operator at the plant's rectifier station before leaving for a job with the Bonneville Power Administration in 1971. His father, Bob Adams Sr., also worked in the plant's rectifier station. Adams retired as an operator at the BPA's Conkelley Substation in July 1992. [36]

Bob Vucasovich, a native of Anaconda, began working for the Anaconda Company at the company's chrome plant near Columbus, Mont. He served overseas during World War II and then went to work at Anaconda's mining operation in Boone Springs, Nev., in 1946. He was transferred to his hometown of Anaconda in 1948, where he worked as a metallurgical clerk. Vucasovich was transferred to the Columbia Falls plant in 1954, where he was employed as the chief metallurgical clerk in the accounting office. He was promoted to general accounting supervisor in February 1962. Vucasovich was transferred to Anaconda's New Mines Department in Sahuarita, Ariz., in February 1966. In Columbia Falls, he served as president of the Lions Club and Toastmasters. [37]

Sylvan Eccleston, a native of Anaconda, began working for the Anaconda Company in October 1939 as a bellboy at the Montana Hotel in Anaconda. He became a laborer in the zinc leaching plant in 1942, a card clerk in the time-keeping office in 1949 and was promoted to clerk in the accounting office in 1950. Eccleston came to Columbia Falls in 1954 to be the chief cost clerk. He was promoted to general accounting supervisor in February 1966. Alan Opp, a native of Whitefish, Mont., began working at the AAC plant in August 1955 as a dispatcher clerk in the service department. He moved to the general

office as a clerk in November 1956 and was promoted to cost accounting supervisor in February 1966. Earl S. Holst, a native of Westby, Mont., came to the aluminum plant in September 1956 as a shop clerk in the mechanical department. He became a field maintenance clerk in January 1960 and was promoted to cost accounting supervisor in February 1966. [38]

Klaas DeWit became the warehouseman at the AAC plant while it was still under construction in March 1953. [39] A native of Meerkerk, Holland, DeWit immigrated to the U.S. in 1911 and attended Montana State College in Bozeman. He began working for Anaconda in 1933 as a laborer at the timber mill in Bonner, Mont., moving up to grader and eventually the purchasing department. He served five months at the Anaconda Company's copper operations in Chuquicamata, Chile. DeWit was a master of the Columbia Falls Masonic Lodge and president of the Columbia Falls Lions Club and was a member of the Kalispell Elks. Bill Liddicoat came to the aluminum plant in March 1955 as chief clerk in the accounting department. He began working for the Anaconda Company as a posting clerk for the Butte Water Co. in 1933. He served with the Columbia Falls Chamber of Commerce, was president of the Whitefish Rotary Club, served on the board of directors for the Whitefish Memorial Hospital, was president of the Whitefish Lake Golf Club, and was a director of the Hospital Services Association of Montana. [40]

Edward B. Jystad started working as an accounting clerk at the AAC plant in July 1953. He was a former Flathead County treasurer and county assessor. In 1924, Jystad joined the Flathead Symphony Orchestra as a violinist and later concert master. He was also a past secretary-treasurer of the Kalispell Lions Club and former treasurer of the Kalispell Toastmasters. [41] Tom Needham, a journalism major from the University of Montana in Missoula, was hired as the first communication director at the AAC plant in March 1956. His job involved putting out a monthly bulletin and keeping news posted on 24 bulletin boards around the plant, organizing the orientation program for new employees and organizing events such as Family Day. After one year with the aluminum plant, he went to work at Anaconda's Jackpile Mine near Albuquerque, N.M., the world's largest open-pit uranium mine. [42]

Anaconda's great leap forward

The Anaconda Company did well during World War II, selling copper and brass.The 1950s saw additional expansion and diversification by the company. Chairman Roy H. Glover described major changes at the mining and metals processing company during the Montana Press Association's meeting in Livingston, Mont., on Aug. 18, 1956. Over the past 10 years, Anaconda had increased production by $350 million, and Glover expected the company to grow that much again in the next five years. In those

combined 15 years, the company's growth would be equal to its entire book value at the end of World War II, he said. Glover described company plans to spend $140 million on Montana operations over the next five years. By the end of 1955, Anaconda employed 14,150 workers in Montana with a total payroll of $65.8 million. Anaconda's Montana operations also paid $60 million for supplies, taxes, fuel, timber, lumber, electric power and other items. Overall the company put $10.5 million into the state economy every month. [43]

Part of the company's big plans became public in October 1956, when the Anaconda Company announced plans to build a $1 million on a pilot plant near the company's huge copper smelter in Anaconda for the production of alumina from domestic clays. The plant was expected to be completed by autumn 1957. The plant would use low-grade clays, rather than bauxite, to produce alumina. The process would involve leaching and high-pressure filtration and was expected to produce 10 to 14 tons of alumina per day from 50 tons of clay. The clays were already being mined in Idaho and being shipped to Anaconda. If the pilot plant proved to be commercially viable, the company planned on spending $35 million constructing a full-scale plant close to the clay deposits south of Spokane. The alumina then would be shipped to the smelter in Columbia Falls. The implications of the new process for both industry and the national defense program were significant. The bulk of the bauxite used in the world's aluminum industry came from tropical countries. For the U.S., that meant chiefly Jamaica and Dutch Guiana. [44]

Isaac F. Marcosson's history of the Anaconda Company, published in May 1957, was partially a celebration of the giant mining and processing company's foray into aluminum and other metals. Marcosson was a well-known contemporary author, a journalist and a foreign correspondent for The Saturday Evening Post for 31 years. In reviewing the book, Hungry Horse News publisher Mel Ruder noted that the book was "not a discussion (pro and con approach) to company development, for there is nothing that would be displeasing to the great corporation in the book." Ruder, for example, disagreed that the growth of Columbia Falls was strictly the result of the new AAC smelter just outside the city limits – it was also a result of a tripling in lumber production and the building of the Hungry Horse Dam. [45]

The Anaconda Company's board of directors met in Butte on July 25, 1957 – the first time the board had officially met in Montana since June 24, 1898. The board also traveled to the Flathead Valley on Aug. 1, 1957, to inspect the new plant in Columbia Falls. Many of the board's members also were present at the aluminum plant's dedication on Aug. 15, 1955. According to Fortune magazine, Anaconda was ranked 45th among the top 500 industrial corporations in 1956 for net sales, up seven notches

since 1955; 16th for profits, up eight notches over 1955; 23rd for total assets; 17th in number of stockholders; and 44th in number of employees. [46] But a setback in the economy was in store for the next few years.

A general downturn in aluminum business throughout the U.S. in 1957 was initially blamed on a decline in demand. AAC, as a new producer, found itself at a disadvantage as older firms in the aluminum industry took advantage of their better established outlets. The Anaconda Company responded by building a new fabricating plant in Terre Haute, Ind., which would be operated by the Anaconda-owned American Brass Co. and would produce aluminum sheet, strip, rod, tube and extruded shapes. Anaconda also began negotiations to acquire the Cochran Foil Co., which owned plants in Louisville, Ky., and Fair Lawn, N.J., as well as the Cochran Continental Container Corp., which owned plants in Louisville and San Gabriel, Calif. The Cochran plants manufactured aluminum foil for the baking and frozen food industries. After Anaconda bought the two companies, a $2 million expansion at the Louisville plants began in 1957 and was expected to be completed by 1959. A company reorganization in early 1959 merged the Anaconda Aluminum Co., the American Aluminum Co. and the Cochran Foil Co. into a single Montana corporation headquartered in Louisville. The new company's assets were estimated at more than $140 million. The result of the merger was to create a nearly integrated aluminum producing company. The missing pieces were bauxite mining and alumina refining, which was being addressed with the hope of producing alumina from clay. [47]

Montana residents contributed to the company's plans with the adoption of aluminum license plates. In November 1953, the state government announced that aluminum tabs would be used to indicate the 1954 date on the steel license plates currently in use. [48] By December 1957, the Montana Board of Equalization was contemplating using aluminum for vehicle license plates. Union and political spokesmen hailed the move as favorable to the new plant near Columbia Falls. It was pointed out that the state of Washington had already decided to use aluminum for license plates in honor of its own aluminum industry. [49] In January 1958, the board announced plans to use aluminum vehicle license plates beginning in 1959. Steel plates were issued for two years at a time, but the aluminum plates would be thicker and issued for four years. The new plates were expected to save Montana $20,000 to $30,000 while also helping the state's new aluminum industry. The plates would require a purchase of 105 tons of aluminum, compared with 250 tons of steel. [50] On July 8, 1958, three tons of aluminum scrap from the license plate shop at the Montana State Prison in Deer Lodge arrived at the AAC plant for remelting. [51]

Ground-breaking ceremonies for the new Terre Haute rolling mill took place on June 5, 1956. Slated to cost about $25 million, the mill was expected to be in operation by autumn 1957 casting aluminum ingots and billets, rolling sheet and strip, and extruding tubing, rods and special shapes. The plant would receive its primary aluminum from the plant in Columbia Falls. [52] The first aluminum sheets from Terre Haute arrived by rail car at Anaconda's Great Falls Reduction Works on Feb. 18, 1959. The 24-by-43-inch sheets originated as aluminum bars poured at the Columbia Falls smelter and would be used as cathodes in the electrolytic process at the Great Falls plant. [53] On May 26, 1959, the AAC board of directors approved plans to add 25,000 square feet at the Terre Haute plant for cold-rolling equipment. The rolling mill was not yet in full operation, and the new addition would take a year to complete. [54]

On Nov. 15, 1957, the board of directors at Cochran Foil Co. met to vote on a possible merger with AAC. Satterthwaite and AAC President Russel B. Caples noted that if Cochran had merged with AAC earlier, a production cutback at the Columbia Falls plant would not have been necessary. [55] An exchange of one share of Anaconda stock for every two and a half shares of Cochran stock had been offered. The merger would result in the marketing of Anaconda brand aluminum foil to American consumers, in competition with Kaiser, Reynolds and Alcoa foils. The merger was expected to help the Columbia Falls smelter, which had curtailed production by 25% because of a weak demand in the market. [56] In July 1958, Caples spoke publicly about AAC's merger with Cochran Foil, the third largest aluminum foil manufacturer in the U.S. Cochran plants had already begun to use aluminum from AAC plants, Caples said. [57] On Sept. 26, 1959, Orville Schmied, the director of products development and research for AAC in Louisville, gave a talk on "Aluminum foil in packaging – The industry and the part Anaconda plays in it" at the AAC Employees Club in Columbia Falls. The audience included supervisors from the AAC smelter, members of the AAC Technical Society, and several members of the American Institute of Metallurgical Engineers. [58]

Archibald P. Cochran founded his aluminum fabricating company in Louisville in 1939 with 12 workers and one lathe. By November 1957, the company had 475 workers in plants in Louisville and Terre Haute, and Cochran Foil was one of the largest aluminum foil manufacturers in the U.S. [59] Cochran's colorful career began as a Marine Corps pilot in 1918-1919. He went on to graduate from MIT before going to work for Reynolds Metals, where he worked his way up from inspector through foreman, superintendent and plant manager to vice-president in charge of manufacturing. In 1939, he sold $330,000 in stock and founded his own company in an old tobacco warehouse – an aluminum foil rolling business. During World War II, the Cochran Foil Co. turned to producing armor-piercing shell fuses, and his company received an Army-Navy citation for quality and production. The net worth of his company increased from $1 million in

1947 to $10 million in 1958 when it was absorbed by AAC in a stock exchange. By 1960, Cochran was the largest single stockholder in the Anaconda Company. [60] Cochran was president of the Anaconda Aluminum Co. in May 1960, when he was elected to the board of directors of the Anaconda Company. The number of directors was increased from nine to 10, and directors held three-year terms. Another new director was James S. Rockefeller, chairman of the First National Bank of New York City. The Anaconda Company was the nation's third largest non-ferrous metals producer. [61] In May 1962, a reorganization of top management at AAC was announced at the company's headquarters in Louisville. Cochran was promoted to chairman of the board and chief executive officer. [62] Cochran retired from the AAC board of directors on Sept. 30, 1964. [63]

First plant curtailments

The 1950s economic roller-coaster ride began for the AAC plant in Columbia Falls on Sept. 19, 1956, when the Bonneville Power Administration notified 13 of its direct-service industrial customers operating 17 plants in the Pacific Northwest to be ready for a 100% curtailment of interruptible power beginning Oct. 1, 1956. The power cutback was blamed on drought conditions. The Columbia Falls plant had 111 megawatts of firm power available out of a total of 128 megawatts used in production, so the curtailment amounted to about 13% of capacity. [64] The BPA fully restored the interruptible power on Oct. 26, 1956, as drought conditions eased up. [65] Unlike most Pacific Northwest aluminum plants, the AAC plant got through a second power cutback caused by drought without curtailing production by using 18 megawatts from the Montana Power Co.'s Kerr Dam at the outlet of Flathead Lake. The BPA restored 9.9 megawatts of interruptible power to the smelter on March 7, 1957, bringing the plant back up to its normal load of 120.9 megawatts. [66] The BPA curtailed all interruptible power in the Pacific Northwest on Aug. 31, 1957, once again citing drought conditions. There was little impact to the plant in Columbia Falls because it relied much less on interruptible power and had already curtailed production by 25% because of weak demand in the aluminum market. About 86% of the electricity consumed by the AAC plant was firm power, while 40% of the electricity used at Kaiser's Mead smelter in Spokane was interruptible power. [67] The BPA temporarily restored 60% of interruptible power on Oct. 21 after streamflows improved in the Columbia River system. Relatively low industrial loads compared to 1956 were also considered a factor in the decision. [68]

The aluminum marketplace was more difficult to deal with than power shortages. On May 22, 1957, Satterthwaite announced to workers that the aluminum plant would curtail production by one-eighth beginning June 1 and by another one-eighth on July 1. Demand for aluminum was very low and the plant had been accumulating inventory, he

said. Meanwhile, Glover told Anaconda stockholders at their annual meeting that the company had strong confidence in the metals market despite a current period of adjustment. Glover pointed out that there was a global shortage of copper, which would amount to 1 million tons by 1961 and could cause the metal to be restricted. With that figure in mind, the company was embarking on major investments and expansion programs. Glover also told stockholders that in only 18 months, Anaconda's research department had solved a problem that had baffled the U.S. Bureau of Mines for 25 years – how to process clay into alumina. Glover pointed to the dependence of the U.S. aluminum industry on foreign supplies of bauxite and explained how a pilot plant in Anaconda for processing clay into alumina would end that dependency. [69]

On May 31, 1957, a letter was sent to all the supervisors and foremen at the Columbia Falls smelter describing the Anaconda Company's optimistic outlook on the temporary market slump and curtailment of production at the plant. [70] The partial shutdown was expected to result in the immediate layoff of 24 workers. The plant employed 691 workers, and at least 60 were expected to be laid off altogether. Layoffs were handled according to seniority. As soon as Anaconda's new fabricating plant in Terre Haute was completed and operational, it was expected that the Columbia Falls smelter could resume full production. [71] On June 1, half the reduction pots in Potroom 1 were shut down, with the rest scheduled to be shut down on July 1, effectively idling plant production by 25%. [72]

While AAC was curtailing production and building up inventory, Kaiser, Reynolds and Alcoa were maintaining full production by selling surplus aluminum to the federal government. The government program was initiated in response to the Korean War when it became clear the Big 3 aluminum producers were reluctant to build more smelter capacity without market assurances. The government responded by offering to purchase unsold inventory at prevailing market prices. The Big 3 exercised this option for the first time since the Korean War emergency took place by asking the government in spring 1957 to take 213,750 tons of aluminum off their hands. At the same time, the Big 3 were privately financing expansion projects – Kaiser by 152,000 tons, Reynolds by 212,500 tons and Alcoa by 170,000 tons. On top of that expansion effort, plans were in play by newcomers to the U.S. aluminum industry – Ormet by 180,000 tons and Harvey Aluminum by 67,000 tons. Two other factors influenced how AAC was affected by the weak market – delays in construction of AAC's new fabrication plant in Terre Haute, and the strength in the Big 3's development of new aluminum products and marketing organization, compared to the relative weakness of newcomer AAC. [73] The AAC curtailment marked the first time in 10 years that a U.S. aluminum producer deliberately cut back production, and it was the only planned cutback in the industry at the time. Curtailments in previous years had involved labor strikes or power shortages, not

market conditions. The government's surplus program would expire for most U.S. aluminum companies in 1958 and 1959, but the Big 3 continued to install additional aluminum capacity that might exceed demand after the program expired. [74]

On July 18, 1957, Sen. Mike Mansfield sent a letter to the Office of Defense Mobilization that was critical of the government buying surplus aluminum from Kaiser, Reynolds and Alcoa. Mansfield was particularly concerned about how the program adversely affected the AAC plant when market demand was weak, and about the Big 3's plans to expand smelting capacity despite the weak market. Mansfield described the government program as "a subsidy to the three major producers in an ever expanding industry." [75] The Office of Defense Mobilization replied to Mansfield in August 1957. The government felt a need to expand aluminum production capacity during the Korean War emergency, the ODM said. In order to encourage expansion by the Big 3, the government offered to purchase unsold inventory for a period of five years as well as provide financial assistance in the form of rapid tax amortization. "The Anaconda Company did not wish to obligate itself on a put-and-call arrangement but did obtain rapid tax amortization," the ODM said. Surplus contracts with the Big 3 would terminate between Oct. 31, 1957 and June 30, 1959, and rapid tax amortization for new plants was only offered up to Sept. 22, 1955, the ODM said. The only aluminum producer to take advantage of the tax benefit was Olin, the letter said. [76]

AAC plant workers heard some good news in August 1957 when Satterthwaite sent a letter to the plant's employees describing improvements in the weak aluminum market. New orders were coming in, and Alcoa had raised its price by one cent per pound, he said. Meanwhile, Anaconda's research facilities continued to develop a process to make alumina from clay, he said, and the Anaconda Wire & Cable Co. was purchasing all of its aluminum from the Columbia Falls plant. Anaconda Wire & Cable, an Anaconda subsidiary, was planning to build a new fabrication plant in Watkinsville, Ga., and the American Brass Co., another Anaconda subsidiary, expected to have its fabrication plant in Terre Haute completed and in operation by 1958. [77]

By late September 1958, it had become apparent that a serious decline in demand for aluminum was impacting the U.S. aluminum industry. Production of primary aluminum for 1957 was about the same as for 1956, but fabricators were putting out fewer products. The AAC smelter had cut back production by 25% rather than build up unsold inventory. The company forecasted a stronger market and considered restarting idled capacity by January 1958. [78] Meanwhile, Alcoa had reduced output at two of its Pacific Northwest plants by 25% because electrical power shortages. [79] Fewer rail cars carrying locally produced goods left Columbia Falls in 1957 than in 1956 – a decline from 4,468 in 1956 to 4,297 in 1957. The number of incoming rail cars carrying raw materials also fell,

from 4,140 in 1956 to 3,063 in 1957. One explanation was a drop in the number of incoming rail cars carrying raw logs. A nationwide decline in housing starts had affected lumber production at Columbia Falls mills. [80] By late October 1957, employment at the AAC plant had fallen to 575, but a call was sent out to seven casting department employees to return to work. [81] On Nov. 15, Caples and Satterthwaite announced that half the 25% production curtailment would be restored by Jan. 1, 1958, and 50 workers would be rehired. [82]

Demand versus capacity

Excess U.S. primary aluminum smelting capacity in 1957 had led to a quick halt to additional new construction at aluminum smelters, while overall U.S. capacity showed a slight increase from 1959 to 1963. One explanation for excess capacity by 1957 was the demand by the government for aluminum stockpiling and demand for military uses – both government incentives for stockpiling and inaccurate demand forecasting had led to the aluminum industry expanding in excess of demand. At the same time, demand from the residential construction, home appliance and automobile markets grew slack in 1957 to 1958 and 1960 to 1961. Historically, the price of U.S. primary aluminum increased less rapidly than U.S. wholesale prices, but from 1950 through 1957, primary aluminum prices rose faster than wholesale prices. This rapid increase reflected shortages when the industry was operating at near full capacity. With excess capacity conditions in 1957, aluminum producers competed against each other in an attempt to keep their smelters running at full capacity. As a result, prices fell. By October 1963, the U.S. aluminum industry was back to full capacity, and by March 1964 prices had increased from 22.5 cents per pound to 23.5 cents. [83]

American Metal Market reported another interpretation of the market setback in April 1958. While most of the media had focused on falling prices and idled capacity, less attention was given to the fact that production levels were roughly the same as for 1957, the report said. Curtailment was generally taking place in older inefficient plants and potlines, while newer and more efficient potlines were going on line to take their place. In the case of Reynolds, completion and activation of its new facilities at Listerhill, Ala., enabled Reynolds to produce aluminum at the highest level in the company's history. Meanwhile, Kaiser had reactivated two potlines at its new aluminum smelter at Ravenswood, W.Va., which offset curtailments across the U.S. market. U.S. primary aluminum production for the first quarter of 1958 was 395,000 tons, compared with 402,000 tons for 1957. The report noted that while production figures remained high, at least one-fifth of installed capacity was idled. Price reductions in primary aluminum begun by Aluminium Ltd. (Alcan) had by April 1958 spread around the world, and

fabricators in the U.S. and the United Kingdom were generally passing on the price reductions to their customers. [84]

On April 1, 1958, the price of aluminum in the U.S. market fell by 8% from 26 to 24 cents. In a letter to AAC workers, Satterthwaite called the price change "a serious blow to the current operations" of the smelter. The price change, initiated by Alcan following price cutting in Europe, followed 18 months of weak market demand and competitive pressure by foreign sources of aluminum. Fabricators were fiercely competing for business, Satterthwaite said, and both prices and marketability for extrusions, wire, castings and cable were chaotic. The price drop hit the Columbia Falls plant when it was already running at only 88% capacity due to weak market demand, and drastic reductions in production costs were necessary. [85] Meanwhile, Kaiser closed its aluminum smelting plant in Tacoma because of the weak demand. It wasn't until July 1964, as demand increased in the market, that Kaiser announced it would restart the plant. By that time, analysts blamed setbacks in the late 1950s on overexpansion, not weak demand. [86] With no improvements in market conditions, the AAC plant planned on cutting production from 87.5% to 75% beginning July 1, 1958. [87]

In an effort to help Pacific Northwest aluminum producers compete with aluminum plants in the Ohio Valley, the Great Northern Railway announced rate reductions in July 1958. Great Northern was the largest hauler of alumina and aluminum among the Western railroads. Aluminum output in the Pacific Northwest increased by 16% from 1953 through 1957, but power costs had also gone up and freight costs had increased by 36%. Pacific Northwest plants as a group had cut back to less than 60% of capacity because of market conditions. Prior to the reductions in freight costs by Great Northern, the division point for aluminum deliveries was Wyoming – some Ohio Valley producers east of that point could outsell Pacific Northwest producers. [88] Then on Aug. 1, 1958, Alcoa announced a price increase of about 7/10 cents per pound for primary aluminum, following earlier announcements by Reynolds, Olin and Revere. Analysts expected that AAC and Kaiser would soon follow with price increases. One reason cited for the price increase was the impact of depressed prices since April 1 caused by world aluminum markets. The lower prices led to increased sales for U.S. producers, but combined earnings fell by 22%. Another consideration was an increase in labor costs by 18 to 20 cents per hour effective Aug. 1 resulting from a 1956 labor contract that provided a three-year no-strike agreement. [89]

Mel Ruder expressed his optimism in a Sept. 12, 1958, Hungry Horse News editorial. The Columbia Falls plant continued to operate at 75% capacity, but nationwide the U.S. aluminum industry was operating at 25% below its 2 million ton-per-year capacity. Ruder cited a Sept. 6 American Metal Market article that painted a rosy forecast of

increased uses of aluminum in automobiles, building and food packaging. The article cited a survey by Kaiser that claimed the 5.9 million car-per-year U.S. automotive industry would increase its consumption of aluminum by 50% to 337,000 tons. The U.S. aluminum industry had doubled in size on average every 10 years since 1900, the article said. Forecasters expected the trend to continue for the next 10 years because production capacity was available, prices were reasonable compared to competitive materials, and new alloys and fabricating techniques were making new applications available. [90] By late November 1958, however, the job situation at the Columbia Falls smelter remained bleak as the plant continued to run at 75% capacity, but there were encouraging signs. The first rail car with test aluminum bound for Terre Haute left Columbia Falls. The new fabricating plant was scheduled to begin operating in early 1959. So far, the Anaconda Wire & Cable plant in Great Falls had been the primary consumer for the Columbia Falls smelter. Once the Terre Haute plant was up and running, then aluminum from Columbia Falls would go to the Cochran Foil plant in Louisville. The first Anaconda aluminum consumer product made its appearance in stores in the Flathead Valley – Chef-Foil, made by Cochran Foil. [91]

The Soviet factor

A new player in the global aluminum industry appeared in 1955 when the Soviet Union began selling primary aluminum on the world market with ingot prices below that of Aluminium Ltd.'s and taking some of the business away from the Canadian company. [92] By May 1958, with a surplus of aluminum in the world market, the effects of Soviet aluminum sales were becoming felt by major aluminum producers. Since World War II, aluminum production had increased in the U.S. by 300%, in Western Europe by 400%, in Canada by 190% and in the Soviet Union by 560%. But the figures were relative – aluminum production inside the Soviet Union increased by 21% since World War II, but because of the sheer size of the Soviet aluminum plants, that increase amounted to about 80% of the total increase in global aluminum production. [93]

By 1957, the U.S. led the world in aluminum production with 44%, while the Soviet Union ranked second with 19%. During years when the aluminum market was tight and demand was higher than supply, the Soviet Union did not export aluminum. In the last half of 1957, the Soviet Union exported 20,000 tons of aluminum to Great Britain at a price well below that of Canadian producers. By May 1958, the Soviet Union was exporting 50,000 tons per year to Great Britain. Canadian producers attempted to meet this market challenge by lowering prices, but the Soviet Union kept its price one cent per pound lower than the Canadians. The Canadians asked the British Board of Trade to invoke its anti-dumping law against the Soviet Union, but the burden of proof fell on the Canadians, and the communist economy's system of pricing was meaningless to

capitalist economists. The political implications of the Soviet aluminum suggested a new type of warfare in which the Soviets intended to destroy capitalism by undercutting a key industry, the Hungry Horse News suggested. [94]

On Aug. 10, 1954, a "secret" memo by the CIA's Office of the Chief, Economic Research, Office of Research and Reports described growth of the Soviet Bloc aluminum industry. "There are indications that the Soviet satellites will become self-sufficient in aluminum production during 1954 and that production in the USSR is now on a scale that allows increased allocations for civilian consumption in addition to wider military end-use and increased stockpiling," the report said. "The U.S. and Canada are the only countries which annually produce greater quantities of aluminum than does the USSR." The Soviet aluminum industry had been nonexistent until 1932, the report said. Growth of the industry up to World War II was slow and relatively insignificant, and when the only operating Soviet plants were overrun by the Germans during World War II, the U.S. supplied the USSR with completely integrated aluminum production facilities and large amounts of aluminum metal. "The Soviets therefore quickly acquired a modern ready-made aluminum industry geared solely to a war economy and to the task of turning out military aircraft," the CIA report said. [95]

After the war ended, while aluminum companies around the world were cutting back production, Soviet plants accelerated output and expanded facilities. "The 10 Soviet aluminum plants are large, integrated installations," the CIA report said. "The production know-how and processing techniques for the Soviet aluminum industry are comparable in quality to those of the Free World." The Soviet aluminum capacity increased 400% from 1943-1953 and was expected to more than double before 1960. The Soviet stimulus also helped boost aluminum-related plants in Soviet Bloc countries. Hungary, the largest aluminum producer in the Soviet Bloc, had a surplus to export. About 25% of the Soviet aluminum production was allocated to stockpiles. It was U.S. aluminum capacity doubling from 1951-1953 in response to the Korean War that enabled the U.S. to maintain aluminum capacity at three times the size of the Soviet's capacity, the report noted. [96]

On June 25, 1958, Sen. Mike Mansfield wrote to Secretary of State John Foster Dulles about the impact of cheap imported aluminum on the U.S. aluminum industry. According to a subsequent letter by R.A. Learnard, a sales manager for Alcoa, representatives of the seven U.S. aluminum producers met with Under Secretary of State C. Douglas Dillon to discuss the problem. A memorandum from the Aluminum Producing Industry submitted at the meeting reported that 30% of U.S. aluminum plant capacity was idle, compared with only 10% idled worldwide. As a result, about 20,000 U.S. workers were unemployed in the aluminum producing and fabricating industry. The

memorandum was critical of subsidies and other kinds of support provided by foreign governments to their aluminum companies. According to Mansfield, a serious threat to the U.S. aluminum industry came from a flood of cheap aluminum from the Soviet Union, which had weakened both the U.S. and world aluminum markets. Mansfield cited a July 13, 1958, New York Times article about cheap Soviet aluminum – the Soviet Union produced 710,000 tons of aluminum per year, making up 22% of the world production. [97] On July 10, 1958, R.S. Reynolds, president of the Reynolds Metals Co., wrote to Mansfield about Soviet aluminum sales in the Free World during the current recession. "World War II and the Korean Crisis have proven that the nation's interest is best served by a strong domestic aluminum industry," Reynolds said. "The resourcefulness and strength of the industry can, and should, be mobilized again to meet this present threat of economic warfare." [98]

On Jan. 15, 1959, Irving Lipkowitz presented a talk on the Soviet aluminum industry on behalf of six U.S. aluminum producers. Lipkowitz, an economist, had served with the Justice Department team that prosecuted the 1937 anti-trust lawsuit against Alcoa. According to Lipkowitz, the Soviet's share of global aluminum production had doubled since World War II from 12% in 1946 to 22% in 1958, while the U.S. share had fallen from 48% in 1946 to 40% in 1958. The Soviet Union consumed all of its aluminum and imported some aluminum up to 1955, and then the Soviets sold small amounts of aluminum in December 1955 and January 1956 in small spot sales. Soviet aluminum reappeared in England in May 1957 on a "cut-price" basis, at 1 1/4 cents to 2 cents per pound below whatever Aluminium Ltd. offered. The Soviets "automatically" undercut global aluminum prices, Lipkowitz said. [99]

Within a few months of appearing in England, Soviet aluminum accounted for 14% of the British supply, while Aluminium Ltd.'s share in England shrank from 80% to 60%. Aluminium Ltd. filed an anti-dumping action in England, but no action was taken. Then on April 1, 1958, Aluminium Ltd. lowered its price by 2 cents per pound, an action that rippled throughout the global aluminum industry, causing a $57 million drop in profits for aluminum companies in 1958. But the amount of Soviet aluminum sold in the Free World was small, about 22,000 tons from May 1957 through March 1958. Lipkowitz called the Soviet move "sharpshooting" at the Free World market and not dumping under the normal meaning of the term. The Soviet's seven-year plan called for a 180% increase in aluminum production by 1965, but there was not enough domestic growth to consume that much more aluminum – future use was "shrouded in mystery," Lipkowitz said. The Soviet economy and the Free World economy could not be easily compared, he pointed out, because capital in the Soviet Union was "free" while in the U.S. a $1,500 per ton investment in new aluminum capacity would come with $165 in

financial costs, amortized over 20 years. In addition, labor costs in the Soviet Union were one-quarter to one-fifth of those in the U.S. [100]

Cochran made his first trip to the AAC plant in Columbia Falls with AAC President Caples in January 1959. Cochran's company had merged with AAC in 1958. The Terre Haute rolling mill was expected to be operating by February, eventually producing rod and sheet. According to Anaconda's plans, cast aluminum pigs would be shipped from Columbia Falls to Terre Haute for rolling into sheet that would be further rolled into foil in Louisville. [101] AAC employment included 550 workers in Columbia Falls, possibly 1,000 at Terre Haute when it started up, 550 in Louisville and more at smaller fabricating plants in San Gabriel and Fair Lawn. The $40 million rolling facility at Terre Haute and increased sales of fabricated products should address the 25% curtailment and accumulating aluminum stockpiles in Columbia Falls, Cochran said. The foil plant in Louisville had its best year ever in 1958, producing aluminum products for air conditioners, building construction, containers and packaging. The Louisville plant produced more than 1 million frozen food platters a day. With new fabricating facilities coming on line, the re-organized company would need twice as much aluminum as could be produced at Columbia Falls, Cochran said. But there were difficulties in expanding the smelter in Columbia Falls – high transportation costs for raw materials and finished metal and the shortage of new hydropower sites in the region. Cochran noted that Sen. Mansfield had made a reference to a future hydroelectric dam near Libby, Mont. [102]

On June 11, 1959, the AAC plant announced plans to return 30 of the 60 idled reduction pots at the Columbia Falls smelter to full production starting July 15. This would raise capacity from 75% to about 88%, or about 57,000 tons per year. [103] The plant employed 544 men and 28 women. Plant Manager James F. Smith said the decision to increase production came from AAC headquarters and was based on improved market conditions. [104] By September 1960, employment at AAC plants across the U.S. included 392 hourly and 150 salaried workers in Columbia Falls; 281 hourly and 102 salaried workers in Terre Haute; 458 hourly and 200 salaried workers in Louisville; and 56 hourly and 74 salaried workers at Fair Lawn, Los Angeles and other locations. AAC was a wholly owned subsidiary of the Anaconda Company, but decisions affecting the company were generally independent of the New York and Butte offices, the Hungry Horse News reported. AAC had $61 million of capital investment in Columbia Falls and nearly $40 million at the new plant in Terre Haute. AAC's 1959 property taxes in Columbia Falls came to $671,000 – significantly higher than elsewhere. Taxes in Louisville were $29,000 and in Terre Haute were $275,000. Without AAC's fabrication plants, the Columbia Falls plant would not be running at its current 87.5% capacity. The U.S. aluminum industry

was very competitive and constantly in search of new products, Ruder reported after touring the AAC fabricating plants. [105]

The 20-year old AAC operation in Louisville, formerly Cochran Foil, manufactured packaging foil for use in cigarettes, soap and food processing and was assessed in 1958 at $10 million. Rolled aluminum more than 0.006 inch in thickness was considered sheet aluminum, and rolled aluminum under that thickness was considered foil. One machine at the Louisville plant made 8,000 pie plates per hour. The Louisville plant produced 2,700 different kinds of items in its laminating facility, where paper and aluminum one-tenth the thickness of a human hair were bonded for cigarette packaging and food processing. Laminated aluminum was decorated with lacquered gold for Hallmark greeting cards. The Louisville plant made all-aluminum ashtrays that sold for a penny apiece, and popular all-aluminum Christmas trees that used a pound of metal. Workers at the Louisville plant were members of the Aluminum Workers International Local 145 and earned a comparable wage to the workers in Columbia Falls, typically between $2.50 and $2.70 per hour. [106]

Tax and economic impacts

The first detailed look at the impact of the AAC smelter on the Flathead and Columbia Falls economies was published in January 1960. Maxine Johnson, a professor at the School of Business at Montana State University in Missoula, looked at demographics, taxes, wages and salaries, and plant expenditures at local businesses. “No related industry has followed the plant to the Flathead, nor is such a development likely,” she reported. “The area is too far from major population centers.” The greatest impact on the local community was in the area of government-financed institutions. Both School District 6 and the Columbia Falls High School District experienced higher operating costs as a result of the increased population. The fact that the plant lay outside the city limits of Columbia Falls meant the city did not collect increased tax revenues, which would have offset increased costs to schools and other city services. Overall, residents in Flathead County benefited from tax revenues paid by the plant compared to other Montanans between 1953 and 1958. [107]

The Hungry Horse News gave front-page headline coverage to Johnson’s report on Nov. 11, 1960. The newspaper also printed the report’s seven-page summary in full. The Flathead County economic report was the 12th in a series of regional studies dealing with the economy of Montana and its demographics. [108] Johnson was born in Kansas in 1925. She grew up in Bellingham, Wash., and received her bachelor’s degree in economics from Washington State University in 1948 and her master’s in economics at the University of Montana in 1950. She worked for the University of Montana’s Bureau of Business and Economic Research from 1950 to 1988, first as a research associate and

later as the director and a professor of management. She spent most of her career studying the Montana economy and was the author of 140 articles and 18 monographs about state and regional economics. She served on the boards of the Montana Power Co., First Bank Western and Montana Board of Investments. She received the Distinguished Alumni Award from the University of Montana in 1975 and an honorary Ph.D. from Montana State University in 1981. [109]

Much has been said about tax benefits during the 54 years that the Columbia Falls smelter operated. In 1954, the No. 1 taxpayer in Flathead County was the Great Northern Railway, with a tax bill of more than $279,000. The tax bill for the AAC plant while under construction jumped from $217 in 1953 for unimproved real estate to more than $78,000 in 1954 for management housing in Columbia Falls and construction at the plant site. The Anaconda Company also paid $25,000 for timberlands and mineral rights in the west side of Flathead County. [110] By March 1955, the partially completed smelter was appraised by Flathead County at $16.2 million, compared with $7 million for Great Northern Railway's property and $18.1 million for the entire city of Kalispell. The appraisal figures for School District 6, which ran from Columbia Falls east to the Continental Divide, more than doubled from $12.1 million in 1954 to $26.6 million in 1955 as a result of the new plant. Flathead County's appraisal as a whole increased by 26% from $62.2 million in 1954 to $78.9 million in 1955. The new revenue was expected to lower taxes for Columbia Falls' homeowners by about 10%, but the Montana Supreme Court had not yet ruled in the Victor Chemical Co. case, which could lower the smelter's tax rate. A Silver Bow County district court had ruled that a law passed by the Montana Legislature to aid newly constructed industries by lowering taxes from the normal rate of 30% to only 7% was unconstitutional. The AAC plant claimed the same reduction in taxes as part of the benefits initially awarded to the Harvey Machine Co. [111] The Montana Supreme Court ruled against Victor on Sept. 19, 1956. [112] AAC lawyers filed papers officially dropping the company's tax protest, thereby freeing up the revenue for local schools and government, on November 1956. [113]

Up to 1955, about 75% of the taxes paid in School District 6 had come from the Great Northern Railway, but it was expected that the AAC plant would pay twice as much as Great Northern once the new aluminum plant was up and running. According to the county assessor, the impact of the new plant would be lower taxes for Flathead County homeowners. [114] According to county records in November 1955, the new plant would owe $376,364 in real estate and personal property taxes for 1955, up from $78,857 for 1954. The Great Northern Railway was the county's second largest tax payer with a bill of $248,961 for 1955. [115] On Dec. 10, 1955, AAC paid $189,474 in taxes to the Flathead County Treasurer, of which $130,197 was paid under protest pending resolution of the Victor Chemical Co. case. Revenues paid under protest could not be used by the

government until the matter was settled in court. [116] In 1956, the AAC plant paid $478,941 in property taxes. Total property assessment for Flathead County was $84.8 million, compared to $38.5 million in 1947, and Flathead County passed Missoula County for total property valuation. The second largest taxpayer in the county was Great Northern, which paid $263,971. [117]

Property valuation for School District 6 increased to $26.6 million by 1956, up from $12.1 million only two years earlier. [118] On May 31, 1956, AAC paid $189,426 in taxes to Flathead County. Of this amount, $130,197 was paid under protest. This was the last year that AAC could claim benefits under the disputed tax benefit law as it was written. [119] In November 1958, AAC paid the first half of its property taxes for 1958 to Flathead County. The tax bill was 30% higher at $637,000. The AAC plant was assessed at $19.7 million compared with $20.8 million for the entire city of Kalispell and $90 million for the entire county. Great Northern Railway at No. 2 paid $300,000. For 60 years the Great Northern Railway was the largest single taxpayer. No. 3 was Pacific Power & Light with a bill of $273,000. [120] In 1959, AAC continued to be the largest taxpayer in Flathead County, paying out $702,380 in property taxes. As a result of a decision by the Montana Board of Equalization in spring 1959, taxes were reduced for utilities and railroads, including the Great Northern Railway, Pacific Power & Light, and the Flathead Electric Cooperative, while taxes increased by $65,000 for AAC. [121] Pacific Power & Light's taxes decreased by 23%, and Great Northern Railway's taxes decreased by 8%. At the same time, taxes for the AAC plant increased by 10%. Despite some growth in Flathead County, the assessed tax valuation fell by about $1 million from 1958 as a result of the new ruling. [122]

Local economic impacts at the time could be gauged by railroad traffic. In 1954, a total of 2,600 rail cars left Columbia Falls with lumber and other goods, and a total of 1,950 rail cars stopped in town, mostly carrying construction materials for the new AAC plant. With these numbers, Columbia Falls qualified as the most active shipping point on the Great Northern mainline in the Kalispell Division between Havre, Mont., and Spokane. Lumber mills in Columbia Falls turned out a record 85 million to 90 million board-feet of lumber in 1954, representing 225,000 man-days of employment and payrolls of $3.5 million for the year, including operations in the forests. Over half the lumber shipped from the Flathead was milled in Columbia Falls, while new lumber mills were starting in nearby Martin City and Coram. Another $5 million in payrolls for 1954 was attributable to construction. [123] By December 1954, the lumber industry in Columbia Falls was making a resurgence because of new access roads in the forests and larger trucks to haul logs to the mills. All four lumber mills in Columbia Falls had completed major expansion projects since 1952. [124] In 1956, a total of 3,250 railcars left Columbia Falls carrying lumber, and another 750 railcars came into town carrying raw logs. Lumber

mills in Columbia Falls produced 102.5 million board-feet of lumber, enough to build 12,000 average-sized American homes and valued at $9 million. Another 1,225 railcars left Columbia Falls carrying ingot aluminum produced by the new aluminum smelter. [125]

For the first six months of 1956, construction permits in Columbia Falls totaled nearly $400,000 in new home value. Ten of the 29 building permits were for new homes. The average price for a new home was $13,225. The largest single structure under construction in town was the $200,000 AAC Employees Club being built by Gordon Construction Co. [126] Sometime in late March 1956, the new Columbia Falls library was scheduled to open for the first time. The 16-by-70 foot building once served as the Foley Construction Co. headquarters at the AAC plant while it was under construction. According to a Hungry Horse News editorial, the library building was "as shack-like on the exterior as it is attractive on the inside." Another $2,000 was needed to finish the library, which so far had been built on donations of time and materials, from knotty pine trim and tile floors to acoustic ceilings and shelving.[127] On June 30, 1971, the Anaconda Aluminum Co. sold the AAC Employees Club to the city for one dollar and the library was moved there. [128] Pride in the aluminum plant was felt even by school children. On May 4, 1956, the Hungry Horse News printed a large page-one photo of Columbia Falls junior high school students gathered around a scale model of the AAC plant. The model was part of a project for the Northwestern Montana Fair and was created from an aerial photo. The students also studied the industrial processes that converted bauxite from Jamaica and Arkansas into alumina at the refinery in Corpus Christi, Texas. [129]

Ruder reported on the history and diversity of the growing local economy in an Aug. 10, 1956, editorial. The first major local development was growth in the timber industry, where 10 times as many workers were employed in 1956 compared to 1946. Capital investment in the mills had increased, and more workers were finding work in winter. The number of rail cars carrying lumber out of Columbia Falls increased from 779 in 1947 to 3,051 in 1956. The next major development was construction of the Hungry Horse Dam, which led to the aluminum plant and employment of 600 workers. The third major development was growth in tourism in Glacier National Park, which saw visitors top half a million for the sixth consecutive year. Development in cabins and motels in the Flathead Valley had grown to meet tourist needs. [130] Locals were seeing the benefits of this growth in their schools. On Nov. 6, 1956, voters in the Columbia Falls area approved $1.5 million in funding for a new 600-student high school. The current high school had 344 students, but 500 students were forecasted by 1960. The new 112,000-square-foot high school would include a 4,000-seat gymnasium. [131]

In fiscal year 1957, the average annual wage in Flathead County was $3,822. The figure increased by 2.4% to $3,915 in 1958. The average for the state increased 7.1% from

$4,209 in 1957 to $4,510 in 1958, indicating the Flathead still lagged behind the rest of Montana. Unemployment compensation in Flathead County in 1958 was $1.1 million, which amounted to 5.6% of total wages for the county that year. Flathead County ranked third highest in unemployment compensation payments among all the counties in the state. [132] By 1959, shipments of lumber and aluminum out of Columbia Falls topped 5,000 freight cars. Of that total, 1,110 train cars contained aluminum, 85 cars contained scrap potlining material, 29 cars contained scrap steel bars, and one car carried carbon blocks. Aluminum shipments increased by 25% over 1958, with 1,225 freight cars carrying 63,472 tons of metal. The smelter received 2,731 carloads of raw materials in 1959, including 1,688 carloads of alumina, 649 carloads of carbon, 107 carloads of chemicals, 162 carloads of fuel oil, and 125 carloads of collector bars, pig iron and other materials totaling 148,343 tons. The 1959 freight bill for the plant was $2.8 million, an increase of 30% over 1958. Shipments of lumber in 1959 totaled 3,946 carloads, down from 3,793 carloads in 1958. [133]

The population of Columbia Falls according to the 1960 census was 2,132, an increase of 73% since 1950. A poll showed that the average resident wanted a job, good schools, churches, lower taxes, good outdoor recreational opportunities such as hunting and fishing, good weather and city improvements, such as paved streets and more parks. New residents were found to be active in community affairs, and the city boasted a new $20,000 fire truck. Building permits for the past six years totaled $3.5 million in new construction. The city had a new $1.6 million high school. The new $200,000 St. Richard's Catholic Church on the west side of town replaced the original church built in 1890. [134] The 1960 census reported Flathead County had 32,965 residents, including 10,151 in Kalispell and 2,965 in Whitefish. The number of housing units in the county totaled 12,510, of which 8,799 were listed in sound condition with all plumbing. A total of 10,121 were occupied, with 7,482 occupied by owners and 2,639 occupied by renters. The median value of owner-occupied homes was $9,900 and the median monthly rent was $67. A total of 8,822 occupied homes had cars. [135] The 113,000-square-foot Columbia Falls High School was dedicated on March 4, 1960. Hungry Horse News described the new facility as "the finest high school in any Montana city under 10,000 population." [136]

The clay to alumina dream

The Anaconda Company lofted two promises when confronted with the weak aluminum market in the late 1950s. It delivered on one – creating downstream integration. It failed on the other – creating a new source of alumina inside the U.S. On Sept. 23, 1955, the Anaconda Company announced long-range plans to build a plant near Spokane to convert domestic clay into alumina as a way to circumvent the need to mine bauxite in

foreign countries. The plant was tied to a proposed 300 million cubic feet-per-day natural gas pipeline to be run from Canada to Oregon and Washington. In full operation, the alumina plant was expected to consume between 25 million and 40 million cubic feet of gas per day. Before construction of the plant would start, the company planned to construct a pilot plant to test the process. [137] In October 1956, after nearly two years of laboratory study and tests at the AAC plant in Columbia Falls, the Anaconda Company announced it had solved a problem in producing alumina from clay deposits located near Moscow, Idaho, and made plans to build a pilot plant capable of converting 50 tons of the Idaho clay per day into alumina. [138] The $1 million pilot plant would be built in Anaconda. Once a natural gas line from Canada to Spokane was completed, a fully operational processing plant would be built near Spokane. Anaconda had already secured options on clay reserves near Moscow. Much of the research on how to process clay into alumina took place during World War II when the German submarine campaign threatened the nation's bauxite supply from the Caribbean and South America. [139]

By late September 1957, the pilot plant was under construction near the copper smelting plant in Anaconda. The program drew much attention from other major aluminum producers who had already taken options on clay deposits in the U.S. [140] Some U.S. companies were carrying out similar research. On March 20, 1961, the Olin Mathieson Chemical Corp. announced that it had discovered a commercially viable way to make alumina from clay at its new $7.5 million research center in New Haven, Conn. Olin's pilot plant converted aluminum sulfate into alumina. The Soviet Union had long used a clay-like material called nephelite to make alumina. [141] On May 15, 1963, Anaconda Chairman Clyde Weed reported on the clay-to-alumina project during the annual Anaconda Company stockholders meeting in Anaconda. Although further testing was necessary, Weed said, "I believe I can say with reasonable assurance at this time that our process is a success and that it will be competitive with other methods which produce alumina from imported bauxite." The pilot plant in Anaconda was producing about five tons of alumina per day from clay, and the alumina was being smelted in Columbia Falls, he said. [142] Clays sent to the pilot plant were calcined and then leached with hydrochloric acid to dissolve the aluminum and iron. The solution was roasted, leaving ferric oxide and alumina, and the hydrochloric acid was recycled. The iron was separated by caustic soda digestion or by soda sintering. [143]

Alumina produced from the Idaho clay was first used in two reduction pots at the Columbia Falls plant in February 1963. The pilot plant had taken six years to develop, and the two reduction pots produced 6,200 pounds of aluminum every 48 hours. According to Plant Manager James Smith, the smelting would be in a test stage for about a year to evaluate the economics of the process. "A long-time dream of the American aluminum industry is to be able to use the more conveniently located clays as

a source of alumina rather than bauxite from the tropics," the Hungry Horse News reported. [144] Further progress was reported on Aug. 16, 1965, as the Columbia Falls smelter celebrated its 10th anniversary. AAC President Thomas D. Gebhart described new developments in Georgia, where the Anaconda Company would soon be producing alumina from clay. According to Gebhart, 88% of the U.S. aluminum industry's alumina came from foreign bauxite, and 12% came from Arkansas where deposits were running out. [145]

Anaconda was nearly ready to build a commercially operating clay-to-alumina plant when it chose instead to enter into a partnership with Kaiser and Reynolds in 1966 to build a 950,000 ton-per-year alumina refinery in Jamaica using locally mined bauxite. The clay-to-alumina pilot plant was closed down. [146] But the dream didn't completely die. In 1974, the Chilean government settled with Anaconda over copper mines that the government expropriated from the company in 1969. Anaconda accepted $253 million at a time when it was still climbing out of a financial crisis that climaxed with the loss of the Chilean mines. Anaconda Chairman John B.M. Place said he hoped to use the settlement money to expand the company's aluminum operations, particularly in research and development in the use of non-bauxitic ores to produce alumina. The company owned extensive deposits of kaolin clay in the U.S., and the Jamaican government had substantially raised taxes on bauxite purchased by Anaconda, Place noted. [147]

Anaconda Company officials weren't the only people drawn into the clay-to-alumina hope. On Sept. 16, 1943, Sen. James Murray received the first of many letters and other promotional material from A.J. Ritchie at the Seattle Chamber of Commerce promoting the use of clay deposits in the Pacific Northwest to produce alumina rather than using bauxite from foreign lands. Ritchie claimed the idea originated in 1941 when the U.S. Bureau of Mines, the War Production Board and other government agencies "approached Northwest business leaders, pleading with them to stir up interest in the producing of aluminum oxide from Pacific Northwest clays." On Aug. 23, 1943, the War Production Board wrote to Sen. Murray's son and secretary Charles Murray in response to a query about supporting a clay-to-alumina processing plant in Missoula. The board said it would need to see evidence of an abundant supply of the appropriate type of clay before giving the idea any support. The board also noted that there were labor shortages in the area because of copper mining and processing in the Butte area. Sen. Murray's office continued to receive letters and material about developing a clay-to-alumina industry in Montana as late as 1956. [148]

Murray was also involved in promoting free trade as a way to benefit the U.S. aluminum industry. On Feb. 4, 1955, Murray introduced a bill to suspend the duty on imported

aluminum and aluminum alloys for one year. The duty was authorized under the Tariff Act of 1930. Murray's goal was to supply independent U.S. fabricators during the national defense mobilization. The bill was opposed by Assistant Director Harold Peterson, of the Executive Office of the President. Peterson told Murray in a May 2, 1955, letter that suspending the duty for one year wouldn't make much of a difference to the economy, but it would cost the U.S. government revenue. But the Institute of Public Affairs, a nonprofit think tank, had come to a different conclusion in a 15-page report on the pros and cons of the bill issued on April 1, 1955. In favor of the bill, the Institute noted that duties on copper were already suspended, aluminum was in short supply and even the Big 3 producers needed more aluminum for their fabricating plants. Points not favoring the bill included that the U.S. government would lose about $7 million in revenue per year, the bill would help foreign competition, and it was doubtful that the bill would accomplish much in the long run.

The Institute of Public Affairs concluded that Murray's proposed bill was a good idea because tax revenue on the increased business by independent U.S. fabricators would make up for the revenue lost by suspending the duties. The institute noted that pig and ingot aluminum could be considered raw materials, and the economy benefited by not placing duties on such raw materials. The report also noted that the bauxite tariff of 50 cents per ton had been suspended for two years effective July 16, 1954. "We predict it will never be reimposed, as it is saving the primary producers some $3 million annually," the institute said. [149] On June 29, 1956, Murray introduced a bill to suspend the duty on imported alumina for two years. The duty also was authorized under the Tariff Act of 1930. Murray noted that very little alumina was imported to the U.S., and lifting the duty would help the national defense effort. Another bill introduced that year called for suspending the duty on imported bauxite for two years. Both bills passed. The bauxite duty had been suspended earlier and continued through the 1950s. [150]

As the decade turned, Anaconda executives expressed great optimism about the future of the aluminum industry. AAC Executive Vice President Mord Lewis, while visiting the Columbia Falls plant in November 1961, confirmed a report that the company was considering expanding the plant's smelting capacity from two potlines to three. Lewis explained that certain economic factors could determine the decision. For one, taxes in Flathead County were too high, he said – taxes on the plant increased from more than $478,000 in 1956 to more than $682,000 in 1961 without any enlargement of the plant. Added freight costs for a plant so far away from suppliers and end users was another concern. Factors in favor of expansion included the existing shops and management, and the fact that the plant put out a good quality metal product. But market changes also could influence the decision to expand the plant. In a recent issue of the "Anaconda Aluminum Courier," AAC President Archie Cochran described a drop in aluminum prices

by Canadian producers by two cents per pound as "the roof falling in." According to Cochran, "We were just getting our heads above water and beginning to show some profit. Now we are starting to feel the money pinch again, particularly at Columbia Falls where the ingot price cut will have the most drastic effect." [151]

The Columbia Falls aluminum plant produced about 3% of the nation's primary aluminum, but the Louisville foil plant produced about 13% of the nation's aluminum foil and about 22% of the nation's aluminum containers, Lewis told local media during his visit. AAC needed more primary aluminum production capacity, but if it did not come from Columbia Falls, it might come from a new plant built in the Ohio Valley. Growth in aluminum production in the Ohio Valley resulted mostly from cheaper transportation. Power in the Ohio Valley cost about $4 to $5 per megawatt-hour, while power in Columbia Falls was only $1.75 per megawatt-hour. The BPA could not offer enough firm power to handle an expansion to three potlines, Lewis said, but a new industrial power bracket was available that would provide low-cost power 90% of the time, meaning it would be lost only in times of extreme drought. [152] The public was being primed for an expansion by Anaconda at Columbia Falls and in the Ohio Valley, but the company's plans already had been under development for several years.

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