In 1974, I was assigned by Anaconda Copper Company to initiate an exploration program in Alaska. As a young geologist, I was fresh from experiencing the expropriation of Anaconda's vast copper mines in Chile, by the communist government of Salvadore Allende. My experience in Chile had taught me that ore was defined, not only by tons and grade that could be mined at a profit, but also by politics. In Chile, Anaconda's ore became waste, not due to any technical factors, but due the politics of expropriation.

I was happy to be coming to Alaska, to the United States, where I thought I would not have to worry about any of our discoveries being expropriated by the government. I was very naive! In a few years I was back to fighting a government expropriation, this time it was the United States government. The taking of valid mineral rights by the government was not by outright expropriation, but by the indirect method of placing known deposits inside a national park or by denying access for developing the deposits.

The fight to save Anaconda's and other companies' mineral rights and access to the Ambler District of the southwestern Brooks Range, near Kobuk, became known as the "Battle of the Boot."

Preparing to sling drill collars from Shungnak camp in 1976. Generator shack is in background.

David Heatwole proudly displays a run of zinc-rich massive sulfide drill core, from the Sun Deposit in 1977.
I first became aware of the massive land withdrawals being proposed for Alaska during my initial visits to the state in 1974. Most land managers had a BLM map of Alaska on their walls showing the proposed checkerboard pattern of land ownership. Each township had a color denoting federal, state or native ownership. I remember the dark green color was proposed national parks and wildlife refuges and was referred to as "d(2) lands"; reflecting Section 17 (d)(2) of the Alaska Native Claims Settlement Act. I was appalled to learn that d(2) lands totaled 80 million acres, approximately 25% of Alaska was to be closed to mineral entry!

After Anaconda's initial reconnaissance of the state in the 1974 field season, I could see that vast areas of high-potential mineral terrain were covered by d(2) land classification and would never be explored if placed into federal conservation areas. I convinced Anaconda management that we needed to join the fight to keep Alaska lands open to mineral entry, and obtained permission to release our confidential assessment of high potential mineral areas. To release private mineral data was uncommon at this time. Most mining companies still believed their main competitors were other mining companies, not the federal government. However, Anaconda's Chilean experience had made them aware of the government's impact on their business. I sent a letter from our Tucson, Arizona headquarters to Alaska Senator Ted Stevens, detailing the company's assessment of Alaska mineral potential and the conflicts with proposed d(2) with-

UAF Professor Tom Smith, shows a map to Anaconda geologists in Ambler District in 1977. Looking on are John Proffet, Kit Marrs, Peter Herzberg and Murray Hitzman. "Loner," taking a compass bearing is W. T. "Bill" Ellis.
drawals. I was surprised when I received a personal acknowledgment signed by Senator Stevens thanking me and Anaconda for releasing the data.

Anaconda, working in partnership with Sunshine Mining Co., discovered two large massive sulfide deposits in the Ambler district. Because of prior work by the USGS, Alaska Department of Geology and Geophysics, and Kennecott Copper Co., the area known as the "schist belt" of the southwestern Brooks Range had been excluded from D2 withdrawals. However, this highly mineralized area was surrounded by the proposed Gates of the Arctic National Park on the north and east, the Noatak Wildlife Refuge on the west, and the Selawick and Koyukuk Wildlife Refuges on the south. In addition, the natural access corridor leading east to the pipeline haul road was blocked by a unique looking appendage on the south boundary of the proposed Gates of the Arctic National Park. This extension became known as the "boot". Access across the boot could provide a needed access corridor for the development of the Ambler district deposits.

In the 1977 field season, the House Interior Committee scheduled a summer visit to Alaska to visit the proposed parks and hear from the "locals" (no Washington "fact finders" ever came to Alaska during the winter!). The leaders of the delegation were Mo Udall, a democrat from Arizona and Chairman of the Interior Committee, and democrat John Siberling. Both were the "champions" of large parks in Alaska.

Panoramic view of the Sun Deposit, the hill in the foreground is dip slope surface trace of mineral zone. The deposit has been prospected by over 30 drill holes, showing a major massive sulfide deposit. Interior Secretary Andrus was shown this exact view in 1978. Camp is in lower left corner of picture.
The Park Service would escort the group around Alaska. The campsite for examining the proposed Gates of the Arctic Park, would be Selby Lake, a scenic area located inside the “boot”.

Anaconda’s Washington office had tried to get a visit to our prospects on the itinerary, while Udall was at Selby Lake. The Interior Committee majority staff said the congressmen would be too busy to visit mining operations, but a few of the minority staff said they would like to learn about Ambler’s mineral potential.

On August 16, 1977, after all of our crews were in the field, I took the helicopter and headed for Selby Lake to pick up the minority staff. I was surprised to find Udall and Siberling in the camp. I guess it was some sort of “rest day” (so much for their reported “busy” schedule). Also in the camp were reporters from Time, US News and other national media, and when they heard about the mining activity, they wanted to go see it. Udall and Siberling also said they also wanted to see the mining activity. “You will see how miners are scarring the landscape,” Siberling told the reporters.

Now I had a logistical problem. Instead of three people, I had a dozen to transport, not possible in a Hughes 500c helicopter and the Park Service’s Huey was much too large to land at the Sun Camp where we were drilling. I radioed for assistance from the other mining companies operating in the district; they all cooperated and soon I had a fleet of Hughes 500 helicopters to transport my entourage.

Flying with Udall and some press in the lead chopper, we flew to the Sun Camp, where Anaconda, Sunshine,
Kennecott and Noranda had all worked, drilling over thirty holes. Udall's Arizona district was centered on Tucson, I informed him that the camp cook at Sun, Joan Dusenberry Marrs, was the daughter of Katie Dusenberry, the Chairperson of the Pima County Board of Supervisors, an important political group in his district. Udall thanked me for the tip and made the comment, "I'll have to watch myself!"

Udall had only one eye and as we approached the site I explained to him how we had drilled out mineralization valued at several billion dollars. We had two drill rigs operating at the time I pointed to the approaching hillside and asked if he could see them. He peered hard through the one eye, as did the reporters in the back. No one could see a drill rig, not to mention the old sites. When we landed at the camp, I showed the group the drill rig which was located not far from the camp and the press got busy photographing the drilling operation.

Siberling arrived on the second chopper load. He jumped out and screamed above the rotor noise "Where are the scars?" I took him aside and pointed out the drill rig, explaining that we had multiple drill holes with no visual impact. The third helicopter laden with press was arriving, Siberling ran out and said "Don't stop here! This is not the place," but it was too late. I think Siberling had been fed some misinformation from the preservation groups that miners had bulldozers ripping up the countryside. He was truly shocked
at the lack of any surface disturbance by our activities.

The group met in the cook shack for coffee and warm cookies and engaged in what was referred to as the “great Sun kitchen debate.” Everyone had to agree that our drilling activities had very little impact on the land. It could still be a park, even though we had drilled out a major mineral zone. If miners could prospect in this manner, why not let them identify mineral resources before land was withdrawn? Udall and Siberling argued that if mineral deposits were found they would be developed, destroying the chance for any parks. I countered that after all of the possible ore deposits were discovered and developed, mining would only impact 1% of the land. The rest of Alaska could be used for parks. The debate went on, the reporters loved it, and eventually we got some balanced articles in national publications.

The Mining Law of 1872 was also discussed in the “kitchen debate.” Udall, under pressure from Arizona small miners, had recently reversed his position to overturn the law. Siberling, whose family made its fortune in the tire business, was still attempting to change the law. Siberling pushed Udall in front of the press, noting all the “rip-offs” due to the 1872 law. “Why should mining companies get mineral rights for free?” Udall responded that he would continue to oppose any change to the mining law. He told Siberling that while he personally supported changing the law, it was clear that many of his constituents in Arizona were comfortable with the 1872 law and were very vocal about any change. “I have not seen the light, but I have felt the heat,” Udall said.

Although the visit did not change Udall and Siberling’s position on the bill, it did soften the rhetoric a little. Udall stopped using “the bulldozers are poised” phrase and Siberling in his report to congress said “we visited the camp of Anaconda Copper Co. and from what we observed they were doing a good job.”

Later, Udall addressed a meeting of Commonwealth North in Anchorage. He did not mention his trip to Sun camp. He quipped, “I find all Alaskans so friendly, they all wave at me in that peculiar Alaskan way, with the middle finger extended!” Although I did not agree with Udall on anything, I liked him, he was a genuine person. We honored him the next year by staking a group of claims in Interior Alaska,
called “Mo Udall.” Unfortunately these claims did not pan out, so Alaska will not have a Mo Udall memorial mine! In January of 1978, I made my first trip to Washington D.C. to lobby for access. As a field geologist, I was really a “fish out of water,” but Judy Baird of Anaconda’s Washington team took me under her wing. It was my first time to see Don Young, then in the minority on the House Interior Committee, in action. I was proud of the way our lone Congressmen stood up for Alaska and fought for the Meeds bill, a much better bill than Udall’s H.R. 39. We lost the committee vote to substitute the Meeds bill, 10-7, learning later that President Carter had personally called swing votes. I became aware of what a fight we had, a Democrat controlled congress and an environmental President whose agenda was to lock up Alaska.

One incident stands out in all the time I spent “pounding the halls of congress.” We needed to make our case for Ambler access to a possible Democratic swing vote on the Interior Committee. This congressman’s staff had more of a preservationist’s lean and told us that their boss had no time to see us. After being refused an appointment, Judy Baird, in disgust, told me “Come on, we’ll get the appointment.” We walked over to the House Interior Committee hearing room where our target congressman was in a meeting. “He has to go to the bathroom,” Judy explained to me. We waited for over an hour and sure enough as the meeting recessed the nervous congressman hurried towards the men’s room. “Congressman,” Judy called out in her sweetest voice, and explained how I had come from Alaska and would only be in D.C. for one day—we got our appointment and our vote!

In the summer of 1978 I was in the Ambler District and received a message from Judy in camp over the single side band radio. Interior Secretary Andrus was going to be at Selby Lake on July 9 and 10 and although visiting our properties was not on his agenda, if I could contact him, he would probably come. At noon on July 9, I took the helicopter to the Park Service’s Selby Lake camp. I will always remember walking up to the camp in time see the cook dump a skillet of bacon grease on the tundra. I hoped that there were no bears in the vicinity! The Secretary had gone earlier for a tour of the Arrigetch Peaks. His staff, openly hostile to mining, said they would tell him of my visit and request for him to visit our operations. I had a bad feeling about the “spin” the staff might put on my offer of a tour, so I decided to wait to speak to the Secretary personally. It was a lonely afternoon, no one in the camp, except two reporters, wanted to have anything to do with a miner.

Secretary Andrus returned to the camp at about 7:00 P.M.. After my chilly reception by his staff, he was warm and cordial. He invited me to stay for supper. I don’t know who was more surprised, me or the Secretary’s staff! Over supper I told Secretary Andrus about our activities and made arrangements to meet him the next day for a tour of our properties.

The next day I took Andrus and two reporters to the ridge crest immediately west of the Sun deposit. We had a
sweeping panoramic view of the deposit. One drill rig was operating and again neither Andrus nor the reporters could see the drill or any of the thirty plus drill sites. It was impressive to them that we could define several billion dollars of valuable mineralization and not leave a visible trace on the landscape. Although Andrus was complimentary about Anaconda's methods of exploration, he told me on the spot he would oppose any attempt to gain access across the “boot.”

In December of 1978, disaster struck! When Congress failed to act on D-2 legislation, President Carter used the Antiquities Act and other executive orders to create over 100 million acres of new parks and wildlife refuges in Alaska. The Antiquities Act, which was passed to give the President authority to withdraw small tracts of land to protect American Indian burial sites, had been used to lock up almost a third of Alaska! A gross abuse of executive power, but it gave the preservationists a strong lever to push their agenda through the congress.

The Antiquities Act had enlarged the boundaries of the proposed Gates of the Arctic Park. The western boundary of the park had been expanded by one township to the west and Anaconda's Sun deposit was now inside a National Park. Our deposit had, in effect, been expropriated by the U.S. government. I always wondered if Secretary Andrus' visit to the Sun deposit had anything to do with this westward expansion of the Park.

In June of 1979 Anaconda struck back. To me it was the company's finest hour, I was very proud of my em-
ployer. The headlines in the June 16 issue of the Anchorage Times screamed, "MINING FIRM SUES CARTER."

Anaconda had sued the President of the United States, the Secretary of the Interior and the Secretary of Agriculture, claiming that they had greatly exceeded their authority by using executive orders to create parks and wildlife refuges in Alaska. The suit said the intent of their action was to create wilderness areas in Alaska, bypassing the expressed authority of the US Congress. Anaconda asked the court to declare all withdrawals invalid or to force the Carter Administration to greatly reduce the area of the withdrawals.

Anaconda's suit never got its "day in court." A series of legal maneuvers, and the eventual passage of ANILCA prevented the company from making its complete arguments. However, filing the suit put the preservationists on notice, that valid mineral rights were not going to be extinguished without a fight.

On February 7, 1979, I made my first testimony before the House Interior Committee in Washington D.C. I was on a panel with Chuck Hawley and Russ Babcock of Kennecott. My job was to tell the committee about the Sun deposit, located inside the Antiquities Act Park, and make the case for access across the boot. I was very nervous and hardly slept the night before. In addition, being seated with the congressmen on a dais looking down at me was quite intimidating. My voice quivered during my testimony, but I got my feet on the ground for the question-and-answer period, explaining our problem using specially prepared maps.

Anaconda geologists Mark Zedepski and Mike Jackson examine a ridge near Sun Deposit in early summer. Zedepeski did his UAF master's thesis on the Sun Deposit.
When the hearing ended, I went up to the dais to say hello to Udall and Siberling. They remembered me from their visit to Sun Camp. Siberling told me that moving the boundary of Gates of the Arctic Park to include the Sun deposit was a mistake and said, "we'll fix it." He was true to his word. H.R. 39, the bill that passed the House, was a terrible bill, but the boundary of Gates of Arctic Park had been moved back to the east and the Sun deposit was out of the park. To my knowledge this was the only pro-development action supported by Siberling in the whole d(2) debate.

Access to the Ambler District was woefully inadequate in H.R. 39, the bill that passed the House. We began to work in the Senate to see if we could get access across the boot. Judy Baird and I stayed up late one night and drafted the language on a yellow legal pad. We submitted the language to Senator Stevens' staff and worked very closely with them as a bill worked its way through the Senate. Other mining companies prospecting in the Ambler district thought that a western access route to Nome or Kotzebue might be a better alternative then east across the boot. The compromise language which was in the final Senate bill allowed for access from the east or west. Senator Stevens made access to the Ambler deposits, including across the boot, one of the "must haves" for the Senate bill.

Section 201(4)(b) of the bill that passed the Senate, says "Congress finds there is a need for access to the mineral deposits of the Ambler District" and goes on to say, that after a normal environmental review, "...the Secretary shall grant such access..." The preservationists screamed their concerns about access across the boot and other provisions of the Senate bill. Udall, the House negotiators and the Carter Administration said in conference committee that Ambler access was one of the provisions that had to go. We were not sure if we would be able to hold the language in the final bill. One proposed compromise was to remove the word "shall" from the access language, which would give the Secretary of the Interior more discretion over granting access. A future Secretary like Cecil Andrus would mean no access!

On November 1979, Ronald Reagan was elected President of the United States and Republicans captured a majority in the US Senate. A new dawn was beginning! Udall, knowing that the new congress would be much more friendly to the Alaska position, caved in and accepted the Senate bill which still locked up vast areas but was much more balanced than his H.R. 39.

The debate in Alaska was to accept the Senate bill or start the process all over again with a favorable administration and a republican majority in the Senate. Could we get a better bill? I was caught in a dilemma. From the viewpoint of my employer, Anaconda, we had everything we needed in the bill — access across the boot and the Sun deposit outside the park; but from my point of view as an Alaskan, it was a terrible bill — million of acres of high-potential mineral land locked up forever and access to open lands very complicated.

The bill passed both houses of Congress and was signed into law in the remaining days of the Carter Adminis-
The battle of the boot was won, but the war exempting high-potential mineral lands from closure and reasonable access provisions was lost.

Twenty years later, the base/precious metal deposits of the Ambler District remain undeveloped. In addition to low metal prices, the lack of any kind of transportation system to the area is a major economic stumbling block for any mining activity. When development does take place, these large high-grade deposits will be developed at some time in the future and we will find out if the promise of ANILCA, for access to the Ambler District, is good enough to cross an established National Park.

David Heatwole was Alaska Exploration Manager of Anaconda Copper Co. from 1974 to 1985. He was President of the Alaska Miner's Association from 1978 to 1980.