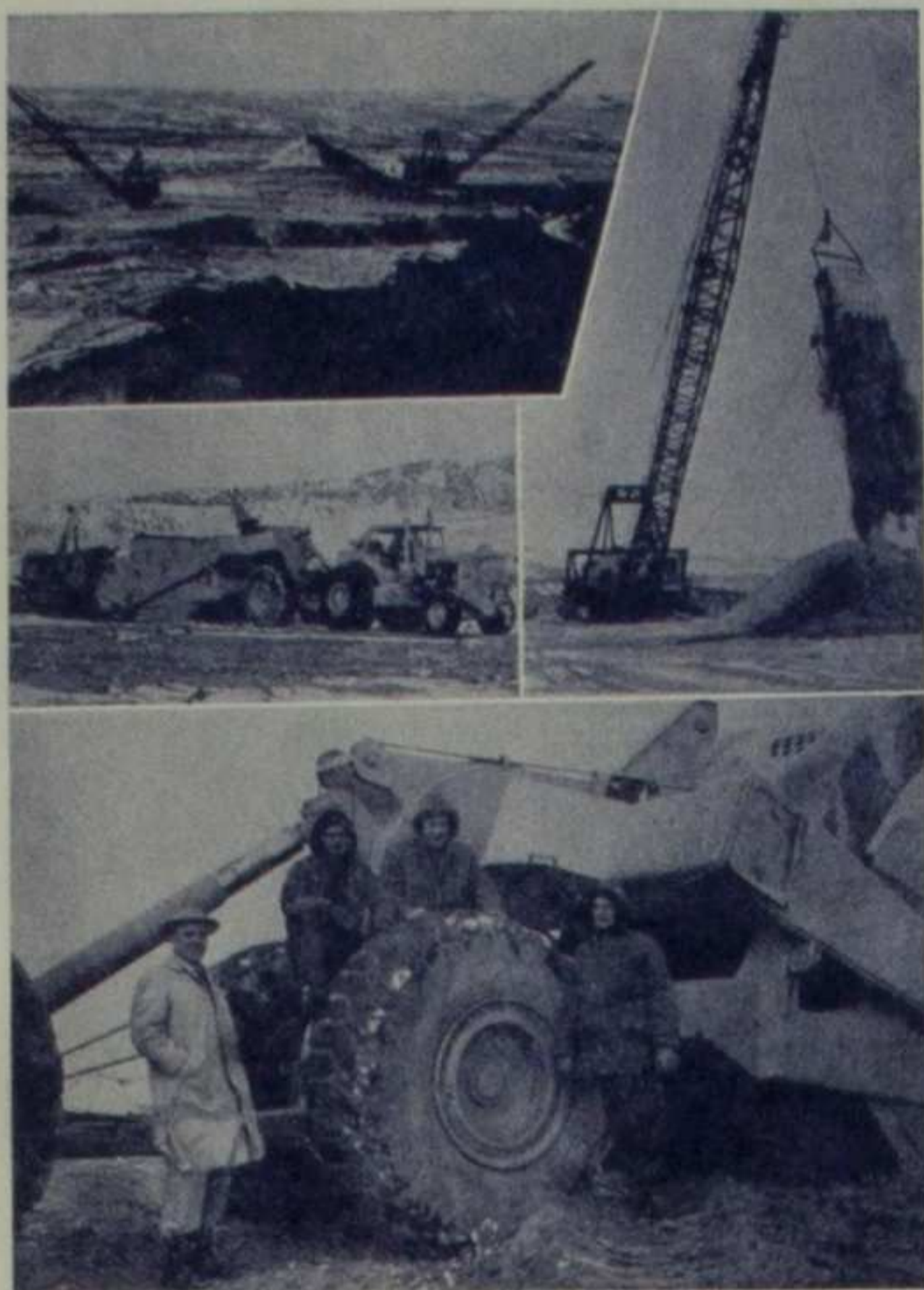


SPECIAL URANIUM REPORT



WYOMING'S GAS HILLS DISTRICT

Crook's Gap — Copper Mountain — Others

"The Awakening Giant of the
Uranium World"

May 1957

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INFORMATION COMPILED by the RIVERTON, WYO. CHAMBER of COMMERCE
Roy Peck
Chairman
Industrial Committee

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THE FRONT COVER

Upper Left, Two large draglines working at the Vitro Minerals uranium mine in the Central Gas Hills.

Upper right, The huge Marion 7200 dragline dumping a load of overburden at the Vitro mine.

Center, left, Moving the first scraper full of dirt at the site of the Lucky Mc Uranium mill. The MRS27 scraper is built up to carry 3 $\frac{1}{2}$ yards of dirt. Assisting to the rear is an HD21 cat.

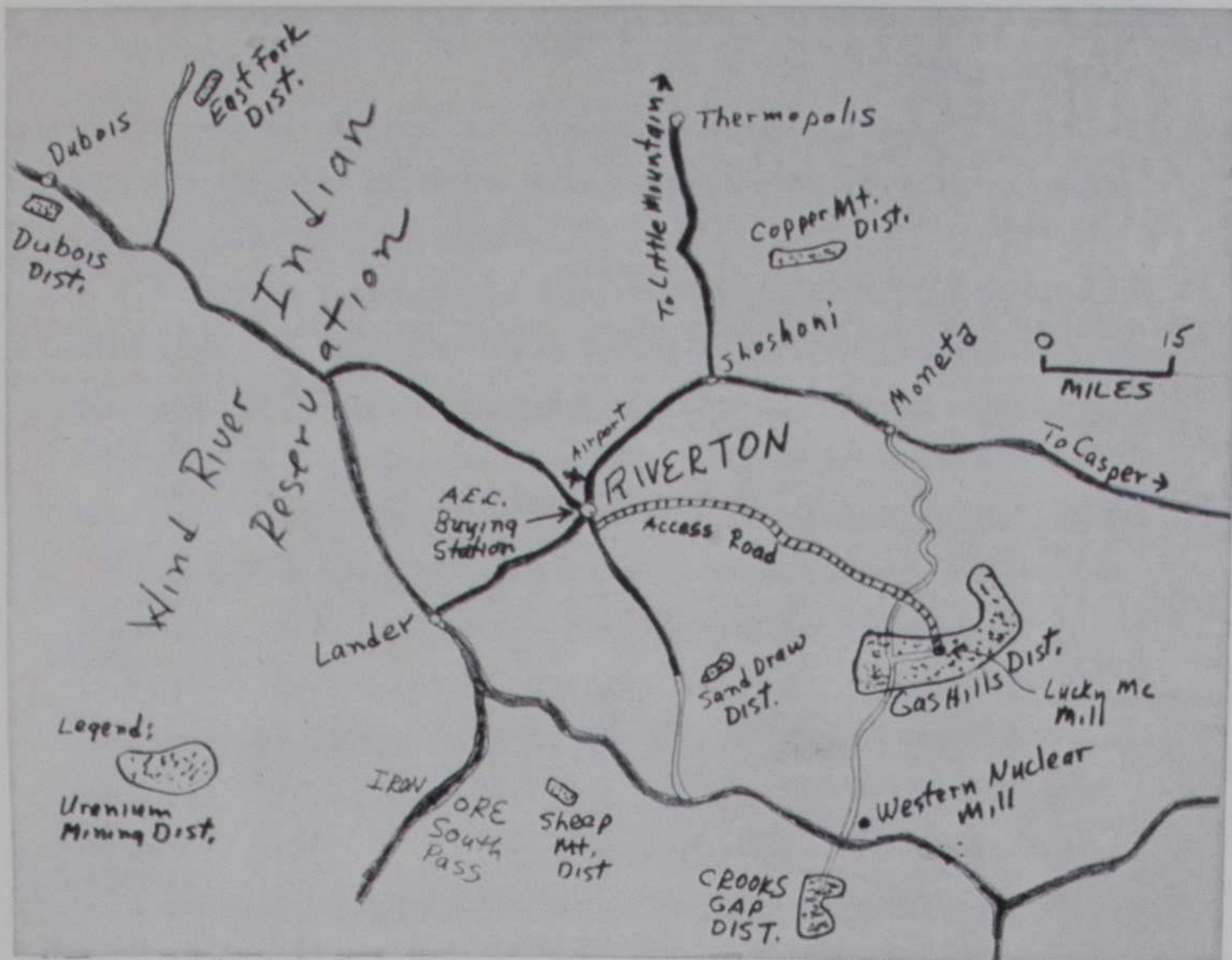
Lower, the first shovelful of dirt has just been moved for the Lucky Mc Uranium mill. Left to right, Al Quine, Lucky Mc general manager; Neil McNeice, discoverer of Lucky Mc and vice president and director; Lowell Morfeld, McNeice's partner and a director in Lucky Mc; and Hank Rowe, project manager for Utah Construction Co.

URANIUM PRODUCTION

Gas Hills - Crooks Gap — Other Areas

About 75% of the uranium ores being mined in Wyoming are coming from the Gas Hills. It is expected that as mills get into operation, improving the market picture, this ratio will become even greater, possibly as high as 85%.

The map below shows the general Fremont County uranium district, road networks, and other geographic features. Companies operating in the areas are indicated below the map.



Gas Hills District

West Gas Hills

Globe Mining Company
Western Nuclear
Gas Hills Uranium
Radorock Resources
Federal Uranium
Mountain Mesa
Riverton Uranium
Gas Hills Uranium Development
Washakie Uranium Corporation
Dale B. Levi
Harold Reach

Northeast Gas Hills

Joe Wentz
NOMCO

Copper Mountain District

Little Mo Mining
Four-City Uranium
Charles Shelley
Jarvis and Fitzgerald
Lamac, Inc.
Kerr-McGee
Charles Massey
Washakie Exploration

Sand Draw District

Cheyenne Mining and Uranium
Charles Poole and Associates
Rex Peters
Eldon A. Jones
Washakie Exploration

Dubois District

Kaye Minerals
Whiskey Mountain Mining Company

Central Gas Hills

Lucky Mc Uranium
Vitro Minerals Corporation
Western Nuclear
Shoni Uranium
Antelope Mines
Out West Uranium
Standard Uranium

East Gas Hills

Veca Minerals
Shoni Uranium
Hughes Mining Company
Stanbury Mining Company
Two States Uranium
Valley Dean
Ran Rex
Gas Hills Uranium
Amrad Oil
Bengal Uranium
Aljob Mining
Union Carbide Nuclear
McAlester Fuel Company
P-C Mining
Dale B. Levi
NOMCO
Vitro Minerals
Cheyenne Mining

Crooks Gap

Wyoming Uranium
Phelps-Dodge Corporation
Continental Uranium
Western Nuclear
Harrower Brothers
Mile High Minerals
Gas Hills Uranium
Radorock Resources
Federal Uranium

Sheep Mountain District

Bridger Mining Company
Uranium Drilling Service

East Fork District

Washakie Exploration
Vipont Mining

ORE RESERVES IN THE GAS HILLS, CROOKS GAP AND OTHER AREAS IN
CENTRAL WYOMING IN RELATION TO PRESENTLY AUTHORIZED MILL CAPACITIES

Mining and market were far out of balance during 1956 in the Gas Hills uranium district. This situation will become even more aggravated as 1957 continues.

Presently there are no mills in operation in the Gas Hills or adjacent to buy ores. Total output is purchased either through the small Atomic Energy Commission buying station program, or through long hauls by truck and rail to the Vitro mill in Salt Lake City or the Mines Development mill at Edgemont, South Dakota.

It is the A.E.C.'s announced goal to remove themselves from the buying station program at the earliest possible moment. It is expected that Gas Hills ores will lose their A.E.C. contracts sometime this summer, and that the Riverton buying station (presently buying ores other than Gas Hills) will close around January 1, 1958.

The only permanent solution to this market problem is the construction of mills by private enterprise. Two such mills--Western Nuclear located 22-30 miles south of the Gas Hills and 10 miles north of Crooks Gap, and Lucky Mc Uranium located in the heart of the Gas Hills--are now under construction.

Neither of these mills at their present rated capacities can hope to meet the market demands of mines in the Gas Hills and Crooks Gap.

In fact, it would seem likely that should the AEC set aside its buying program at the buying stations at the time these mills open, the problem of market will be worsened. Western Nuclear hopes to be on mill stream by July 1, 1957, but the Lucky Mc mill will not be completed until the early spring of 1958.

Western Nuclear will have the problem of sampling nearly 100,000 tons of ores purchased by the AEC and stockpiled near their mill at Split Rock. It would seem unlikely that Western Nuclear would be in a position to buy more than their custom requirements of ore, about 3,000 tons a month. A.E.C. is presently buying about

2- Ore Reserves

10,000 tons of uranium ores per month and this amount is far below the market needs of the Gas Hills, and Crooks Gap is only starting to come into production.

Lucky Mc Uranium does not contemplate purchase of any of its custom ores until the mill opens in 1958. But even when Lucky Mc's 4500 tons per month custom ore capacity is available, there will be only market for some 7500 tons of custom ores in the Gas Hills. Any one of several companies could fill this total capacity.

It is apparent that more milling capacity must be authorized for the Gas Hills and Crooks Gap, and authorized rapidly if an economic tragedy is to be averted for mining companies not presently building mills.

The A.E.C. can temporarily alleviate this condition by continuing their buying program. Should it seem inadvisable to ship further ores through the sampler at Western Nuclear, a temporary solution would be to return the Gas Hills quotas to the Riverton buying station for a few months while mills are completed.

No one is operating under the illusion that the A.E.C. will buy great quantities of ores for an indefinite period. But during the time that mills are being negotiated with the A.E.C. and constructed it seems justifiable for the A.E.C. to continue its limited buying.

Further proof that additional mills are needed to serve Gas Hills and other Wyoming mining districts may be seen when the ore reserve picture is analysed.

Ore reserves shown here are proven, probable, and possible reserves, and do not include inferred reserves in favorable ground as yet undrilled. It has been estimated that less than 25% of the favorable ground in the Gas Hills has been drilled, so it is probably that there are from two to three times the reserves in the Gas Hills that are shown in this survey.

3- Ore Reserves

Presently authorized milling capacity:

Lucky Mc Uranium	750 tons per day
	273,750 tons per year
	1,368,750 tons milled in 5 years
Western Nuclear	400 tons per day
	146,000 tons per year
	730,000 tons milled in 5 years

TOTAL Ore to be Milled in 5 years, both mills:

2,098,750 tons

CUSTOM ORES from total milling figure (based on 20% custom):

419,750 tons

Estimated Ore Reserves:

WEST GAS HILLS

Globe Mining Company	900,000 tons
Western Nuclear (Bull Rush)	100,000
Gas Hills Uranium (Federal)	100,000
Mountain Mesa	75,000
Riverton Uranium	25,000
Gas Hills Uranium Development	50,000
Tri-States Uranium	10,000
Miscellaneous	50,000
	<hr/>
TOTAL West Gas Hills	1,310,000 tons

CENTRAL GAS HILLS

Lucky Mc Uranium	1,500,000 tons
Vitro Minerals	400,000 tons
Western Nuclear (Frazier-Lamac)	150,000
Antelope Mines	25,000
Out West Uranium	25,000
Gas Hills Uranium (Federal)	25,000
Miscellaneous	50,000
	<hr/>
TOTAL Central Gas Hills	2,175,000 tons

4- Ore Reserves

EAST GAS HILLS

Veca Minerals	200,000 tons
Aljob (Union Carbide Nuclear)	300000
Shoni Uranium	50,000
P-C Mining	50,000
Two States Uranium	200,000
RanRex (Federal)	25,000
Dale B. Levi	25,000
Bengal Uranium	50,000
Vitro Minerals	25,000
Cheyenne Mining	25,000
Hughes Mining Co.	25,000
Gas Hills Uranium (Federal)	25,000
Miscellaneous	50,000
	<hr/>
TOTAL East Gas Hills	1,050,000 tons

NORTHEAST GAS HILLS

Joe Wentz	50,000 tons
NOMCO (Diefenderfer)	25,000
	<hr/>
TOTAL Northeast Gas Hills	75,000 tons

CROOKS GAP

Wyoming Uranium (Phelps-Dodge)	300,000 tons
Continental Uranium	100,000
Harrower Brothers	100,000
Western Nuclear	100,000
Miscellaneous	50,000
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TOTAL Crooks Gap	650,000 tons

COPPER MOUNTAIN

Little Mo	25,000 tons
Miscellaneous	25,000
	<hr/>
TOTAL Copper Mountain	50,000 tons

5- Ore Reserves

OTHER ORES

High Lime of Pryor Mtns.,
Little Mtn., Bald Mtn. 160,000 tons

Dubois, East Fork, Sheep
Mountain, Sand Draw 25,000 tons

ORE IN STOCKPILE

Includes Riverton buying
station, Split Rock buying
station, ore stockpiled at
mine sites 250,000 tons

TOTAL Unmilled Reserves Tributary
to x Central Wyoming mills 5,685,000 tons of ore reserves

Central Wyoming Ore Reserves 5,685,000 tons

Presently authorized mill capacity 2,098,750 tons

Ore Reserves with NO MARKET 3,586,250 tons

There can be only one inescapable conclusion from the statistics just presented. More milling capacity is of vital necessity if the Gas Hills and its neighboring uranium mining districts is to survive.

Increase in capacities of Western Nuclear and Lucky Mc Uranium mills would help the situation. But the only real answer is for the authorization of at least one more and possibly two or three more mills to serve Wyoming uranium ores.

Several companies are in negotiation with the Atomic Energy Commission now. Among those known are Globe Mining Company, who have the second-largest uranium ore reserve in the Gas Hills; Fremont Minerals (Susquehanna Corporation), who do not own property in the Gas Hills but operate the successful mill at Edgemont, South Dakota as Mines Development; Union Carbide Nuclear, giant in mining and milling on the Colorado Plateau; Vitro Uranium, who are talking in terms of an ore concentrator; Giant Resources, and probably several others.

Successful conclusion in the near future of some of these negotiations would be good news for the Wyoming uranium industry.

MEMORANDUM FOR THE SECRETARY OF DEFENSE
Subject: [Faint text]

Reference is made to [Faint text]

Mr. [Faint name]

Enclosure of [Faint text]

[Faint text]

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"1956 DEVELOPMENTS IN THE GAS HILLS AND CROOKS GAP"

A Paper Before the 2nd Annual Wyoming Mining Association
Convention at Casper, Wyoming, April 13, 1957.

Delivered by Roy Peck, Publisher of the Riverton Ranger
Vice President of Shoni Uranium.

Mr. Cummings

Members of the Wyoming Mining Association,

Ladies and Gentlemen:

A subject such as "1956 Developments in the Gas Hills and Crooks Gap" is one that under most circumstances would take at least a week to cover, and several volumes to print. My allotted time is from 20 to 30 minutes.

I shall do my best to do justice to both of these fine uranium mining districts. But I must apologize in advance for any omissions that might occur. They are not intentional. The breadth and scope of mining in the Gas Hills and Crooks Gap is of such magnitude that it might well take a full afternoon of this convention, and summon the opinions of many miners, mill operators, exploration chiefs, geologists, and even newspapermen to cover the subject. It will be my problem to shift hats often enough during my remarks to give you a little insight into the many advances in the past year.

Historically, the Gas Hills was discovered first in September 1953 by that intrepid amateur geologist and prospector, Neil McNeice, now vice president of Lucky Mc Uranium. Neil's fabulous discovery whetted the appetites of many other prospectors and a few months later, late in 1953, but for the most part in early 1954, Crooks Gap was discovered some 30 miles to the south.

Some of the first claims in the Gap were the Hazel group staked by Lawrence Bergston; the Snoball claims staked at about the same time by Bishop and Spurlock, Lander surveyors, these claims now owned by Western Nuclear, or should I say Lost Creek.

It is really very difficult to know where to stop when naming the pioneers of the Gas Hills and Crooks Gap. Most of the prospectors of 1953 and early 1954 deserve the title.

To name a few--Page T. Jenkins and Darby Hand, now of Globe Mining Co., were flying the Gas Hills, and finding hot anomalies, at about the same time Neil McNeice and his partner Lowell Morfeld were staking claims on the ground. Jenkins and Hand staked many claims to the west of the Lucky Mc property.

Cotter Ferguson was an early comer into the Gas Hills, bringing with him friends from Savanna, Illinois. The Bull Rush claims of Savanna Construction, now part of Western Nuclear; the Sagebrush and Cal claims of Gas Hills Uranium, were but a few of the more than 500 claims finally acquired for Gas Hills Uranium thru Cotter's tireless work.

Alfred Nostrum, upon hearing of McNeice's discovery, remembered an outcrop of uranium he had noticed in 1952, rushed back to the spot in 1953, and the now famous Aljob mine was founded in the East Gas Hills. It is now under option to Union Carbide Nuclear.

Vern Hughes came to the Gas Hills in '54. His discoveries

in the East Gas Hills have been the basis for many of the better producing properties today. Hughes was not selfish and invited many of his friends in to share in the seeming bonanza-- Sam Stanbury, Bob Diefenderfer, and many others.

There were Charley Massey, Joe Wentz, Stan Starrett, Jerry Ruzicka and the school teachers of Lander, Lawrence Gibson of Riverton, and many others who pioneered in the Gas Hills. Some have done well, and for some the main struggle still lies ahead.

Into Crooks Gap came Hepburn Armstrong, quitting a Washington job to stake claims and take leases that became Wyoming Uranium. The Harrower brothers, Norm and Bob, found the rich Sun Dog claims and have spent much time, and hard-earned money in their development. Bob Adams of Rawlins, now president of Western Nuclear, acquired the Sno-ball claims and was on his way to a position of leadership in uranium.

We shouldn't forget Copper Mountain, a part of the Wind River basin geologic complex that made uranium ores. There Lou Holst and L. A. Henderson helped build Little Mo--other early claims were staked by Curt Kaiser and Al Allard, by Charles Shelley, and of course others.

But we must move on quickly, at the expense of other uranium pioneers whose names we cannot mention because of time limitations.

Geologists, from the Atomic Energy Commission, from the USGS, private and company geologists, have made a great contribution to the growth of the two districts. It took an open mind and a new uranium outlook to understand the complexities of the Wind River formation.

Dr. Dave Love of the USGS theorized on the origin of the uranium from White River formation tuffs, Whitey Zeller of USGS has done and continues to do invaluable work in water sampling, surface and sub-surface mapping of the Gas Hills; Ray Lindlof of the AEC is recognized as a Gas Hills and Crooks Gap authority; and Dr. John W. Gruner of the University of Minnesota made great contributions in the identification of uranium minerals and other phases.

The company geologists--Don Anderson of Lucky Mc, Dave Welsh of Vitro and now with Phelps Dodge, Galen Quigley of Vitro, Stan Grant of Gas Hills Uranium who also did early work for Globe Mining in writing his University of Wyoming thesis on Wind River formation channelization; Jenkins and Hand of Globe, Binar Erickson of Two States--consultants like Bob Ford and Bob Parker, Jack Ellis now of Dale B. Levi and so on and on.

One of the important geologic discoveries in the Gas Hills was the unoxidized ore horizon, sometimes called the blue zone because of its dark color. This zone, from which 99% of the uranium ores in the Gas Hills are now mined and will be mined, was first delineated and proven by Vitro Minerals Corporation and if any one individual could be given major credit for this discovery, it would be Galen Quigley of Vitro. He would be the first to admit that his correct diagnosis of the unoxidized ore horizon in the Gas Hills was greatly assisted by the thoughts of other Gas Hills geologists. Nevertheless, Vitro was the first to strip to the unoxidized zone in April of 1955 and ship it in commercial quantities to the AEC buying station in Riverton.

Many favorable geologic factors are present in the Gas Hills and Crooks Gap for the deposition of uranium ores, making the district one of the world's greatest uranium deposits. The source, "the mother lode", could have been both the volcanic tuffs of the White River and the granite cores of the mountains.

3- The Gas Hills and Crooks Gap, Roy Peck

Not all of the uranium is located in the Gas Hills and Crooks Gap. Other Neil McNeice's will make future rich finds in Wyoming--perhaps beneath the Beaver Rim, on the Wind River Indian Reservation, high on Copper Mountain or Birdseye Pass, along the front range of the Wind River mountains, deep back in the Owl Creeks, or in the Big Horn mountains.

The romance and adventure of prospecting still beckons. And it will still be the small, amateur prospector who will make the rich discovery that will bring another Gas Hills. All of us owe a great debt to the amateur prospector as epitomized by Neil McNeice et al.

The change in the Gas Hills has been great in 1956. In fact, breathtaking is an understatement to describe the development of the most underrated uranium area in the world. In 1956 we saw a transitional mixture from exploration to mining to milling. The future will continue to see a combination of all that will bring untold millions of tons of uranium ores from the earth.

Perhaps the best way to describe Gas Hills progress is to examine for a moment the progress made by several of the individual companies, each with a somewhat different objective in mind.

From the first, the goal of the Lucky Mc people has been a uranium mill. This goal was achieved last fall with the signing of a contract with the AEC for the construction of such a mill. The Utah Development Corporation, a Utah Construction subsidiary, is now energetically constructing one of the nation's largest uranium mills for Lucky Mc.

The progress of Lucky Mc may be traced from Neil McNeice's 1953 discovery through the many stages necessary in the development of a sound mining and milling company. It fell the lot of Neil, Lowell Morfeld, Don Anderson and others to get the claims validated and to begin scratching the surface to delineate the ore. It soon became apparent that more capital was needed and Lucky Mc formed an agreement with W. H. H. Crammer, president of New Park Mining Co. of Salt Lake, for further development of the property.

When the magnitude of the Lucky Mc reserves became apparent and the prospect of a mill bright, Lucky Mc turned to an even greater giant of the mining and milling world, Utah Construction Co., to complete their now near-perfect dream.

The expert technical skill of Utah Exploration--and we might mention here Homer Mann and Jack Bailey who guided Lucky Mc thru last summer and fall's exploration phase--proved out one of the great ore bodies of uranium.

Concentrating on blocking out ore reserves, very little uranium ore (relatively speaking) was shipped by Lucky Mc during this period. But utilizing such radical block-out methods as frozen core drilling, Lucky Mc proved reserves of ore that guarantee the existence of their mill for many years.

The year 1956 saw Lucky Mc emerge from a healthy prospect into a mature member of the mining and milling world.

Just west of Lucky Mc lie the claims of Vitro Minerals. Whereas the main objective in the last year with Lucky Mc has been the development of ore reserves, Vitro has concentrated on their mining operations. I might add, however, that Vitro has not neglected its ore reserve development, and by admission in the annual report of Vitro Corporation of America, has proven over 250,000 tons.

Vitro began its mining operation in the spring of 1955 under the capable direction of Roy Coulson, whose mining experience

was gained in the coal fields of Pennsylvania.

An initial pit was stripped with a 2½-yard Northwest 80D dragline to a depth of 40-50 feet. The first pit was 400 feet long and 50 feet wide at the bottom. Using the cut and fill method of mining, Vitro has made seven diagonal cuts off the initial pit in the mining of more than 80,000 tons of ore in less than two years. Much greater production could have been accomplished had a larger market been available.

In 1955 Vitro moved 163,000 cubic yards of overburden; in 1956 took out another 287,000 yards of material. In 1957 the Vitro operation was girded for greater production with a giant Marion 7200 dragline with a 5-yard bucket to do the stripping.

In the first three months of 1957 Vitro has already moved 243,000 cubic yards of overburden with the 7200. Total overburden removed to date is 693,000 cubic yards.

The Vitro production in March was 6300 tons of ore, but this was not the greatest month of production. In May 1956 Vitro mined 6867 tons of ore.

In March 1957 Vitro shipped 1936 tons to the AEC provisional buying station on the Sweetwater near the Western Nuclear mill site, and 2029 tons to the Vitro mill in Salt Lake, trucking the raw material to Rawlins from where it goes to Salt Lake by rail. In the immediate expansion of Vitro production which will include a 2500-ton a month AEC quota to the buying station and a 7500 ton allotment to the Vitro mill in Salt Lake, 14 ore-hauling trucks of Dick Truck Lines will be utilized.

Vitro has more than 20,000 tons of ore stockpiled above the ground now. Having developed an efficient mining operation which can mine 10,000 tons a month with approximately the same personnel as are required to ship the 2500-ton AEC buying station quota, Vitro's marketing problem, like that of other Gas Hills operators, is apparent.

There is now approximately 50,000 tons of ore mined and above ground in the Gas Hills with very limited quotas to the buying station. There is another 150,000 tons of ore stockpiled at the buying station in Riverton, and from 30-40,000 tons stockpiled at the buying station at Western Nuclear. This makes ~~XX~~ a total of more than 230,000 tons of ore from the Gas Hills now in stockpile awaiting milling. And this figure grows daily.

But back to Vitro's mining. The big Marion 7200, rated as a 6-yard machine, is now equipped with a 5-yard bucket and 135-foot boom. It will dig efficiently to a depth of 96 feet, will pile up spoil to a height of 69 feet, and has a dumping radius of 130 feet.

The Marion is now stripping to a depth of 65-75 feet. The average depth of the Vitro ore body now is about 85 feet.

A Fairbanks-Morse engine propels the "walking" Marion, running the draw works and powering the digging. A Cummins diesel engine runs a generator which provides power for the electrical swing motor and the boom hoist motor.

The movement of this big machine from the railhead at Shoshoni to the Gas Hills property 56 miles away was accomplished by virtually building a new road the full distance. It took just 3½ days to make the trip with the eight train-carloads of parts that made up the Marion. It was assembled at the mine and began its first digging January 1, 1957.

Vitro uses a 3/4-yard LS52 pit shovel and four pit trucks in the actual mining of the ore. The Vitro ore body has varied in thickness from 3 to 10 feet, and is 500-600 feet wide. Its exact length has not been released. The ore-body is a channel-type deposit. Vitro geologists do not think that the trap presently holding the ore body is synonymous with the original permeability channel. There has been considerable redeposition.

While on the subject of mining, Lucky Mc has begun stripping two large pits on their property. The pit on project one in the original mine area, seen by many on the tour last year, will be 1100 x 400 feet and will go to a depth of 70-90 feet. The project 4 pit located south of project 1 will be 1700 x 600 feet to a depth of 80-120 feet.

Stripping on project 1 is being done with a 2 1/2-yard Northwest shovel and 20-yard Eclid trucks. Project 4 is being stripped with 3 1/4-yard capacity Wooldridge MRS scrapers and D-9 cats.

It has been estimated that Lucky Mc pre-mine stripping this summer will remove over a million and a half yards of overburden. Actual mining of ore will be done with shovels. No actual mining is planned until about two months before the mill is opened. Mill construction deadline is early in 1958.

Another highly-successful mining venture in the Gas Hills has been that of Globe Mining Co. Globe was founded in January 1955 by Jenkins and Hand, to mine the extensive Jenkins and Hand properties in the West Gas Hills.

The success of the Jenkins and Hand mining operations is well-illustrated by the fact that they shipped 5243 tons of uranium ores to markets in March from seven mines.

Since the start of mining in the late spring of 1955, Globe has shipped 32,000 tons of ores.

In the early days of the Gas Hills, Globe was able to mine from the surface in one of the few commercial oxidized zones in the Gas Hills. Some 6,000 tons of oxidized ore has been shipped, some of it above the surface in the form of boulders that were broken up with jackhammers and trucked to market. Because of the ease of mining in the oxidized zone, Globe was one of the last to get into the mining of its unoxidized zone.

Globe has been able to finance its operations almost entirely from ore receipts, a rather unique situation for an infant mining company. In addition to its mining operations, Globe has done over 250,000 feet of drilling, paid for out of ore receipts.

Globe's tremendous ore reserves have led them to negotiations with the AEC for a mill. Officially, Globe has in excess of 500,000 tons blocked out on its properties. This is proven ore, the possible and inferred reserves are much greater.

Globe hopes to build a mill on an alkaline leach circuit which process will be amenable to both low and high-lime ores. High lime ores are presently not amenable to the Lucky Mc or Western Nuclear mills.

Many other companies have fine progress reports in 1956. Some have developed their own properties, some have turned to outside capital for development.

Gas Hills Uranium developed an underground mine to test their ores. The only other underground operation in the Gas Hills was opened by Bridger Mining Co. on a Globe farmout. Gas Hills has entered into a working, development agreement with Radorock Resources, a Federal Uranium subsidiary, for the exploration and mining of its vast holdings.

An important discovery of uranium was made in the East Gas Hills

6- Gas Hills and Crooks Gap, Roy Peck

by Veca Minerals Co., owned by Sam Stanbury and Vern Hughes. Stanbury discovered the ore body while drilling assessment holes in June of 1956. First shipment was made from the Veca pit in December, only six months after the discovery was made. Shipments have been continuous since that time. Further drilling is in progress now to continue the blockout of ore.

A new pit was opened in the East Gas Hills by Alfred Nostrum and Sijob. The pit is one of the richest in the area. Nostrum has stockpiled over 10,000 tons out of the pit. Union Carbide Nuclear last summer and fall conducted an extensive drilling program proving reserves on Aljob.

The newest pit in the Gas Hills has been placed in production by Bengal Uranium. The mine lies southeast of the Veca pit. Other operating pits in the East Gas Hills are Two-States and Valley Dean, RanRex, Dale B. Levi. Hughes Mining Company opened a pit just north of the Two States Redwood mine and made some shipments in 1956. P-C Mining Company has a pit in ore a mile northwest of Veca Minerals. Mr. Cummings is general manager of P-C. Antelope Mines and Savanna Construction Co. were Gas Hills shippers in 1956 and there were others.

Many extensive drilling programs were conducted in the Gas Hills and Crooks Gap in 1956 proving out and discovering ore bodies. Among the leading drilling companies active in the Gas Hills have been Sprague and Henwood, Teton Drilling Exploration, Alloway and McGee, Ormsby, Yellow Queen, Roberts and Stevens, Ray Drilling Co., Beavers and Harris Drilling, and numerous others. D.M.E.A. drilling programs were completed or are in progress on Sijoni Uranium Corp., Vitro Minerals, Riverton Uranium, and Antelope Mines properties.

The story of Crooks Gap is one more of exploration and mining at the moment. Crooks Gap was discovered about a year later than the Gas Hills for the most part and it is logical that its development is behind that of the Gas Hills. I do not wish to minimize Crooks Gap, for it has tremendous potential which should materialize this summer. Some observers feel that Crooks Gap ores will be of a higher grade than average Gas Hills ores, but mining problems may be somewhat more difficult.

Crooks Gap is the original home of Lost Creek Oil and Uranium, the recipient of the first uranium mill contract in Wyoming in August 1956. The Western Nuclear (Lost Creek) mill is under construction at Home-on-the-Range or Jeffrey City or Split Rock, about 10 miles north of Crooks Gap and from 22 to 30 miles south of the Gas Hills.

Bob Adams acquired the Sno-ball claims and blocked out 50,000 tons of uranium ore there in 1955-56. From this modest reserve sprang the Western Nuclear mill. Western Nuclear sunk a test shaft into the Sno-ball ore body last year.

But success of Western Nuclear's drilling on the Lamac-Frazier group of claims in the Gas Hills, acquisition of the Savanna Construction Gas Hills property, the stockpiled by the AEC of 100,000 tons of ore at the Western Nuclear mill, assure energetic Bob Adam's mill of plenty of ore.

The most ambitious program in the Gap in 1956 was conducted by Phelps-Dodge (giant in copper mining) on Wyoming Uranium property. By this week, Phelps had drilled over 92,000 feet on Wyoming properties. It would appear that Phelps-Dodge was blocking out a considerable ore body on Wyoming Uranium property by the extent of their drilling.

7- Gas Hills and Crooks Gap, Roy Peck

Hepburn T. Armstrong, president of Wyoming Uranium, had announced reserves of over 100,000 tons prior to the start of the Phelps-Dodge program.

Continental Uranium has blocked out ore in the Gap on the Gaddis Mining property. A 40-foot deep exploratory pit has been opened by Continental, exposing some brilliant ore. Continental has shipped test loads to the Riverton buying station.

Phelps-Dodge completed some drilling on the Trey claims of Mile High Uranium in 1956.

The Harrower Brothers optioned their rich Sun Dog claims to J. A. Heald, Texas oil man. Heald completed some drilling and further talks on the deal are in progress. The Highland and Buckskin claims of the Harrowers are under option to O. A. Sutton and drilling is in progress.

Lisbon Uranium has done some drilling in Crooks Gap in the past year. The Hazel claims, originally leased to Mountain Mesa by Bergston, have been in litigation.

Although the buying stations operated by the AEC through Lucius Pitkin, Inc. at Riverton and at Split Rock have and continue to serve a constructive purpose, but it is obvious that these buying stations cannot hope to provide an adequate market for the great ore reserves evident in Gas Hills and Crooks Gap.

The only real answer is milling capacity. The buying station can continue to serve a useful and positive need for the initial testing of new properties with unknown reserves but milling capacity must be provided if uranium is to survive in Wyoming, not just Gas Hills and Crooks Gap.

The mills under construction by Western Nuclear, 400 tons a day, and Lucky Mc, 750 tons a day, will run nearly 2 million tons of ore in the next five years.

But present estimates, and I would be happy to provide anyone with the basis for these estimates, show that Gas Hills reserves alone, now known, are in excess of 4 million tons. And the surface has but barely been scratched in exploration.

Today there is one property in the Gas Hills with over 1½ million tons of proven reserves, another with over 750,000 tons, two properties with over 250,000 tons, seven properties with over 100,000 tons of ore, and many more properties with as yet unproven reserves. And probably less than 20% of the favorable ground in the Gas Hills has been drilled as of now.

There can be no question that milling capacity above and far beyond that presently authorized for Lucky Mc and Western Nuclear is needed to serve the Gas Hills--completely disregarding Crooks Gap.

One answer might be expansion of present milling facilities. But it seems more likely that not only will present mills be made larger, but a third and possibly a fourth mill will be built to serve Wyoming's great uranium potential.

Some of the companies presently in the race for the third mill, and I haven't checked the morning paper to see who else's hat is or might be thrown in the ring, are Globe Mining Co., Susquehanna Corporation who operate the Mines Development mill at Edgemont, S.D., Giant Resources, United Western Minerals, Federal Uranium, Union Carbide, Phelps Dodge, and, of course, Vitro.

8- Gas Hills and Crooks Gap, Roy Peck

1956 has been a memorable year for uranium in Wyoming, but we have only seen the beginning. Uranium is a serious, big business. It can mean great things for the Equality state.

Consider for a moment, the contribution already made. The Lucky Mc mill and mining operation will cost \$10,000,000, the Western Nuclear operation \$5,000,000. The return to the state in employment, tax revenues, auxiliary business income and so on are many fold more.

The gross investment already in uranium, by January 1, 1958 will be in the neighborhood of \$50,000,000, maybe as high as \$75,000,000 by July 1, 1958.

There can be no question that uranium is here to stay. It is far from a fly-by-night operation when the Lucky Mc organization brings to patent 89 mining claims in the Gas Hills. This, incidentally, is the largest patent in the history of the federal land office for mining claims.

Wyoming, the state that "can't" have industry because of discriminatory freight rates, no markets nearby, no people, and assorted other negative reasons, need look no farther than the Gas Hills and Crooks Gap for the greatest industrial expansion in the State's history.

Thank you.

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THE ECONOMIC SIGNIFICANCE OF URANIUM IN WYOMING

The tremendous investments made by uranium companies in Wyoming and the consequent economic significance to the state's economy is a subject little understood by the average individual.

In an industry growing as rapidly as uranium there has not been time for the collection of statistics such ^{as} has been possible in older industries such as petroleum, coal, and iron.

It is important that the people of Wyoming, county and state officials, and federal officials understand the significance of uranium to the state.

It is the purpose of this presentation to show through a sampling of the uranium industry what its economic significance is to the state.

Wyoming has long been a have-not state as far as most industry is concerned. Difficult problems of transportation, communication, and far-away market have deterred the growth of much of our mineral and manufacturing industry. Uranium can be the key that will unlock the industrial door for Wyoming. Fortunately, it is not necessary to transport the raw product for great distances and the final product is of such nature that transportation is not a major factor.

As the uranium mining and milling industry grows it will inevitably lead to other auxiliary industry--sulfuric acid plants which will lead to the development of such fertilizer industries as triple-super-phosphate. There is an old cliché that says that industry begets industry. This will be as true in Wyoming as it has been in other states.

The investment in the uranium industry today is great, much greater than many people realize. And the surface is but barely scratched. The return to Wyoming in employment, in taxes, in increased valuation will well repay the hearty support of all of its people of this new and exciting industry.

2- The Economic Significance of Uranium In Wyoming

The trucking industry has invested heavily in uranium.

For example:

The Dick Truck Lines of Riverton now have 13 20-ton tractor and trailer units which have been purchased exclusively for the hauling of uranium ores. These units cost an average of \$18,000 each. In addition, Dick has invested in a \$14,000 Hough loader, 4 caterpillars, 2 patrols, and a small dragline for the service of the uranium industry. Dick has a complete shop in Riverton where any of his equipment can be rebuilt from the frame up.

The B. & L. Trucking Co. of Riverton has 9 trucks, some tandems, truck-trailers, and tandem-pups. Like Dick they have built a new truck garage and repair shop for the service of their units.

Farrell Brough trucking has 5 units, 3 tandem dumps, and 2 tractors with oil field float trailers in use in hauling of equipment to the uranium fields.

G. & C. Trucking has two large tandems and pups, units costing \$32,000 each. They have built a shop at Split Rock.

There are other individual truckers--H. E. Wickwire with 2, T. E. Adams and Bob Jackson with single units, purchased for the hauling of uranium ores.

A new trucking firm has been formed by Western Nuclear for hauling of their ores to the mills. This firm will operate 10 units.

Undoubtedly there are others in the state, but a summation of the trucking industry's investment exclusively for uranium in Fremont County (excluding oil, gravel, etc.) might be summed up as follows:

43 Trucks representing an investment of	\$785,000
Auxiliary equipment, cats, etc.	230,000
Shops and Truck Garages	75,000
Miscellaneous Parts, Tires, etc.	10,000
	<hr/>
Total.	\$1,100,000

3- The Economic Significance of Uranium In Wyoming

No. of Men Employed by Above Mentioned Firms	109
Payroll For These Trucking Firms, monthly	\$55,590
annually	\$667,080

A similar picture can be painted in the drilling industry, another important auxiliary to uranium.

Drilling is the backbone of exploration. However, without a market for uranium ores, exploration could be considerably reduced. If more adequate markets are provided in the uranium picture drilling will be expanded.

It has been estimated that there is \$520,000 invested in the exploration drilling phases of Fremont County uranium. These drilling companies provide a monthly payroll of about \$24,000 for some 60 men, or an annual payroll of \$288,000.

More than 3,000,000 cubic yards of overburden and ores has been moved in the Gas Hills. By fall, at the present rate of stripping and mining, this figure will be greater than 4,000,000 cubic yards. This represents an investment in this phase of mining alone of greater than \$1,000,000.

Equipment used in mining is expensive and there has been a great investment in this field. It has been estimated that Vitro Minerals Corporation, the leading mining company at present in the Gas Hills, is using mining equipment whose valuation will exceed \$750,000.

Conservative estimates place the value of the mining equipment now in operation in the Gas Hills in excess of \$2,000,000.

The payroll during the construction phase for the Lucky Mc Uranium mill is averaging greater than \$120,000 per month. After this \$10,000,000 mill and mining venture is completed its monthly payroll will be in the neighborhood of \$75,000 or \$900,000 annually.

At present the payroll at Vitro Minerals for their mining operations averages \$12,000 per month or \$144,000 a year, and this payroll would increase if Vitro, for example, could expand its operations through a greater market.

4- The Economic Significance of Uranium In Wyoming

Powder is a big item in a mining venture. Powder used in the Vitro pit will average \$2,500 per month.

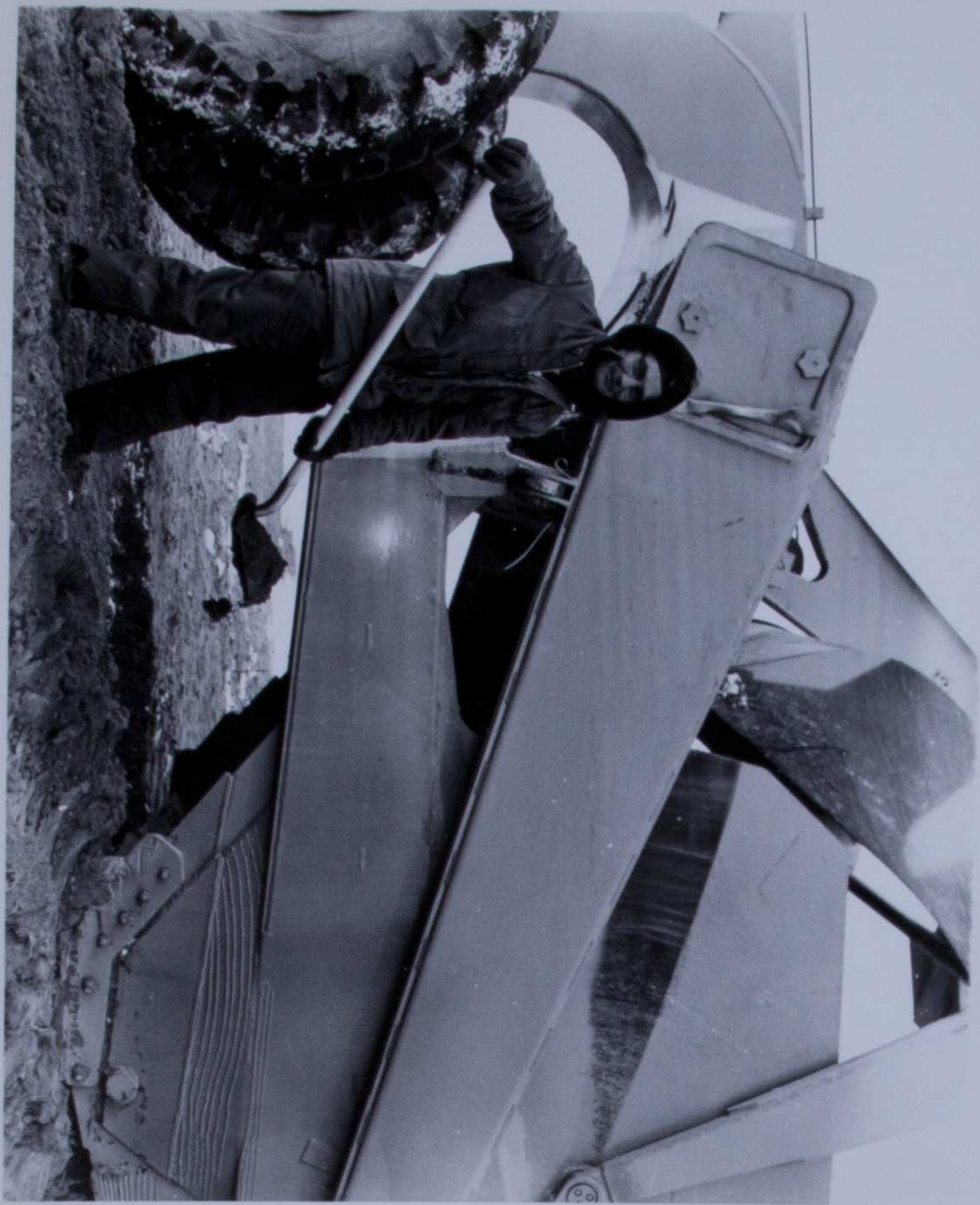
These are but isolated examples selected at random to illustrate the scope and extent of the uranium industry.

The figures presented will be multiplied many-fold as the industry grows.

By spring of 1958 there will be an investment in milling in Fremont county of over \$15,000,000 when the Lucky Mc and Western Nuclear mills are completed. An additional mill will add another \$5-7,000,000 in investment and equivalent gains in employment payrolls and further investment in the mining and auxiliary enterprise portions of the industry.

The uranium industry is a significant factor in Wyoming's economy today.

But with the enthusiastic support of the people of Wyoming and their representatives the uranium industry can go far in the building of a sound, industrial economy for the State.



Neil McMeice, discoverer of Lucky Mc and now vice president of Lucky Mc Uranium, moves the first shovelful of dirt for the Lucky Mc mill in the Gas Hills.



Drilling in ore on the Joy group of claims of Globe Mining Co. Globe has over 900,000 tons of ore indicated and inferred through extensive drilling. Globe property is in the West Gas Hills.



The Vitro Minerals pit mining uranium ore in the Gas Hills at a depth of 80 feet. Dark material in bottom of pit is ore. Marion 7200 dragline removes overburden from above.



The Marion 7200 Dragline at the Vitro Minerals pit in the Gas Hills moves 5 cubic yards of overburden at a bite. It has a pivoting radius of over 70 feet and will dig to a depth of nearly 100 feet.

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An aerial view of the Vitro Minerals uranium pit in Gas Hills. 5-yard Marion dragline in foreground, a 2 1/2 yard Northwest .80D at the upper left. Water in pit was aggravated by recent rains.

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The Veca Minerals pit in the East Gas Hills. Pit is mining at a depth of from 45 to 60 feet. Fault line may be seen on side of the pit about midway.

