Apsáalooke Nation Crow Indian Reservation, Montana

Limestone/Cement Plant Opportunity



Greetings

From the Apsáalooke Nation of Crow Country in Montana, we would like to extend a heartfelt welcome. We are pleased to offer an opportunity to develop a significant limestone resource on our tribal lands, and to construct a nearby cement plant, using that limestone resource. On the following pages, you will learn about our history, our people, and our commitment to create economic sustainability for future generations.

Very detailed laboratory analyses and comprehensive engineering studies of the limestone deposit have been completed. We welcome the opportunity to share this information with you and your organization.

Thank you for taking an interest in this project.

Sincerely,

Cedrick Black Eagle

Cedric Black Eagle

Chairman

Apsáalooke Nation

Limestone/Cement Plant Opportunities Business Advantages

- 500 million + tons of high quality, cement grade limestone
- Close proximity to major rail corridors
- One mineral owner The Crow Nation
- History of successful business endeavors
- No sales taxes
- No property taxes (under certain conditions)
- Proposed plant site in close proximity to quarry
- Crow-owned coal fuel source within 70 miles via rail

Introduction

The Apsáalooke Nation is proud to present this overview of limestone and cement plant development on Crow lands. The Crow are seeking a company to form a joint venture to develop these resources on the reservation.

While The Crow Tribe strives to uphold Indian tradition and heritage, we are also known for our successful business endeavors. The tribe continues to actively pursue business opportunities that foster diverse and sustainable economic development.

Kalispell Missoula Billings Recervation Sheridan Gillette Casper Casper O 25 50 75 100 Missoula Crow Reservation State Boundary

Figure 1: Location Map

Crow Tribal Government

In 2001 The Crow Tribe adopted a revised constitution specifically designed to provide a stable and professional tribal government as well as provide due process and equal protection rights to tribal members. The 2001 Constitution established three separate branches of government – Executive, Legislative, and Judicial branches – similar to that of the United States.

In addition to the 2001 Constitution, the tribal government has enacted several laws that provide attractive business climates for both tribal members and parties seeking to do business with the tribe. These include:

- Tribal Uniform Commercial Code
- Tribal Secured Transactions Act
- Limited Liability Company Act

For more information on these or other provisions of Crow law, the Crow Tribal Legislature's website provides a wealth of information. Please visit the Legislature's website at www.crowlegislature.org or call the Office of Executive Council at (406) 638-2059.

Reservation Location

The Crow Reservation sits on approximately 2,400 square miles of tribally owned and allotted lands in south central Montana within the counties of Big Horn, Carbon, Treasure and Yellowstone. (See Figure 1) Tribal headquarters are located at Crow Agency, in Big Horn County.

Physiographic Setting

The Reservation is situated along the northern flank of the Big Horn and Pryor Mountain Ranges. These uplifts provide outcrops and exposure of numerous geologic formations including the Mississippian-aged Madison formation. The uppermost portion of the Madison is locally referred to as the "Bull Ridge Member." (See Table 1) All formations plunge from the mountain front into adjacent intermontane basins often associated with petroleum production. A majority of the surfaces dipping from the mountain front are exposures of the 'cliff forming' Madison limestone.

To the north and into the Crow Reservation the sediments dip into the Bull Creek syncline, an east-west trending trough situated in central Montana. To the east, the Powder River Basin is a north – south trending basin that contains over 20,000 feet of

sediment. The Big Horn Basin is to the west of the Pryor and Big Horn Mountain Ranges. It is a northwest-southeast trending basin with over 22,000 feet of sediments.

Project Access

The region with the best potential for limestone development is located in the Pryor Mountains near Sage Creek. The project area is approximately 850 acres in size, easily accessible by road, and within close proximity to rail lines.

The site is located within 50 miles of Billings, MT where two main rail and interstate corridors intersect. The east-west I-94/ rail corridor extends west to Spokane, WA and beyond and east to Minneapolis, MN, Chicago, IL, and beyond. It forms a "T" junction with the I-90/I-25/ rail corridor which extends south to Cheyenne, WY, Denver, CO, and beyond.

Project Area Stratigraphy

In the project area, the Madison Formation is about 750 to 800 feet thick. It is comprised of five distinct members. From oldest to youngest, these are the Lower Dolomite, the Woodhurst Limestone, the Cherty Dolomite, the Cliffy Limestone, and the uppermost Bull Ridge Member. The Bull Ridge Member is the source of the cement grade limestone and it is up to 150 feet thick in the proposed mine area. It is unconformably overlain by the Pennsylvanian-aged Amsden Formation.

The Amsden Formation is composed of red shale and siltstone, gray sandstone, limestone, and dolomite. It is often cherty in the middle part of the unit. The Formation is a potential source of iron, silica and aluminum and it varies in thickness from 100 to 150 feet in the project area.

Above the Amsden Formation is the Tensleep Formation. It is a light-gray to light yellowish-gray fine- to medium-grained cross bedded sandstone with a few thin beds of limestone and dolomite. This unit forms ledges and dip slopes on the mountain flanks. The Tensleep is another potential source of silica, and in the project area it varies in thickness from 0 to about 100 feet.

Limestone Exploration

In 2008, geologists from the Division of Energy and Mineral Development (DEMD) identified the Sage Creek limestone site as having a large exposure of Madison Limestone with limited overburden and gentle terrain. Initial field work in the area involved mapping the upper Madison Limestone followed by surface sampling of outcrops for chemical analysis and x-ray flouresence to determine limestone quality. Encouraged by the preliminary sample and study results, a coring program was planned and implemented.

In the tribally owned 850-acre portion of the project area, a 15 hole coring program was designed to sample the Bull Ridge Member of the Madison Limestone, with

Formation	Member	Thickness (feet)		Description	
	_ ,			Light-gray to light yellowish-gray	
Tensleep	Tensleep	100	100	fine- to medium-grained cross	
				bedded sandstone	
Amsden	Ranchester Limestone	40	100	Interbedded limestone, sandstone,	
				and siltstone	
	Horseshoe Shale	60		Red, crossbedded, quartz	
				sandstone and siltstone	
Madison	Bull Ridge Member	150	800	Coarse grained crinoidal limestone,	
				fine-grained limestone, and rare	
				fine-grained dolomitic limestone,	
				with a lower solution zone	
	Cliffy Limestone Member	650		Dolomitic limestone	

Table 1: Stratigraphy of potential resources

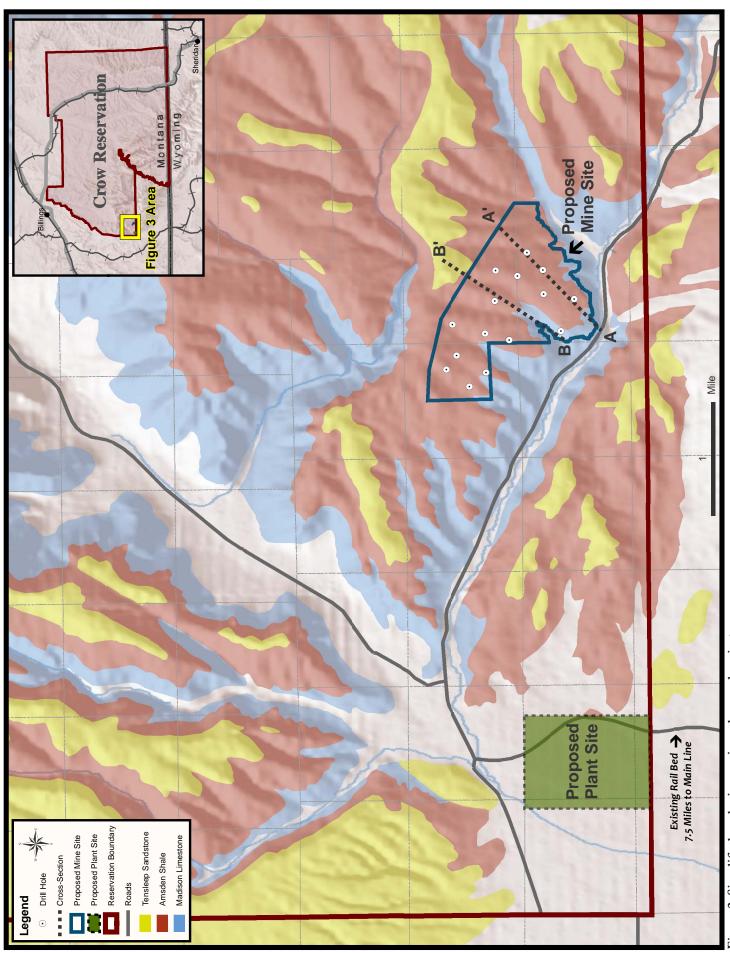


Figure 2: Simplified geologic map in and around project area

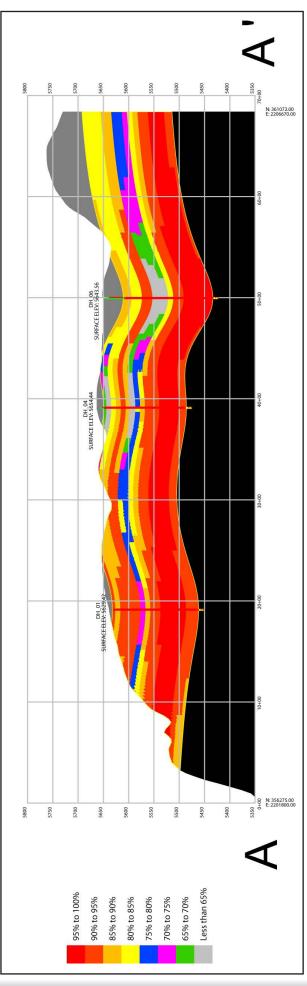


Figure 3: Cross Section A-A' - Colors Correlate to %CaCO3

Sage Cr Resour	Sage Creek Limestone Deposit Resource - Tonnage Breakout January 2010	Deposit eakout
CaCO ₃ Grade	Average Grade	Limestone
Interval %	CaCO ₃ Percent	Tonnage
95 to 100	92.8	89,445,396
90 to 95	92.9	127,931,886
85 to 90	97.8	89,167,566
80 to 85	82.7	93,985,169
75 to 80	77.8	48,595,037
70 to 75	73.0	20,019,890
65 to 70	68.1	5,220,784
below 65	61.0	1,868,543
Total/Avg.	87.7	476,234,271

Table 2: Tonnages of specified CaCO3 grades (%)

			п
	T102	80:0	
	CACO3 LOI AL203 CAO FE203 K20 MGO MNO P205 SIO2 Sulfur TIO2	0.04	
	SIO2	4.05	
	P205	0.29	
ent %	MNO	0.04	
Overall Average Percent %	MGO	2.56	
II Aver	K20	0.20	
Overa	FE203	09:0	
	САО	49.27	
	AL203	0.87	
	Ю	40.93	
	CACO3	87.70	
Overburden Cubic Yards		476,234,271 36,329,963 87.70 40.93 0.87 49.27 0.60 0.20 2.56 0.04 0.29 4.05 0.04 0.08	
Limestone Overburden Tons Cubic Yards		476,234,271	

Table 3: Chemical composition and percentages

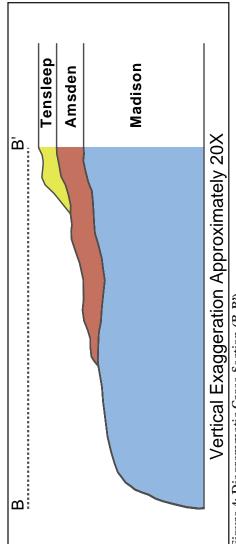


Figure 4: Diagrammatic Cross-Section (B-B')



DEMD geologist examining limestone outcrop. File Photo.

14 of the holes reaching a sufficient depth to penetrate the entire Bull Ridge section. Ten foot cores were cut from the surface to total depth capturing the Amsden Formation overburden when present, the Bull Ridge Limestone Member and terminating in the dolomite of the Cliffy Limestone Member. Core samples were logged and shipped to Hazen Research Inc. for analysis. The sample recovery was excellent from the rotary core drilling program which used water and foam as a drilling fluid.

Hazen Research Inc., located in Golden, CO, split and photographed the core samples and prepared them for x-ray diffraction testing. Approximately 480 samples were evaluated for oxides of silica, alumina, calcium, magnesium, titanium, manganese, zinc, loss of ignition and a suite of heavy metals. (See Table 3) Every tenth sample was analyzed for specific gravity, organic carbon, chloride, mercury and sulfur. Three samples were petrograhically examined for amphiboles and other fibrous minerals. Core sample splits and pulverized samples were returned to the Division for storage and are available for examination.

Limestone Resources

Geologic information from the 15 drill holes and sample assay data results were incorporated into a block model using Carlson Modeling Software. This model allows for detailed characterization of the resource in increments across the site, which can be utilized in developing a mine plan. In addition, an estimate of the overburden volume and limestone tonnage was calculated.

Limestone calcium carbonate grades and other qualities were derived using inverse distance modeling. Block sizes were established at 30 feet long, 30 feet wide and 10 feet high, determined from the drill-hole spacing, sampling and computer hardware limitations.

Based on the results from geologic and mine modeling, DEMD mining engineers have determined that the 500 million ton limestone deposit at Sage Creek is mineable by open pit mining methods. The following were the major determining factors:

- Large resource base of limestone approximately 500 million tons
- Average overall calcium carbonate grade of 88 percent
- Limestone deposit accessible from the surface outcrop
- 150 foot bed of limestone dipping approximately 2 to 4 degrees
- Gently rolling topography at the limestone resource area
- Low stripping ratios (shallow overburden, cover made up of clays and shales)
- Massive deposit Intact rock strength of the limestone, thus allowing a high wall design
- Opportunity to blend limestone quality by mining multiple pit benches
- Good accessibility by surface roads and mining ramps
- Large land ownership; 850 acres of land area.
- Initial large surface pit is approximately 2 miles from the proposed cement plant site

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 nearly 500 million tons of limestone, most of the other necessary raw materials are located near the proposed plant site. These include:

- Clay: Amsden Formation
- Sandstone (silica): Tensleep Formation
- Shale: Abundant shale units exist throughout Montana and northern Wyoming.
- Gypsum: Piper Formation, east of the Big Horn Mountains.

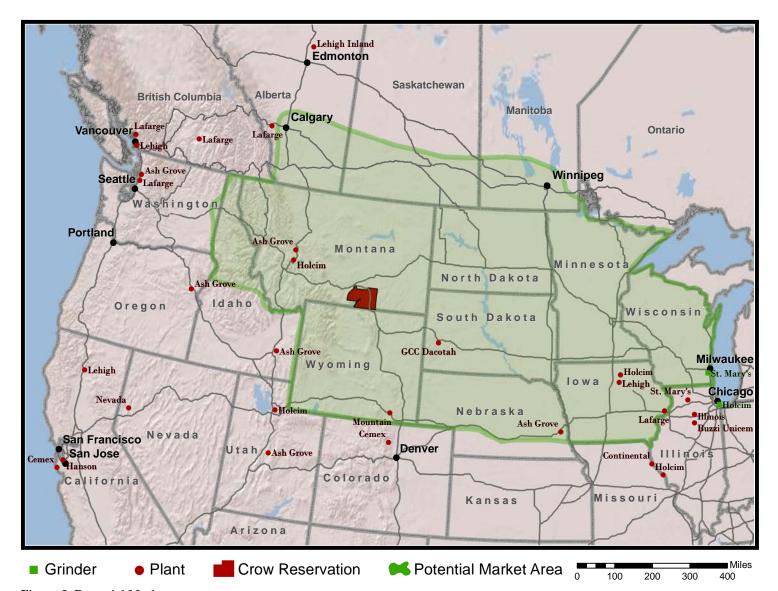


Figure 5: Potential Markets

Other deposits are found in north-central Wyoming within reasonable distance of the reservation.

Potential Markets

The major potential markets for limestone are located across the northern tier of the U.S and in the southern Canadian plains. These markets include:

Idaho, Montana, Wyoming, North Dakota, South Dakota, Minnesota, Wisconsin, Nebraska, and Eastern Washington*

* Western Washington is supplied by coastal British Columbia.

Within the core market area (which excludes Minnesota,

Idaho, and Wisconsin) five cement plants are currently operating. These plants have a combined production capacity of almost 3,715,000 tons per year. The names and locations of these plants are as follows: (See Figure 5)

- Holcim Cement, Three Forks, MT
- Ash Grove, Townsend, MT
- LaFarge Cement near Calgary, Canada
- Mountain Cement Co near Cheyenne, WY
- GC/Dacotah Cement near Rapid City, SD.

Overall, there is little expansion threat from other Montana sources, and there is next to no threat of new cement plants being built in Minnesota, North Dakota, South Dakota, and Wisconsin because these states do not have suitable limestone deposits.

Taxation

There are numerous tax advantages to businesses operating on Tribal Trust lands. Property and sales taxes are not applicable on Trust lands, under certain conditions, and depending on the form of business ownership, exemptions from Federal, state, and local taxes could also occur. Accelerated depreciation schedules also serve to decrease taxation for firms with a tax appetite.

HUBZone

A Small Business Administration program known as Historically Underutilized Business Zones, or HUBZones, provides contracting assistance to small businesses located in economically distressed communities. The goal is to promote job growth, capital investment and economic development in these areas, which indicates all federally recognized Indian reservations.

The Federal government plans to award three percent of all dollars for Federal prime contracts to HUBZone-certified companies. Benefits include competitive and sole-source contracting, and a 10 percent price evaluation preference in full and open contract competitions as well as subcontracting opportunities.

Permitting Process

The permitting processes on Indian lands are streamlined compared to those on non-Indian lands. Federal agencies are the sole regulatory authorities for mines and industrial facilities on Indian lands. The state of Montana does not have regulatory authority on Indian lands for these operations.

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

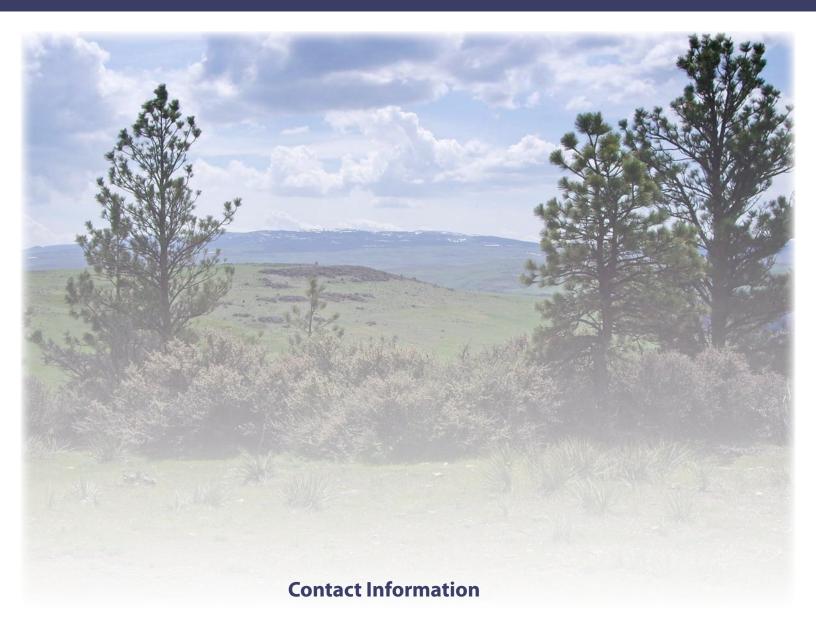
The Crow People

The Crow Tribe was historically nomadic, migrating throughout the central plains of the United States and Canada and eventually settling near the Big Horn Mountains of Montana. Encompassing approximately 2.2 million acres, the reservation is the largest of seven reservations in the state. The Crow Tribe has 12,000 recognized members, with approximately 7,900 residing on the reservation.

The Crow People are renowned for their cultural vitality, especially throughout Indian country. We are proud of our heritage, our traditions, and strive to maintain our unique identity as well as our sovereignty. The tribal language is widely spoken by tribal members and most internal tribal business is still conducted in the Crow Language.

The tribe is particularly well known for hosting the "Crow Fair", which is held annually in August. This event has often been recognized as one of the largest family reunions in the world. During the festivities, several thousand Crow people leave normal life to live in an encampment of over 1,700 teepees and 1,200 tents. Crow families actually move entire households of people, including horses, to camp for the duration of the fair. Non-Crow visitors from all over the world also attend the Crow Fair to share and enjoy the culture and festivities in the "Teepee Capitol of the World."

The fairgrounds, where this event takes place, are located on the banks of the Little Big Horn River. This is an area rich in historic significance, with the Little Bighorn Battlefield only two miles to the south. Other nearby sites include the Big Horn and Yellowstone Rivers, and the historic Bozeman Trail. The climax of the event features a large morning parade of the Crow People and their horses in full regalia, cars and flat bed trucks bedecked with beadwork and attire, an afternoon all-Indian rodeo and horse race, and an evening intertribal powwow.





Apsáalooke Indian Nation

P.O. Box 69 Crow Agency, MT 59022 Phone: (406) 638-3700

Fax: (406) 638-3881



Division of Energy and Mineral Development

12136 West Bayaud Avenue, Suite 300 Lakewood, CO 80228 Phone: (303) 969-5270 Fax: (303) 969-5273

Acting Division Chief: Dennis Bodenchuk

Phone: 720-407-0603

Email: dennis.bodenchuk@bia.gov