



Moapa River Indian Reservation Moapa, Nevada

LIMESTONE/CEMENT PLANT OPPORTUNITY



Division of Energy & Mineral Development

Respecting Tradition . . . While on the Path to Prosperity



Greetings,

From the Moapa Band of Paiutes in Moapa, Nevada, we would like to extend a heartfelt welcome. We are pleased to offer an opportunity to develop a significant limestone resource and a high grade clay deposit on our tribal lands, and to construct a nearby cement plant on our lands using those limestone and clay resources.

On the following pages, you will learn about our history, our people and our commitment to create economic stability for future generations.

We have prepared very detailed laboratory analyses and comprehensive engineering studies of both the limestone and clay deposits.

We welcome the opportunity to share this information with you and your organization.

On behalf of the Moapa Tribal Council, thank you for taking an interest in this project and we look forward to meeting with you to discuss this opportunity in more detail.

Sincerely;



Darren Daboda
Chairman
Moapa Tribal Council
Moapa Band of Paiutes

Southern Paiute History



The Moapa Band of Paiutes is a federally-recognized Indian Tribe. The Tribe occupies the Moapa River Indian Reservation which is located in the heart of the traditional Southern Paiute territory that originally extended from the San Juan River in eastern Utah to the Chemehuevi areas west of the Colorado River in southern California. The Southern Paiute Indians have occupied this land for at least the past 800 to 1000 years.

The Moapa Band of Paiutes was originally created by an executive order signed by President Grant on March 12, 1873, and was expanded to over 2 million acres by executive order on February 12, 1874. However, in 1875, succumbing to pressure from non-Indian settlers, Congress dramatically reduced the size of the Moapa River Indian Reservation to 1,000 acres "to be selected by the Secretary of the Interior, in such a manner as not to include the claims of any settler or miner." The Reservation boundaries as selected by the Secretary of the Interior pursuant to this congressional directive remained largely unchanged until December 2, 1980, when Congress restored 70,565.46 acres to the Tribe.

The Moapa Band of Paiutes people strive to preserve our legends, songs and dances. However cultural disruption during the past two centuries has threatened the continuation of traditional life.

Prior to the 1800's, the Moapa People were a culturally well-adapted people

who combined farming with hunting and gathering. They used the resources of the land with great ingenuity. Most of the domestic objects of our ancestors were various forms of intricately designed basketry, including water jars, winnowing and parching trays, cradleboards, cooking baskets and seed beaters. They had great skill in the use of animal skins and plants. Their knowledge of nutritional and medicinal uses of plants was extensive.

The history of Moapa following contact with settlers, dating from the 1830 opening of the Old Spanish Trail is a tragedy. A peaceful people saw their land and water seized, and their homes frequently raided by slavers. Conflicts erupted with Mormon settlers, New Mexicans and other emigrants. Tribal numbers diminished rapidly as new diseases were contracted, especially tuberculosis and measles. Insurrection and raiding for survival were brutally punished by federal troops and white settlers. Although armed with bow and arrows, defiance did not stop the intrusion of settlers into Moapa. The people were forced to flee into the desert and farming was disrupted.

As previously mentioned, in 1873 39,000 square miles were set aside for tribal lands by the federal government. In 1875, though, the reservation was reduced to a meager 1,000 acres, followed by 60 years of neglect and corruption by white agents.

In 1941, a Constitution and bylaws were created, and the Business Council was

established as a governing body Tribe.

An attempt to revive farming in 1941 failed due to water problems, and a lack of equipment and money. Discouraged, the Tribe agreed to lease the farmland to a dairy company. Beginning with a claim filed in 1951 for compensation of tribal land confiscated in the 1860's, the Indian Claims Commission granted a judgment which resulted in the establishment of a single payment capital fund for improvements and economic development. In 1968 the Tribe refused to renew leases to non-members.

Today, the Moapa River Indian Reservation encompasses 71,954 acres of land in Clark County, Nevada, approximately 45 miles northeast of Las Vegas. All of the land within the Moapa River Indian Reservation is owned in trust by the federal government for the benefit of the Moapa Tribe.

The Moapa Tribe has undergone a dramatic transformation in the last decade, as evidenced by their successful ventures to foster more robust and diverse economic development.

ECONOMIC DEVELOPMENT PROJECTS:

- Renovating the tribal truck stop on I-15
- Construction of a 250 megawatt solar farm, the only commercial facility in the U.S. on tribal land
- Construction of two 100 megawatt solar commercial facilities
- Opening of several new aggregate mining operations

Limestone/Cement & Clay Plant Opportunities

BUSINESS ADVANTAGES

- Approximately 160 million tons of high grade, cement quality limestone to the valley floor with test results showing there is a significant amount of limestone below the level of the valley floor
- One mineral owner – The Moapa Band of Paiutes
- Close proximity to Union Pacific railroad with a railroad spur located on tribal lands
- No state sales tax
- No property taxes
- Plant site location in close proximity to mine site
- Power and water available at both plant & quarry site
- Large workforce available from the Tribe and the Las Vegas area
- Moapa has successful business enterprises which includes the largest solar facility in Indian Country
- Direct route by rail and interstate (I-15) to Southern California

Executive Summary

The Moapa Band of Paiutes is seeking a company to form a joint venture to develop a limestone and cement plan on the Moapa River Indian Reservation. Below is an overview of the Moapa River Indian Reservation.

The Moapa River Indian Reservation is located approximately eight (8) miles west of Glendale, at the junction of State Route 168 and I-15, near the Valley of Fire State Park. The Moapa Band of Paiute members reside on the Moapa Indian River Reservation. Moapa Valley is the prehistoric flood plain of the Muddy River, which flows through the valley and drains into Lake Mead. The region surrounding the reservation is

famous for its sandstone rock formations.

The tribal lands originally set aside in 1873 consisted of 2,200,000 acres.

In 1875 the reservation was reduced to 1,000 acres. In December 1980, President Carter restored an additional 70,000 acres to the Tribe. The current total land base is 71,954 acres.

Today the Tribe is organized under the Moapa Tribal Business Council. The Council consists of the Chairman and five elected council members. The Moapa Band of Paiutes people strive to preserve their traditional lands, culture, legends, songs and dances. The Tribe has a variety of governmental programs, departments and employment opportunities.

Land Use

The Moapa Band of Paiutes Master Plan (2013) identified designated economic development zones for tourism, commercial, residential, recreational and government within developed areas and centers on the reservation. The Tribe is proactively developing sufficient infrastructure to support economic development growth at the Valley of Fire. The land use portion of the Master plan integrates and promotes sustainable land use goals of the Tribe's existing plans and community input.

Project Access

The area with the Limestone deposits is the Arrow Canyon Range of mountains located in the southwest area of the Moapa River Indian Reservation. The project area is approximately 700 acres in size, accessible by road and in close proximity to rail line.

The site is located approximately 30 miles northeast of Las Vegas, Nevada. Interstate-15 is the major interstate that runs from southern California to Utah. This interstate passes directly through the Moapa River Indian Reservation as shown in Figure 1. Union Pacific Railroad’s main east-west line runs through the reservation as well, and connects California to the East coast.

Immediatly adjacent to the main limestone deposit, is a large high grade clay deposit. It is easily accessible by vehicle and was included in the latest drilling project undertaken by the Tribe.

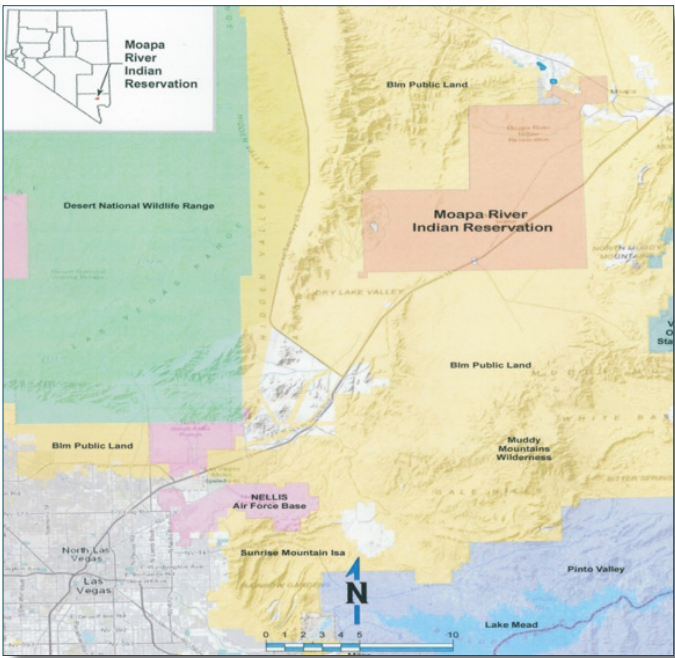


Figure 1: Location of Moapa River Indian Reservation and surrounding lands

Project Area Stratigraphy

The area of interest is located in the Arrow Canyon Range (ACR). The stratigraphic section of the ACR is dominated by limestones and dolomites (Paleozoic marine rocks). In the project area, the Sultan Formation is about 500 to 600 feet thick. It is comprised of two distinct members. From oldest to youngest, these are the Valentine Limestone and the Crystal Pass Limestone.

Both members are the source of the cement grade limestone and compose the entire thickness of the project area. Within the Valentine and Crystal Pass Limestone Members is a sandstone (quartzite?) section of varying thickness as shown in Table 1.

Age Classification	Formation	Member	Thickness (feet)	Description
Devonian	Sultan	Crystal Pass Limestone	150-260	Very thin-bedded light-gray limestone
		Quartzite Seam	5-20	Interformational sandstone
		Valentine Limestone	75-380	Light-gray limestone and dolomite

Table 1: Stratigraphy of potential resource

Limestone Exploration

Two phases of exploration occurred at the proposed quarry site as described below.

Initial exploration was conducted by Ash Grove Cement Company in 2007. Four limestone core holes and 26 clay holes were drilled on the Moapa River Reservation. Tests done on the limestone and clay samples included: X-ray Fluorescence (XRF - SiO_2 , Al_2O_3 , Fe_2O_3 , CaO , MgO , Na_2O , K_2O , TiO_2 , P_2O_5 , Mn_2O_3 , SrO), Loss on Ignition (LOI), and Sulfur (SO_3). The data from the core holes as well as surface geologic mapping estimated that approximately 160 million tons of limestone resource was present in the North Hill of the Arrow Canyon Range and 27 million tons in the South Hill of the Arrow Canyon Range. Ash Grove also created a mine plan that provided feedstock for a cement plant that was designed to produce potentially 2,117,000 tons per year.

The second phase of exploration was conducted by The Division of Energy and Mineral Development (DEMD) to verify and supplement Ash Grove's chemical characterizations and resource estimates. This was accomplished with the drilling



Figure 2 Drilling of Limestone completed by National Exploration, Wells & Pumps

and testing of two limestone and two clay core holes. By twinning two clay holes to depths of 100 feet, and one limestone hole to a depth of 500 feet, DEMD was able to demonstrate compatibility with Ash Grove's data. DEMD also drilled an additional hole to a depth of 200 feet on the north side of the deposit, which is an area that was not drilled by Ash Grove. DEMD tested for more elements than Ash Grove did. These additional elements

are: Arsenic, Mercury, Total Organic Carbon, and Chlorine. These tests were run in order to determine if there were any deleterious materials present in the deposit. The results demonstrated that there was very little to none of these deleterious materials. All other lab data from the DEMD drilling has a high level of concurrence with the Ash Grove data.

Figure 3: Simplified geologic map of project area and drill hole locations

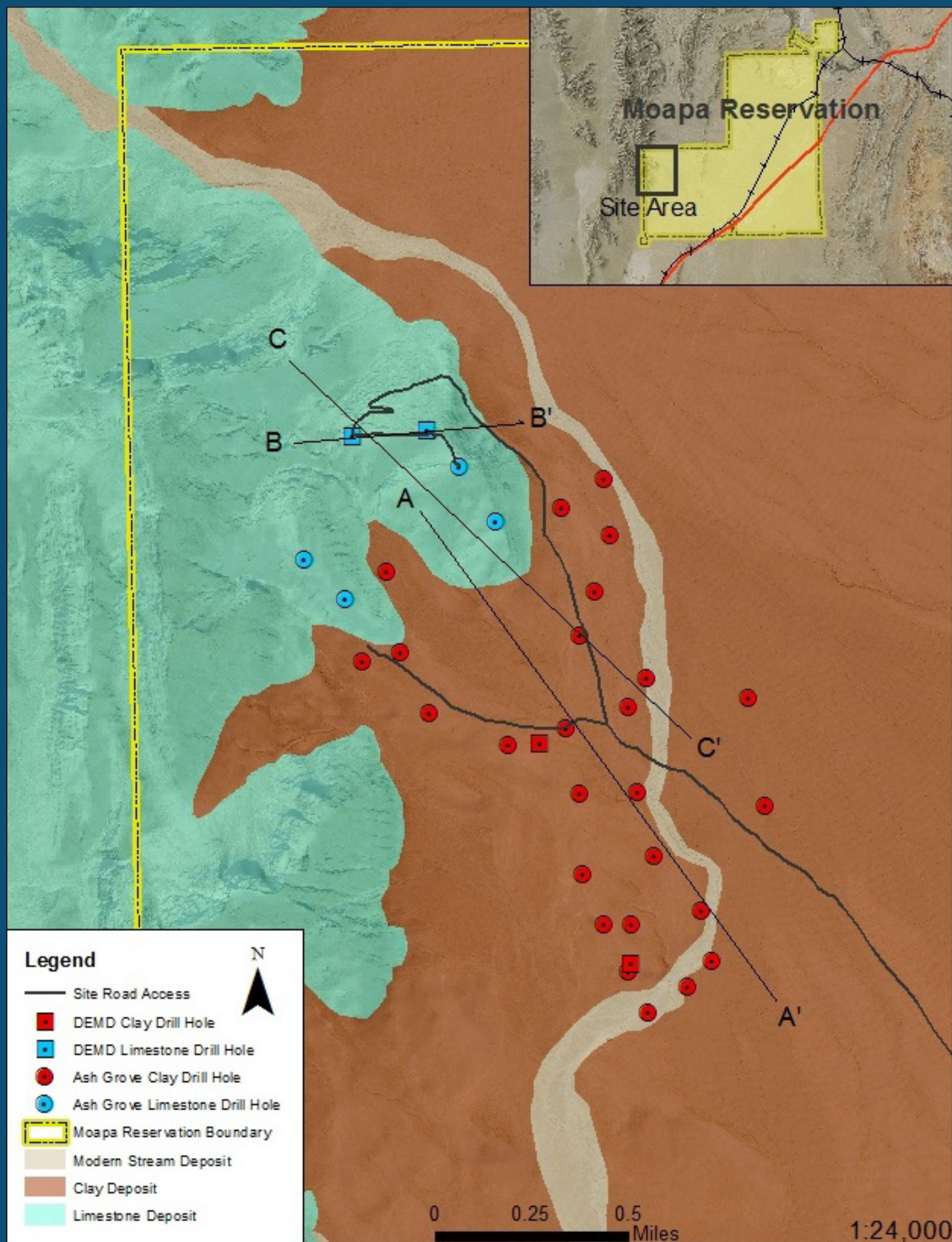


Table 2: Chemical composition and percentages. N/T: NOT TESTED

		Average Percent by Weight, dry basis														Ave. Weight Parts Per Million (ppm)					
	Pit Area Acres	Total Tons	Al2O3	BaO	CaCO3	CaO	CO2	Fe2O3	K2O	LOI	MgO	Mn2O3	Na2O	P2O5	SiO2	SO3	SrO	TiO2	Total Sulfur	Hg	As
	120	99 million	0.23	0.00	89.72	50.41	43.01	0.09	0.05	43.12	3.17	0.01	0.01	0.01	2.86	0.04	0.02	0.00	0.02	0.02	1.16
	77	63 million	0.12	N/T	N/T	54.51	N/T	0.15	0.09	42.89	0.52	0.01	N/T	0.00	1.68	0.02	0.01	0.02	N/T	N/T	N/T
	78	26 million	13.03	0.04	N/T	12.18	N/T	4.02	2.40	16.21	3.02	0.07	0.38	0.15	47.27	0.73	0.06	0.47	0.96	0.02	7.32

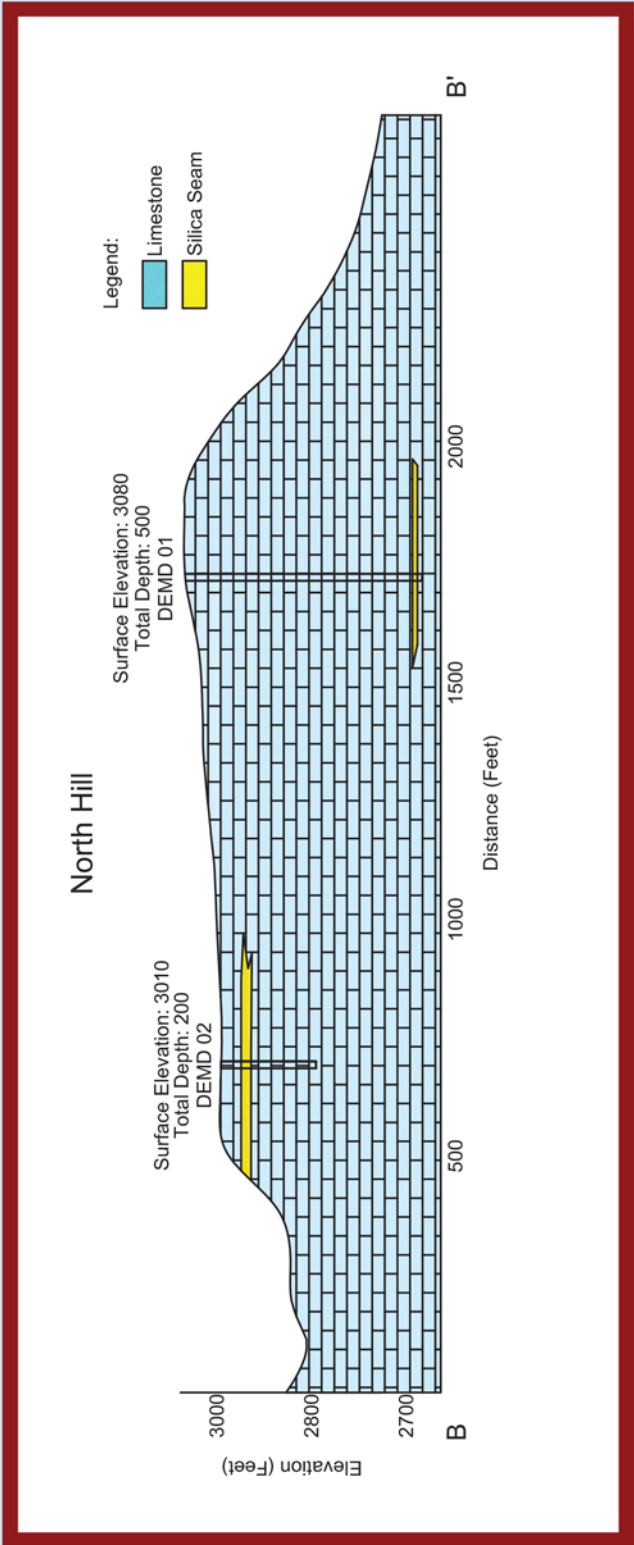
Table 3: Tonnages of specified CaCO3 grades (%) of N. Hill

North Hill Limestone Deposit Tonnage Breakout			
Calcium Carbonate (CaCO3) Grade Interval %	Average Grade %	Limestone Tonnage	
90 to 100	94.75	88,121,774	
80 to 90	86.54	5,224,604	
70 to 80	75.48	2,697,994	
60 to 70	65.50	1,479,862	
Weighted Average/Total	93.33	97,524,234	

Table 4: Tonnages of specified CaCO3 grades (%) of S. Hill

South Hill Limestone Deposit Tonnage Breakout			
Calcium Carbonate (CaCO3) Grade Interval %	Average Grade %	Limestone Tonnage	
90 to 100	95.76	44,737,914	
80 to 90	86.33	6,181,730	
70 to 80	75.70	4,904,664	
60 to 70	65.31	4,120,925	
Weighted Average/Total	91.05	59,945,234	

Figure 4: Cross-Section B-B' North Hill DEMD drill holes



Tables & Figures

Figure 5: Diagrammatic Cross-Section C-C'

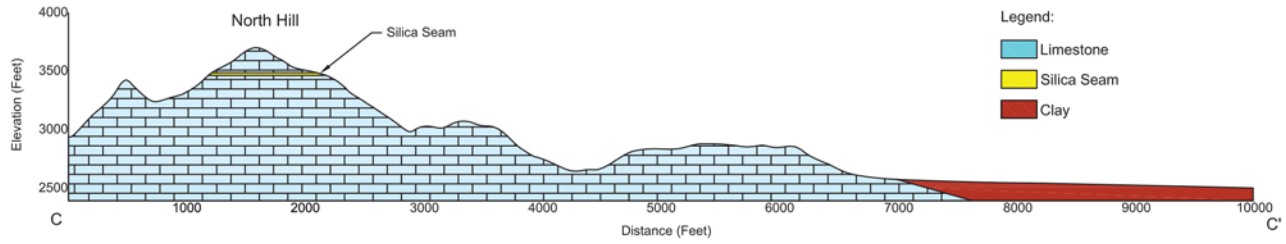


Figure 6: Cross-Section A-A' Clay Deposit Iron Oxide Content

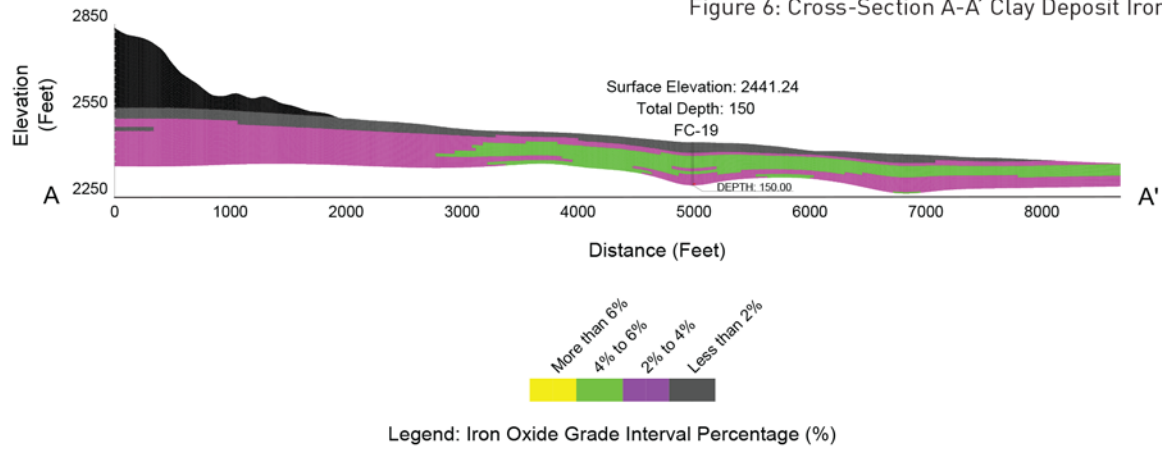


Figure 7: Cross-Section A-A' Clay Deposit Aluminum Oxide Content

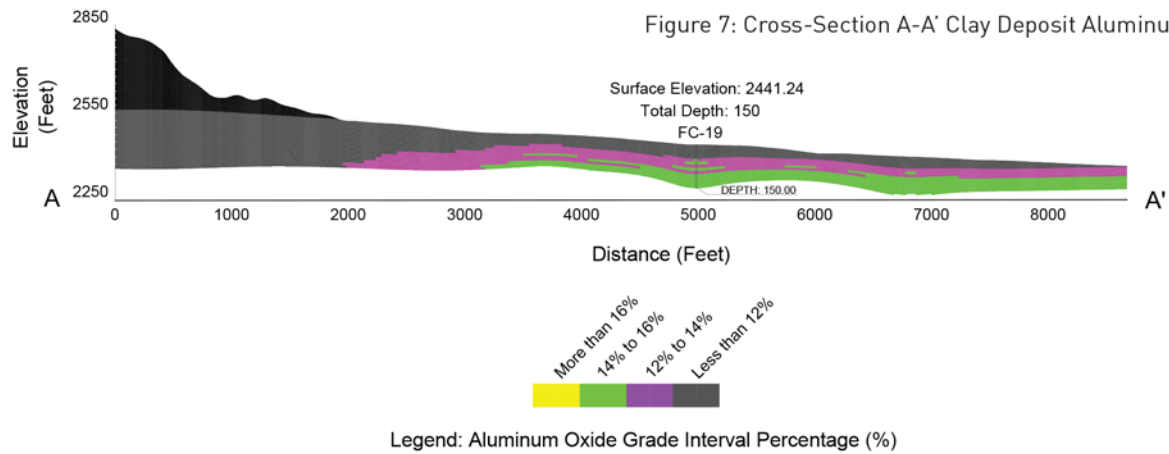
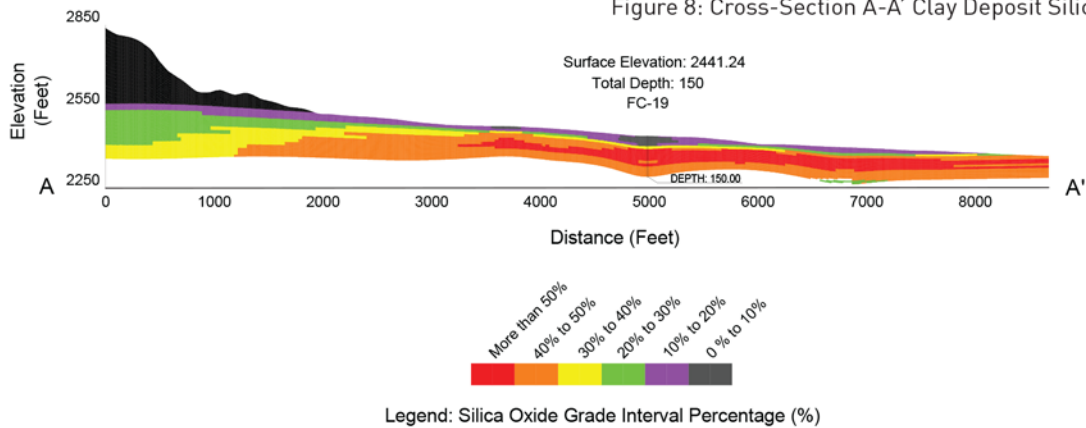


Figure 8: Cross-Section A-A' Clay Deposit Silica Oxide Content



Limestone Resources

The high level of concurrence between DEMD and Ash Grove's data allows for DEMD's and Ash Grove's data to be incorporated together in calculating resource estimates and preliminary geologic models and mine plans. In addition, an estimate of the limestone volume and tonnage was calculated.



Figure 9: DEMD staff geologists logging core in the field

Limestone calcium carbonate grades and other qualities were derived using inverse distance modeling. Based on the results from geologic modeling, DEMD engineers have determined that approximately 99 million tons of limestone deposit is minable in the North Hill, and 63 million tons of limestone is minable in the South Hill. A summary of the limestone deposits suitability as a minable resource are:

- Large resource base of limestone approximately 160 million tons
- Average overall calcium carbonate grade of 90.36 percent
- Limestone deposit accessible from the surface outcrop
- No stripping ratios; no overburden
- Massive deposit – The inherent rock strength of the limestone allows for a high wall design if warranted
- Good accessibility by surface roads
- Entire limestone deposit owned 100% by the Moapa Band of Paiutes

Raw Materials Available for Cement Production

Limestone is the primary raw material needed for cement production. Secondary raw materials include sand, shale, clay and gypsum.

In addition to approximately 160 million tons of limestone, the other necessary raw materials are located near the proposed plant site. These include:

- Clay (21 million tons of clay as a source for iron, aluminum and silica.) See Figures 6-8

Potential Markets

Nevada and Southern California via rail and/or interstate.

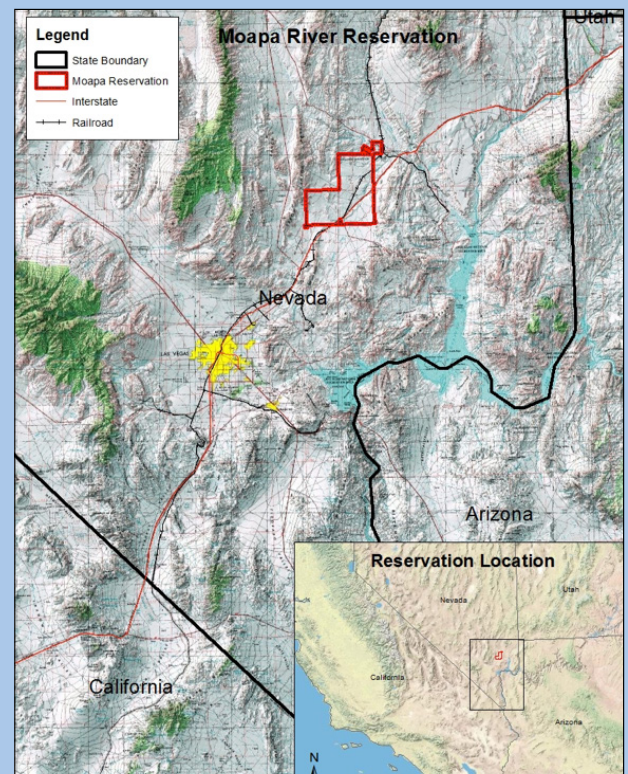


Figure 10: Moapa River Indian Reservation location map

Taxation and HUBZone

Taxation and business zoning

opportunities may be available to potential leases.

Permitting Process

The permitting processes on Indian lands are streamlined compared to those on non-Indian Federal lands. Federal agencies are the sole regulatory authorities for mines and industrial facilities on Indian lands.

The state of Nevada does not have regulatory authority on Indian lands for these operations.

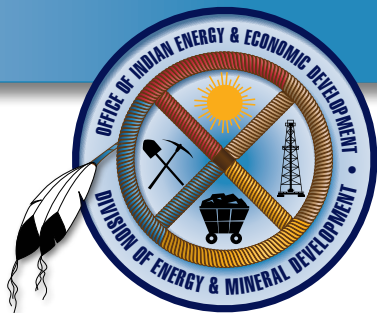
Federal and state regulatory agencies are however both involved with railroad rights-of-way.



Figure 11: North Hill (left), South Hill (right), Alluvial deposit (center)



Figure 12: South Hill (left), North Hill (right), Alluvial deposit (center)



Division of Energy & Mineral Development

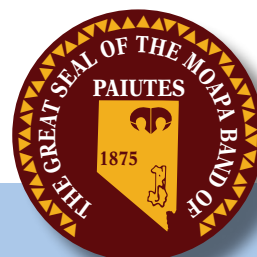
About DEMD:

The Division of Energy and Mineral Development provides the best technical and economic advice and services to assist Indian mineral owners in gaining economic self-sufficiency by creating sustainable economies through the environmentally sound development of their energy and mineral resources. Indian reservations – largely unexplored lands – hold vast natural resources, and our staff members are uniquely poised to offer services no other agency can provide.

We are uniquely poised to offer energy and mineral solutions that no other government agency can provide - on the reservation, where it counts.

Currently we offer technical advice in assisting tribes to explore and develop nearly 2 million acres of energy and mineral resources. An additional 15 million acres of undeveloped lands could hold the potential for further energy and mineral exploration.

The Division is committed to identify tribal needs and how they best fit with their long-term desires. Once identified, the Division helps tribes develop their resources by finding the best companies to fit with tribal goals. The Division also helps Indians diversify and re-invest their money with other profitable enterprises that can create employment for their people.



Moapa River Indian Reservation Mission Statement

*Our mission is to advance the
Moapa Band of Paiutes*

*And preserve our homeland by
building an independent*

*And self-governing community that
provides an opportunity*

*For all people who have made a
commitment to this mission*

Moapa River Indian Reservation

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