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THE ROLE OF MINING ON INDIAN RESERVATIONS IN THE USA

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Today American Indians are left with less than 3% of the land that once was theirs (FRANTZ, 1995², p. 47). Compared to the rest of the USA, however, the value of mineral resources discovered on reservation lands is, in some cases, out of all proportion to the small amount of land that is still in Indian ownership, but estimates of the exact extent of these deposits differ greatly.

The identifiable oil reserves on reservation lands amount to approximately 4.2 billion barrels and 18.5 trillion cubic feet of natural gas, 3% of the known reserves in the United States (see ORTIZ, 1984, p. 152; HENKEL, 1985, p. 300; ME-REWETHER et al. 1994). Joseph Jorgensen, on the other hand, estimates that these reserves on Indian country may reach from 3% to 10% of the U.S. total (1978a, p. 51)¹.

The situation is similar with Indian coal reserves, which, according to a report of the Department of the Interior, amount to around 70 billion tons, around 5% of the total deposits of the country. The same report reveals that reservation lands contain more than 15% of the nation's low-sulfur, strippable coal (U.S. Department of the Interior 1986, p. 102) but other sources suggest as much as 15% of the total U.S. coal reserves can be found on the reservations², and as much as 33% of the low-sulfur, strippable coal is located there (see ORTIZ, 1984, p. 152; BREGMAN, 1982, p. 8; GODWIN, 1994).

The uranium resources on Indian lands are also of national importance, although the extraction of these deposits was stopped in 1982 because of the relatively high costs involved compared with other countries, and due to the low world market prices and small demand. The uranium supplies that have thus far been discovered on Indian reservations are estimated between 15% and 40% of the total U.S. reserves (see BREGMAN, 1982, p. 8), while most surveys assume that at least half of the U.S. reserves are to be found on Indian country (see GOODMAN, 1982, p. 101; HENKEL, 1985, p. 300)³, allegedly at least 11% of total world reserves (ORTIZ, 1984, p.152), making total uranium deposits on reservations among the most important in the world.

Compared with the large oil, coal and uranium reserves, the non-energy minerals on the reservations are of secondary importance with the exceptions of still unexploited tungsten, zeolite and bentonite deposits⁴, for which there will be an increasing demand in the future because of their worldwide scarcity and their many uses in numerous industries. Copper, vanadium and phosphate sites are also of importance, and there has recently been a significant amount of mining for these minerals on the Papago (Arizona) and the Fort Hall (Idaho) Indian reservations⁵.

MINING ACTIVITIES ON RESERVATION LANDS – AN HISTORICAL OUTLINE

The fact that a number of reservations have a wealth of mineral resources today is not without a certain irony, because originally it was the intention of the responsible authorities to leave to American Indians only isolated areas which contained no mineral resources. At the time when the reservations were established some mineral resources such as uranium-ore were still unknown, and no one had any idea of the importance that other minerals would have as a source for the nation's energy in the future. In the second half of the nineteenth century, attention was concentrated on gold and silver deposits and later on copper.

These mineral resources were taken into consideration when the boundaries of the new Indian reservations were drawn up. The officers who were entrusted with the creation of the Hualapai Indian Reservation (Arizona) in 1881, for example, doubtless believed that they had carried out their task properly when they informed the authorities in Washington that within the old tribal land of the Pai Indians they had found an area which, in their opinion, was "of little value for grazing and minerals."⁶ They were careful not to include the territory to the west of today's reservation in the Cerbat Mountains which is rich in silver deposits.

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¹ According to BREGMAN (1982, 8) and GOODMAN (1982, 101) these reserves amount to 4% and 5% respectively.

² GOODMAN (1982, 10) speaks of 20% and HENKEL 30% (1985, 300).

³ There are even experts who believe that between 65% to 80% of the total U.S. uranium reserves are to be found on Indian reservations (CHURCHILL 1986, cited in PETERS 1986, 29).

⁴ In 1982 these deposits were estimated to amount to 2,000 tons, 137 million tons and 734 million tons respectively.

⁵ In 1982 these deposits were estimated to amount to 2,000 tons, 137 million tons and 734 million tons respectively.

⁶ The quotation is taken from two letters which Lieutenant Colonel William Redwood Price and Major General O.B. Willcox sent to their superiors in Arizona and Washington, D.C.

Despite such precautions, if it was later discovered after a reservation was established that its territory did have valuable mineral resources, the U.S. government frequently resorted to simply changing the boundary. Such land cessions took place on the Great Sioux Reservation, for example, which was established in 1868. Following the discovery of gold deposits in the Black Hills, this massif was excluded from the Sioux tribal land (SCHWARZBAUER, 1986, pp. 76-77). Step-by-step changes of the boundary also took place on the original Fort Apache Indian Reservation in Arizona, which was divided into two reservations of almost the same size, the San Carlos Indian Reservation and the Fort Apache Indian Reservation in 1896 (see Fig. 1). Silver deposits in the vicinity of Globe and the discovery of copper in the immediate neighborhood of Clifton-Morenci, however, led to several land cessions in that area. The reservation of the Chiricahua Apaches in the southeast of Arizona was abolished altogether when, shortly after its establishment, large gold, silver and copper deposits were located and potential pastureland was found. These discoveries made it impossible for the Bureau of Indian Affairs (BIA) to preserve the reservation because white ranchers and prospectors would have been up in arms should they have tried, and the land was turned over to non-Indians.

Furthermore, the Mineral Laws⁷, passed in 1972 for a small number of reservations, made it possible for outsiders to have access to the greatly coveted Indian mineral resources quite independently, without bringing in the policy of land cessions. All miners had to do was to communicate with the BIA to negotiate leases favorable to themselves which were valid for many years. The outcome of these negotiations was then usually ratified by U.S. Congress, while the tribes directly affected by these leases were generally bypassed in the negotiations or simply presented with the results as a matter of form.

More intensive mining on the reservations began after the First World War with the so-called Mineral Leasing Act (1920), which established a legal basis for large mining companies to operate on public land, including Indian reservation lands held in trust. There was particular interest in the oil and natural gas that was found on Navajo lands in the San Juan Basin (New Mexico) and on land of the Osage Indians of Oklahoma in the early 1920s. In order to extract these resources, an official tribal council was established on the Navajo Indian Reservation as early as 1921, even before the Indian Reorganization Act was passed in 1934, which installed tribal governments on all Indian reservations throughout the country. The primary function of this council was to sanction highly advantageous

contracts with some of the large oil corporations, such as the Midwest Oil Company.

At the end of the 1930s the Mineral Leasing Act, valid throughout the United States, was modified with passage of the Indian Tribal Mineral Leasing Act (1938) which led to standardized mining regulations on all reservations since then. It was stipulated that the BIA was to advertise for bids for permits which at first was limited to the prospecting and development of oil. The permit was to be awarded to the highest bidder and was to be valid for at least ten years. Moreover, until its amendment in 1982, this act further stipulated that Indian tribes did not have the right to exploit their own mineral resources. If mining was envisaged, it would be necessary to have a lease with a non-Indian business.

Due to these regulations, as well as the BIA's central role in arranging leases, its close relationship to other agencies within the Department of the Interior and to the board of directors of many multinational mining corporations, American Indians were powerless to free themselves from being taken advantage of and being patronized well into the 1970s. Since the late 1930s long-term contracts had been signed between the BIA and the mining companies, usually with conditions that were most disadvantageous to the interests of reservation Indians. Fixed-price contracts for coal, based on its market value in the 1950s and 1960s, were negotiated on the Navajo Indian Reservation, but by the end of the 1970s the price for a ton of coal had risen 400% without the Navajos gaining any benefit from this price increase (JORGENSEN, 1978a, p. 52). Indian land leases were usually much too low and did not take either the quality or the quantity of its mineral resources into consideration, as is customary in contracts outside the reservations.

It was not until the 1970s, and specifically after the Indian Mineral Development Act (1982), that reservation Indians gained the right to extract their own mineral resources, and it became possible to gradually put an end to this patronage on the part of the BIA in accordance with the much publicized self-determination policy. This new self-confidence of reservation Indians, which also affected activities in the mining sector, was closely linked to the oil embargo of the OPEC countries in 1973, which caused an energy crisis in the industrial countries of the Western World. At that time even the United States, rich in resources, began to realize how dependent it was on some countries for the supply of energy. The nation began the search for new sources of energy that would make it independent of imports, and a number of large American mining corporations directed their attention once again to the Indian coal reserves, which, though already identified, were still largely untouched. Shortly afterwards the U.S. government, on the basis of a study of the National Academy of Sciences (TRINK, 1989, p. 93), declared some regions, including land on several reservations, to be areas of national need.

To be better prepared for this renewed onslaught on Indian lands and to cash in on the increased demand for

⁷ Strictly speaking, the mining of mineral resources on Indian country was already made possible as far back as 1834 by the *Act of June 30*. This act specified that all leases, including those having to do with mining, required the authorization of the BIA, but at the time few non-Indians made use of this regulation.

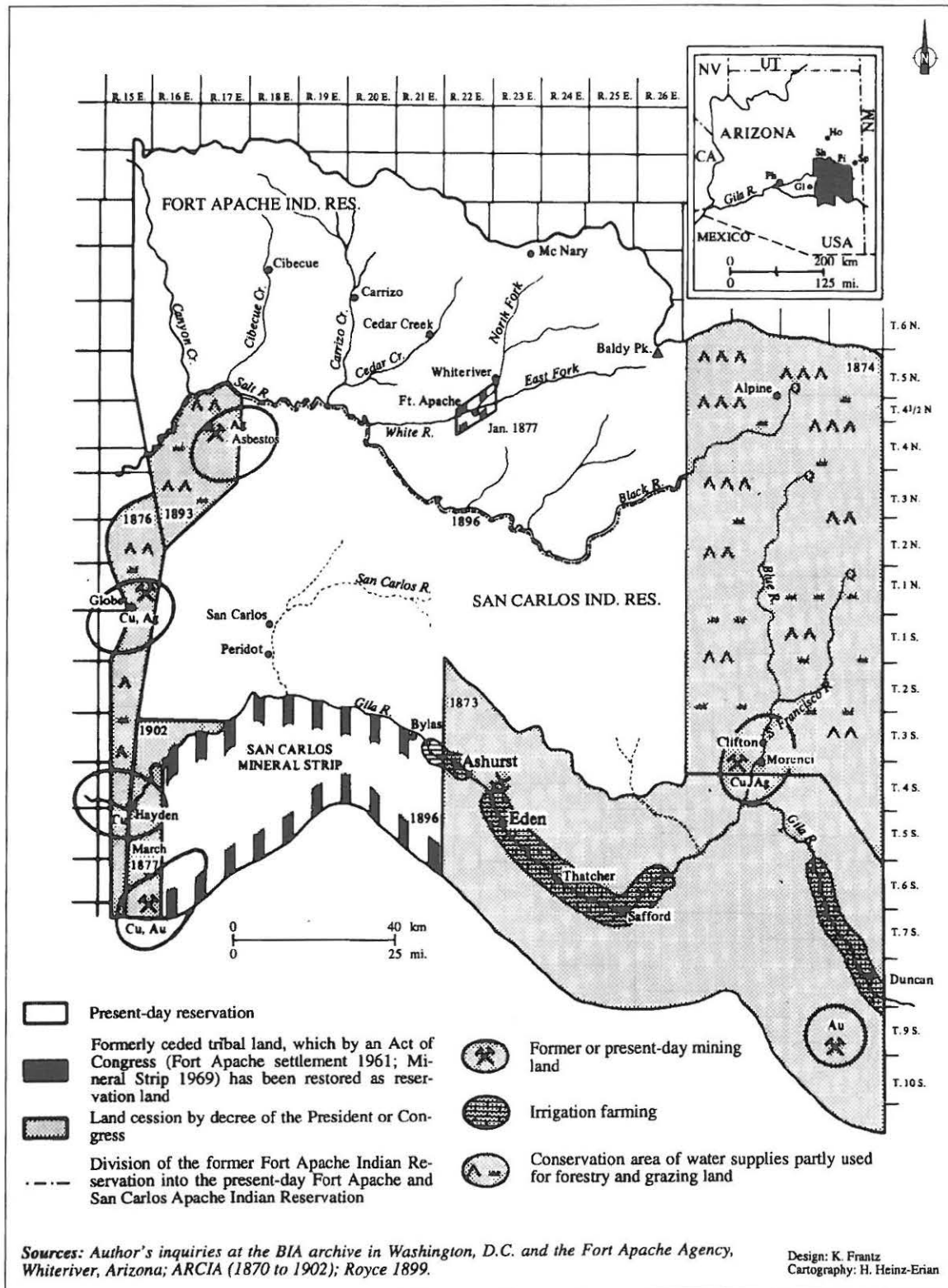


Fig. 1 – Enforced land cessions on the Fort Apache and San Carlos Indian reservations (Arizona) stimulated by the economic interests of non-Indians

reservation resources, twenty-three of the reservations affected by energy resources development founded the Council of Energy Resource Tribes (CERT) under the leadership of the Navajos in 1975. This was envisioned as an "American Indian OPEC" which, with the help of its staff of specialists, was to assist the tribes in their negotiations with mining corporations. From 1973 to 1981 the prices of oil, coal and uranium on the world market rose rapidly, but at the same time contracts were drawn up that were more advantageous to American Indians than they had been in the past, a fact which undoubtedly improved the income statistics of the reservations. During these eight years the output of tribal oil production was cut by about one-fifth, to a 1956 level, but the earnings increased sevenfold, while the natural gas production declined about 4% during this period, but tribal revenues from natural gas increased tenfold.

Between 1973 and 1981 coal production doubled while tribal revenues increased fourfold. Due to a worldwide surplus of these raw materials, however, extraction declined after 1982 and revenues stagnated. This trend has continued throughout most of the 1990s.

MINING ACTIVITIES ON THE INDIAN RESERVATIONS: INCOME, EXPANSE AND REGIONAL DISTRIBUTION

It is not surprising that large areas on Indian country are reserved for mining and prospecting in view of the significant tribal mining resources. These mineral development areas, with only a few exceptions, have, however, been leased to multinational mining corporations which have also acquired a major part of the approximately 12,000 prospecting permits according to the author's inquiries in the Department of the Interior. The land that has been taken over for such permits amounts to approximately 6,200 square miles, or 7.5% of Indian reservation land in the United States. Oil claims cover almost 90% of this land, but this calculation does not take into consideration the Osage Indian Reservation in Oklahoma, which is extremely rich in oil, and is also one of the few U.S. Indian reservations that will not release relevant statistics. Approximately 540 square miles of land has been leased to coal mining corporations. A regional breakdown shows that on some reservations, such as the Fort Berthold (North Dakota), South Ute (Colorado) and Uintah-Ouray Indian reservations (Utah), more than 35% of reservation land is used to prospect for and mine mineral resources that can be exploited. On the Fort Peck Indian Reservation in Montana the this proportion is 57% and on the Jicarilla Apache Indian Reservation in New Mexico 67%.

The existence of these mineral resources and the total size of the areas of mineral development should not cause us to overlook the fact that the majority of the Indian reservations must manage without this potential source of

income. Moreover, even the reservations which have such rich resources very seldom profit from them in the end. The total revenue of the reservations from mining, money received from land leases, right-of-way-income and royalties, but not including the wages that the Indians earn or the income of certain reservations for their share in production, amounted to about 233 million dollars in 1981 (more recent data on a national basis is unfortunately not available). If the Historic Areas of Oklahoma are included, these earnings exceeded 300 million dollars, 90% of which was derived from oil and natural gas production. Since 1981 the total revenue from mining has slightly decreased, and there has been a shift from oil being clearly the number one moneymaker to coal, which generated the largest source of Indian mineral income by 1992 (WILSON, R. e MANY-DEEDS, S., 1994, p. 3). This decline in revenues can be associated primarily with the decline of oil prices and the decline in production.

Only a very small number of tribes benefit from mining revenues, however, as already mentioned. Just thirteen reservations were involved in oil and natural gas development in 1983, for example, and test drilling was carried out on nine others⁸. The great producers were the Uintah-Ouray (Utah), Jicarilla (New Mexico), Wind River (Wyoming), Navajo (Arizona, New Mexico, Utah) and Osage (Oklahoma) Indian reservations, where the tribal revenues were between 13 and 71 million dollars, as well as some tribes in the Historic Areas of Oklahoma, such as the Kiowa and Commanche Apache in Fort Sill, and the Wichita, Caddo and Delaware, which, however, have no reservation of their own.

Ten mines of the Crow (Montana), Navajo (Arizona, New Mexico, Utah) and Hopi (Arizona) Indian reservations achieved a total production of 28.4 million tons of coal in 1983, 3.6% of the total U.S. production that year (U.S. Department of the Interior, 1986, p. 100). On two other reservations, the Southern Ute (Colorado) and the Uintah-Ouray Indian reservations (Utah), exploration concessions for production have been granted. The coal reserves of the Northern Cheyenne (Montana), is estimated at five billion tons, but the tribe has withdrawn the exploration rights of the Peabody Coal Company, the country's largest coal producer.

The mining of uranium-ore took place on only three reservations at the beginning of the 1980s, the Navajo (New Mexico), Laguna (New Mexico) and Spokane (Washington) Indian reservations. As late as 1980, just before mining for uranium on Indian lands ceased, some 24% of the nation's uranium production, approximately 12% of the production of the western industrial countries (BREGMAN,

⁸ Prospecting and drilling for oil and natural gas was carried out on the lands of 31 federally-recognized tribes in 1983. Today they produce 40 million barrels of oil, i.e. 1.2% of the total U.S. production, and 233 billion cubic feet of natural gas, 1.4% of the total U.S. production.

1982, p. 8), came from these reservations. On twenty-two other reservations, including the Acoma (New Mexico), Zuni (New Mexico) and Hualapai (Arizona) Indian reservations field studies and exploratory drilling was carried out by prospectors. Otherwise during the early 1980s only the production of phosphate and vanadium (Fort Hall Indian Reservation, Idaho) and copper (Papago Indian Reservation, Arizona) was of any importance. In each of these cases revenues of more than two million dollars were achieved for these tribes.

The Osage (Oklahoma), Jicarilla (New Mexico), Uintah-Ouray (Utah) and Wind River (Wyoming) Indian reservations are the ones that appear to have profited most if one adds up the income from mining permits and land leases to large mining corporations and considers this in relation to the population of these reservations. On these reservations, which account for only 3.7% of all U.S. reservation Indians, a theoretical per capita income of between 6,000 and 15,000 dollars was achieved in 1981 (more recent data is not available). These figures are theoretical, of course, because the individual Indians did not, in fact, receive these amounts as a direct payment, as the funds went to each tribal government. An additional 11% of reservation Indians would have received a theoretical income of between 1,000 and 6,000 dollars from mining developments on their respective reservations at that time.

THE ADVANTAGES, DISADVANTAGES AND PROBLEMS OF TRIBAL MINERAL DEVELOPMENT

There can be no doubt that the forced development of mineral resources on the reservations by non-Indian mining companies has brought a number of advantages to the reservations involved, advantages which they would not have had without letting these businesses operate on their land. Although the reservations are now permitted to extract their energy resources independently as established by law in 1982, only two reservations, the Jicarilla Apache in New Mexico and the Southern Ute in Colorado with their own oil companies, have thus far made use of this regulation. All other reservations that intended to start the independent development of their mineral resources have failed so far because of the lack of capital and know-how. They have only been able to obtain income through royalties and rent, or in some cases through the taxation of the licensed mining companies. Joint ventures, such as the one of the Navajos with non-Indian corporations to extract uranium so that they could share the profits, are still the exception.

The income from mining has helped some tribes develop the infrastructure of their reservation, raise the level of education of their members through scholarships and training programs and reduce the high rate of unemployment by generating new jobs. The non-Indian mining corporations also need a large number of workers, some of whom can be recruited from the reservation population. The

total amount of the mining-related wages the Navajos received in the mid-seventies, for example, equaled all other mining revenues (OWENS, 1978, p. 55). Similar employment gains were obtained on the Laguna Indian Reservation in New Mexico, where more than 500 Pueblo Indians were active in mining. There can be no doubt that these personal incomes have also benefited the reservation economy.

It still remains questionable whether one can accept the optimistic view that mining would provide the appropriate means to put an end to most of the deplorable socio-economic conditions on some reservations, however, for there is a long list of problems and disadvantages. It is a well known fact, for example, that the price of oil, coal, uranium and other mineral products is always subject to great fluctuations which can have disastrous consequences for an economy that is based almost exclusively on these products. This is true not only for developing countries dependent on mining products, but it is equally true for various Indian reservations in the United States where a substantial portion of the economy is based on mining. Navajo mining revenues, for example, amounted to 94% of the tribal budget in 1954, 50% in 1971, 49% in 1973, 56% in 1981 and 51% in 1995 (ABERLE, 1983, pp. 650-651; information from the Navajo Tribe)⁹. For the Jicarilla Apaches (New Mexico) mining revenues amounted to 81% in 1981 and 92% for the Pueblo Indians of the Laguna Indian Reservations (New Mexico). These reservations have serious financial difficulties when there is a decline in the prices of raw materials on the world market, as shown in the case of the Laguna Indian Reservation with its uranium reserves. The reduction of prices of uranium from 43 dollars a pound to around 20 dollars between 1978 and 1982 brought mining to a complete standstill on this reservation, while tribal budget funds plummeted drastically and more than 500 Indian miners lost their work.

Another problem is that the tribes usually have no real control over the development of their natural resources, even today, because in all important decisions it is still the Bureau of Indian Affairs (BIA) that has the last word. Apart from the fact that the BIA has very few mining experts they are hopelessly overloaded with work, it finds itself constantly involved in a conflict of interests, both with various other federal agencies and with some of the largest corporations of the country. On the one hand the BIA as trustee must represent the interests of the reservations, while on the other hand, as a part of the Department of the Interior, it is surrounded by other agencies that have a particular interest in developing the country's natural resources. Such agencies include the U.S. Geological Survey (USGS) and the Bureau of Land Management (BLM), whose views

⁹ This statement refers to income earned by the tribe itself, to which should be added budget allocations from the Bureau of Indian Affairs (BIA), the Indian Health Service (IHS) as well as grants and contributions from other federal agencies and private organizations. Income from these sources amount to many times the tribe's revenues.

often carry more weight than those of the BIA which despite its many employees has little influence. The Secretary of the Interior will usually take the side of the USGS and the BLM in decisions that are to be made. Another relevant factor is that outgoing top officials of the BIA sometimes join the board of directors of multinational mining corporations. With their contacts and inside knowledge of tribes they can then smooth the way for their new employers in difficult negotiations with the Department of the Interior. In view of these traditionally close connections and links,¹⁰ it is not surprising that contracts with particularly advantageous conditions are often granted to certain companies or that the extraction of mineral resources is sometimes carried out with minimal federal control.

It is an open secret that in Oklahoma and other states that are rich in oil, where Indian territory is widely interspersed with non-Indian lands, that large quantities of oil are illegally drained from under Indian lands by their white neighbors without the BIA taking any steps to prevent it. According to estimates of the U.S. government, prior to the 1980s, the U.S. government and federally-recognized Indians lost approximately 5.7 billion dollars in oil reserves in this way (Arizona Republic, 1987, p. 11). The BIA has no precise information about the annual amount of oil and natural gas that the licensed companies take from leased Indian lands, because the meters are read only at very irregular intervals owing to the lack of qualified employees, and quite often the companies even refuse to allow the BIA to do that. The BIA must, therefore, rely on information provided by the oil producers, which is then passed on in good faith. A Congressional report, found that a consequence of these conditions was that federal agencies failed to collect as much as 5.8 billion dollars for reservation Indians between 1979 and 1985 (Arizona Republic, 1987, pp. 4-6). If this sum is correct, it would amount to roughly four times the total oil revenues to Indian reservations during these seven years.

Moreover, the BIA does not see to it that companies engaged in mining and generating energy observe the precautionary regulations regarding the health of the local population and for the conservation of the environment. Such regulations are largely disregarded by these companies because of the expense involved and lack of monitoring. Large quantities of fly ash and sulfur dioxide are emitted onto the Navajo Indian Reservation from the Four Corners Power Plant, which is fueled by Navajo coal and owned by the Arizona Public Service Company in Fru-

tland, New Mexico. The same happens because of the 2,300 megawatt power plant in Page, Arizona, which is linked to the Peabody Coal Company mines 80 miles away on the Navajo Indian Reservation by a railway. These reservations are left with the pollutants, while a major part of the inexpensive electricity goes to the consumer markets in Phoenix and southern California hundreds of miles away. The Navajos, however, must for the most part, buy back the energy that was produced with their coal because they own only 12.5% of the electricity generated at the Four Corners Power Plant. The remaining coal from the strip mining areas of the Black Mesa (Navajo and Hopi Indian reservations) is crushed on the spot and, by means of a pipeline that is supplied with groundwater,¹¹ the coal slurry is shipped to the 1600 megawatt power plant in Bullhead City, Arizona, more than 270 miles away, where it is first dried and then burned. The energy generated there is also produced for outside markets. Because of the general lack of measures to recover the stripmined land, further harm is done to the Hopi and Navajo tribes, harm that is particularly distressing for the local people that have sheep. It will take decades for the prime vegetation on these extremely arid plateaus to return so as they can again be used as pastureland, and that may never be possible.

The fact that the BIA neglected its supervisory responsibilities had particularly negative consequences for the reservations on which non-Indian mining companies were prospecting for uranium-ore until recently. When mining was begun there in the early 1950s, people were not aware of the attendant health risks. During the next thirty years the health of many American Indian miners suffered as a result and some even died. People living adjacent to these mines were also effected¹², yet even after the risks became known, the precautionary measures taken by the BIA were inadequate. A visit to the little Indian village of Paguete in the northern part of the Laguna Indian Reservation in New Mexico revealed that until the late 1980's at least, the piles of radioactive waste from the Jackpile Mine, once the world's largest surface uranium mining operation, extended right to the western boundary of this settlement. Other settlements near tailings were also to be found on the Navajo Indian Reservation (New Mexico) at that time. On both these reservations the tailings of the mines were used for road constructions and building houses (PETERS, 1987, p. 30) creating an even more permanent hazard to residents. Only in the 1990s were some reclamation projects initiated that treated the contaminated

¹⁰ A financial disclosure statement filed by the head of the BIA during Reagan's presidency showed that he owned stock or interest in three oil-related businesses on Indian country (Arizona Republic, 1987, 6). After leaving office Reagan's first Secretary of the Interior and his acting Assistant Secretary for Indian Affairs founded a business consultant firm whose most important clients included mining corporations which either had already obtained the surface leases and permits on reservation land or wanted to obtain them (*Washington Post*, 1985).

¹¹ For this purpose water is pumped up from deep wells at a rate of about 2,700 gallons per minute as far down as 3,300 feet, and the Navajos only receive little compensation for this groundwater.

¹² The Shiprock Mine on the Navajo Indian Reservation in New Mexico had a total of 150 Navajos employed as miners from 1952 to 1970, for example. A survey showed that ten years after the mine closed down 38 of these miners had died from lung cancer caused by radiation exposure. Another 95 workers suffered from respiratory diseases and cancer (SAMET *et al.*, 1984 and NAFZIGER, 1976, cited in PETERS, 1987, 30).

soil and reseeded the former mining sites so that the prevailing health hazards could be partly stopped (U.S. Department of the Interior – BIA, 1993, pp. 83-93).

Without any doubt, the people who really profit from Indian mining live far away from reservations. With only two exceptions, the Jicarilla Apache Energy Company and the coal-bed methane operations of the Southern Utes, the mineral resources on Indian country are mined by white entrepreneurs and then exported. There is no processing of the minerals on the reservations. As a result the “multiplier effect” that could be gained through mineral resources is lost for the local tribal economy. This lost opportunity is reflected, among other things, in the high rate of unemployment to be found even among those tribes for whom mining is of paramount importance and one of the principal sources of income. The unemployment rate of the Jicarilla Apaches, Navajos and Laguna Pueblo Indians was between 44% and 53% in 1981, when the mining boom was coming to an end. In the case of the Navajo and Laguna tribes this was clearly above the average of 46% for all reservation Indians (U.S. Department of the Interior – BIA 1982, ... Labor Force Estimates). This did not change much till the mid 1990s when the Navajos still faced an unemployment rate of 38% and the Laguna of 46%, the average of all reservation Indians being 37% (U.S. Department of the Interior – BIA 1995, ... Labor Force Estimates).

In the last analysis, the main profit made from the Indian's natural resources is not only siphoned off by the large U.S. mining corporations and electric power companies, but above all by the states in which the reservations rich in resources are located. The Navajo case can be used as an example. In 1976 the total income of the Navajos from royalties, land rents and right-of-way-income amounted to 12.8 million dollars, yet in the same year the state of Arizona earned in 18.5 million dollars in taxes from non-Indian mining corporations and electric power companies there (OWENS, 1978, p. 53), without the Navajos receiving any appreciable sum of money or other service in return from the state. This disparity of tribal revenues and tax revenues earned by the state is still the same today, according to the Navajo Tribe, though there is no published data on this.

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