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PRINTED: 07-06-2010

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: CEDAR GLADE QUARRIES

ALTERNATE NAMES:
DRAKE LIMESTONE QUARRIES
SUPERIOR LIMESTONE

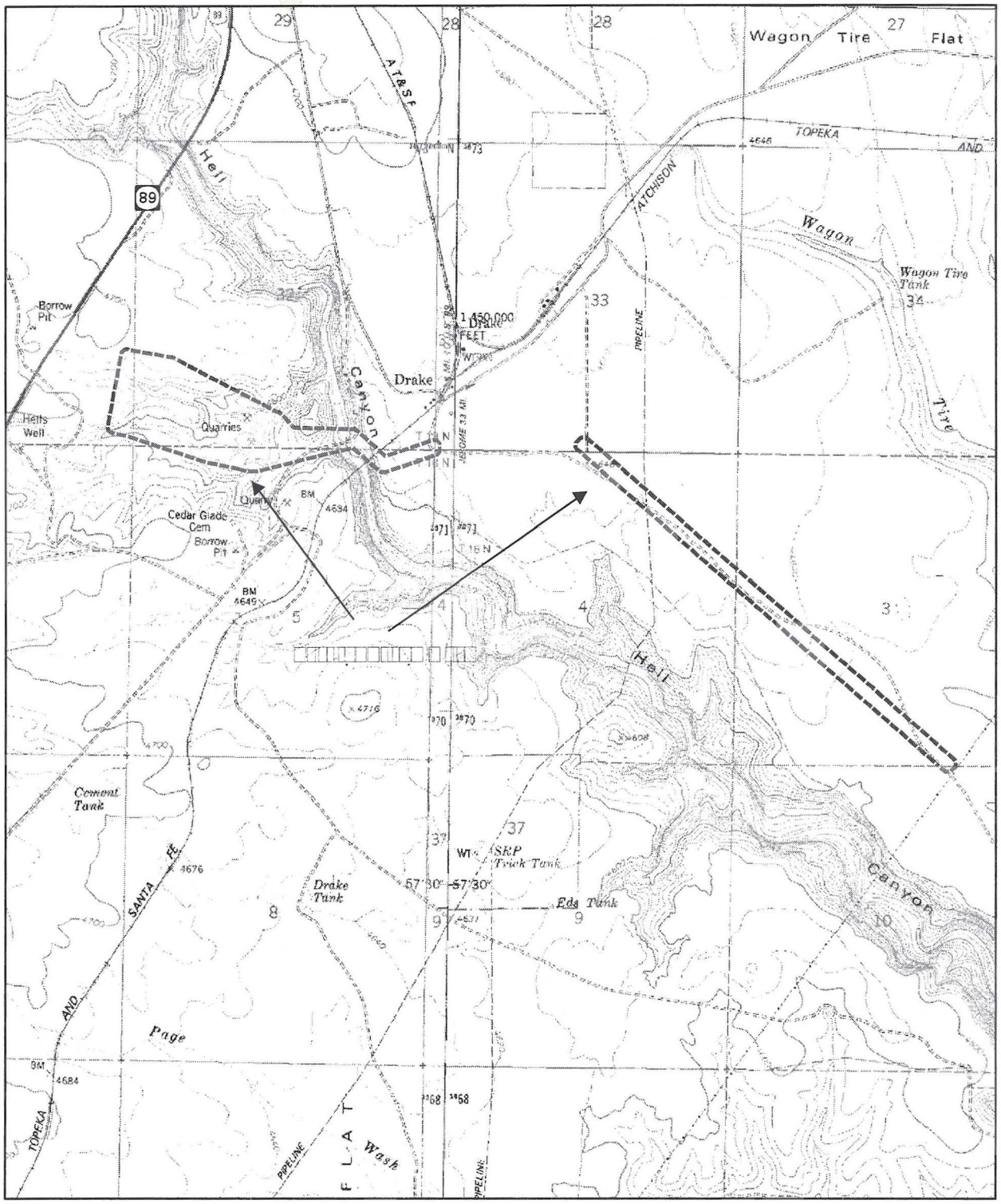
YAVAPAI COUNTY MILS NUMBER: 503

LOCATION: TOWNSHIP 19 N RANGE 1 W SECTION 32 QUARTER SW
LATITUDE: N 34DEG 58MIN 47SEC LONGITUDE: W 112DEG 23MIN 13SEC
TOPO MAP NAME: PAULDEN - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
STONE LIMESTONE CB
CALCIUM LIMESTONE

BIBLIOGRAPHY:
ADMMR CEDAR GLADE QUARRIES FILE
TENNEY, J.B. THE MINERAL INDUSTRIES OF AZ
AZBM 125, 1928, P. 109
KRIEGER, M.H. GEOL PRESCOTT AND PAULDEN QUAD
USGS PP 467, 1965, P. 114
ELEVATORSKI, E.A. AZ IND. MIN. 1978 ADMMR PUB
BLM AMC FILE 87538, CLAIMS EXTEND INTO SEC. 6
SUPPLIES ADJACENT CEMENT PLANT
USFS EIS DRAKE CEMENT LS QUARRY 9-2006
USGS OFR 2004-1439 HYDROLOGIC REVIEW DRAKE



TRANSCON ENVIRONMENTAL

DRAKE CEMENT LLC

Technology
Values
Commitment

DRAKE CEMENT LLC

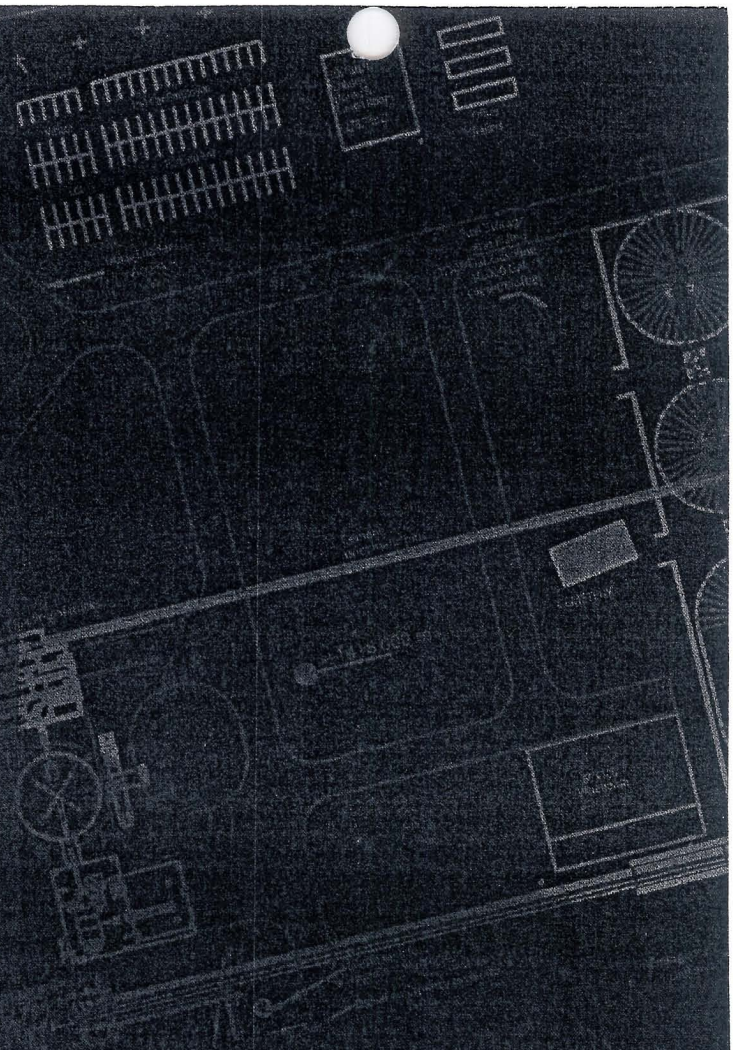
Drake Cement LLC is a company in which the Yavapai Apache Nation holds a significant investment along with other investors that have extensive experience in the construction and operation of cement plants.

Drake Cement plans to construct a new cement plant designed to produce 660,000 tpy of Portland cement types II/V. The engineering design incorporates the most recent advances in cement plant technology, particularly in emissions control.

The project site is located in Drake, Arizona which is 110 miles north of Phoenix and 35 miles north of Prescott. It is strategically located to serve the continuous growth of urban development in Arizona, particularly in the areas of Phoenix and the Northern Arizona, as well as the Southern part of Nevada, including Las Vegas.

The statistical information about the cement industry in the Southwestern United States in recent years reveals, among others things, that this market is deficient in cement production from 500,000 to a million tons per year. The erection of the Drake plant will not only satisfy in part the growing demand of cement in Arizona but most probably will also help stabilize the soaring cement prices, that in recent months have surpassed the $90/ton barrier.

The plant will require around 70 workers, most of which will be recruited from the area whenever possible. In addition, a project of this size will generate a significant amount of indirect jobs to satisfy the demand of services and industry related businesses like ready mix, construction, maintenance, etc.



ENVIRONMENTAL ISSUES

Drake Cement has done extensive research and carefully chosen the Best Available Control Technologies (BACT) in the industry, both in Europe and in the United States and is applying them in this project.

The plant will be located on private property within the Prescott National Forest, about 7 miles away from the closest populated area. Regardless of that, the plant is being designed with the highest standards in environmental controls, guaranteeing emissions of contaminants well below the average for similar plants. Dust control technology will keep particulate matter emissions to a minimum.

Drake Cement acknowledges that water resources are limited in the project area and its rational utilization is a mayor concern in the State of Arizona. Therefore the plant and the quarry operations have been designed to optimize water usage to a very small level of consumption with no significant impact to the base flow of the Verde River, as documented on the "Hydro geologic Review of the Drake Cement Project" published by the US Geological Survey.

11-2005

DRAKE CEMENT LLC

c/o Fennemore Craig
Att. Dawn G. Meidinger
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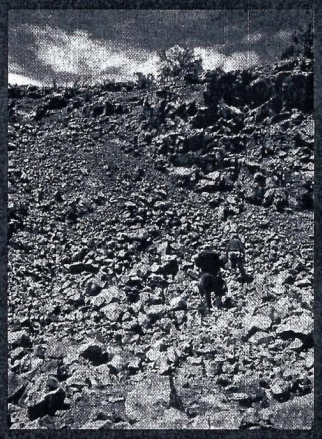
Fax (602) 916 5670
e-mail dmeidinger@fclaw.com
3003 North Central Avenue, Suite 2600
Phoenix, Arizona 85012 2913



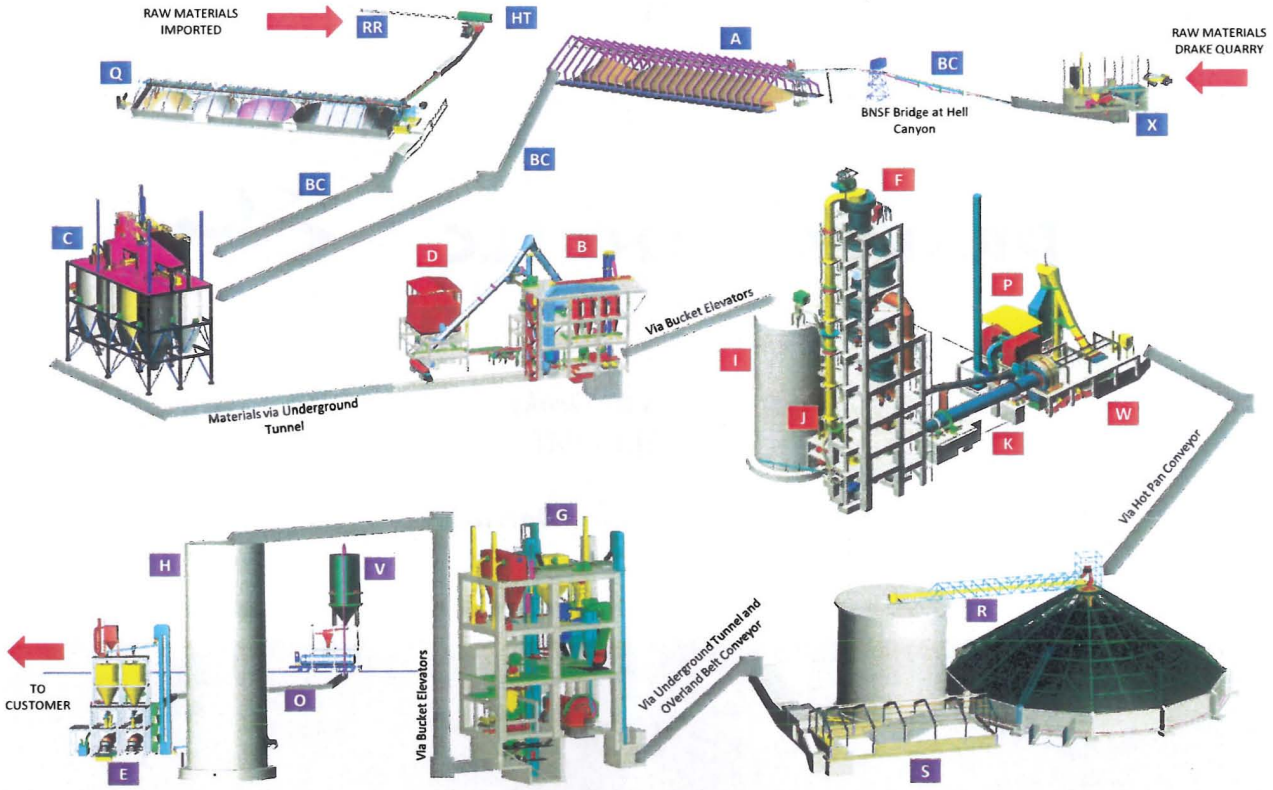
DRAKE CEMENT LLC

From all of us at Drake Cement,
WELCOME

Marco Gomez-Barrios

DRAKE, YAVAPAI COUNTY
ARIZONA, USA

6- 2010



RAW MATERIALS AREA

X — PRIMARY CRUSHER BUILDING
- Vibrating Screen and Impact Crusher Type 160/150CR by Thyssen Krupp Foerdertechnick

BC — OVERLAND BELT CONVEYORS
- CFC/TFC by Superior Industries
- Capacity up to 500 ST/hr
- From Quarry to A: 3,200' (950 m) approx.

A — LIMESTONE STORAGE BUILDING
- 41,200 ST High Limestone and 7,900 ST Low Limestone
- Portal Scrapper GP2 455 / 37.5 Claudius Peters

RR — RAILROAD SPUR AND SWITCHING YARD
- Railroad Spur for Loading of Cement and Unloading of Raw Materials.
- Track Length: 4.1 miles.

HT — TRUCK AND RAILROAD UNLOADING BUILDING
- Vibrating Feeder (400 tons/hr)
- Water Dedusting System

Q — COAL AND ADDITIVE STORAGE BUILDING
- Coal (4,000 ST), Sandstone (1,310 ST), Aluminum source (1,310 ST), and Iron Ore (1,872 ST)
- Belt Conveyors with max. capacity of 400 ST/hr

C — METALLIC SILOS
- Silos for Limestone (602 ST), Sandstone (502 ST), Iron Ore (626 ST), Gypsum (430 ST), Clinker (538 ST), and Coal (341 ST)

RAW MATERIALS MIXING & CLINKER PRODUCTION AREA

B — RAW MATERIAL GRINDING BUILDING
- Roller Press POLYCOM 15/8-5 by Polysius
- High Efficiency Separator SEPOL HR by Polysius

D — RAW MATERIAL AND KILN BAGHOUSE
- Model 6 x 270TB-BHTP-288:S6 by IAC
- 6 compartments, 576 kW Fan

I — BLENDING SILO
- Claudius Peters Mixing Silo MC-16
- Effective 7,183 ST

J — PREHEATER FEEDER BUILDING
- Two Belt Bucket Elevators (1 as standby)
- Capacity up to 170 ST/hr

F — PREHEATER BUILDING
- Six Stage Preheater with Calciner by FLSmidth
- SNCR System 19% Ammonia Injection System

K — ROTARY KILN
- 150' Vulcan Kiln with Falk Main Gearbox
- Cooling Fans and Seals by FLSmidth

W — CLINKER COOLER BUILDING
- ETA Cooler 646 by Claudius Peters
- 2000 mtpd of Clinker at 90°C
- Hot Pan Conveyor by Sthim (max temp. 130°C)

P — BAGHOUSE AND HEAT EXCHANGER BUILDING
- Three air to air heat exchanger modules by IAC
- Baghouse for Cooler by IAC with 4 compartments

CEMENT PRODUCTION AND DISPATCHING AREA

R — CLINKER STORAGE BUILDINGS
- Twin Buttes Mine reclaimed dome (50,000 ST)
- Emergency Silo (13,800 ST)

S — GYPSUM STORAGE BUILDING
- Building with capacity of 2,000 ST
- Collecting Belt Conveyor by Superior (400 ST/hr)

G — CEMENT GRINDING BUILDING
- Roller Press POLYCOM 15/8-5 by Polysius
- One chamber used Marcy ball mill (1,841 kW)
- Cement Cooler by Polysius (from 100°C to 55°C)

H — CEMENT SILO
- Claudius Peters Silo EC-16
- Two discharging system (Bucket Elevator and Emergency Dispatching (165 metric tons/hr)

E — TRUCK DISPATCHING BUILDING
- Two metallic silos (aprox. 125 m^3 each)
- Claudius Peters Fluidization Systems (440 ST/hr)
- Two Fairbanks weighbridges for trucks (120 tons)

O — CEMENT PIPE
- Pneumatic Conveying Pipe by Claudius Peters
- Approx Length: 293 m

V — RAILROAD DISPATCHING BUILDING
- One metallic silo (appox. 398 m^3)
- Claudius Peters Fluidization System (330 MT/hr)
- Fairbanks weighbridge for railcar (360 tons)

DRAKE CEMENT PLANT
Location: Drake, Arizona, USA
Elevation: 4,642 ft (1,416 m) asl
Cement Types: II and V Low Alkali Cement
Plant Capacity: 660,000 ST/yr
Water Consumption: 70 acre-ft/year
Power Capacity: 17.0 MW (installed)
Major Markets: Phoenix, AZ and Las Vegas, NV

Drake Cement LLC

Scottsdale Office (Corporate)
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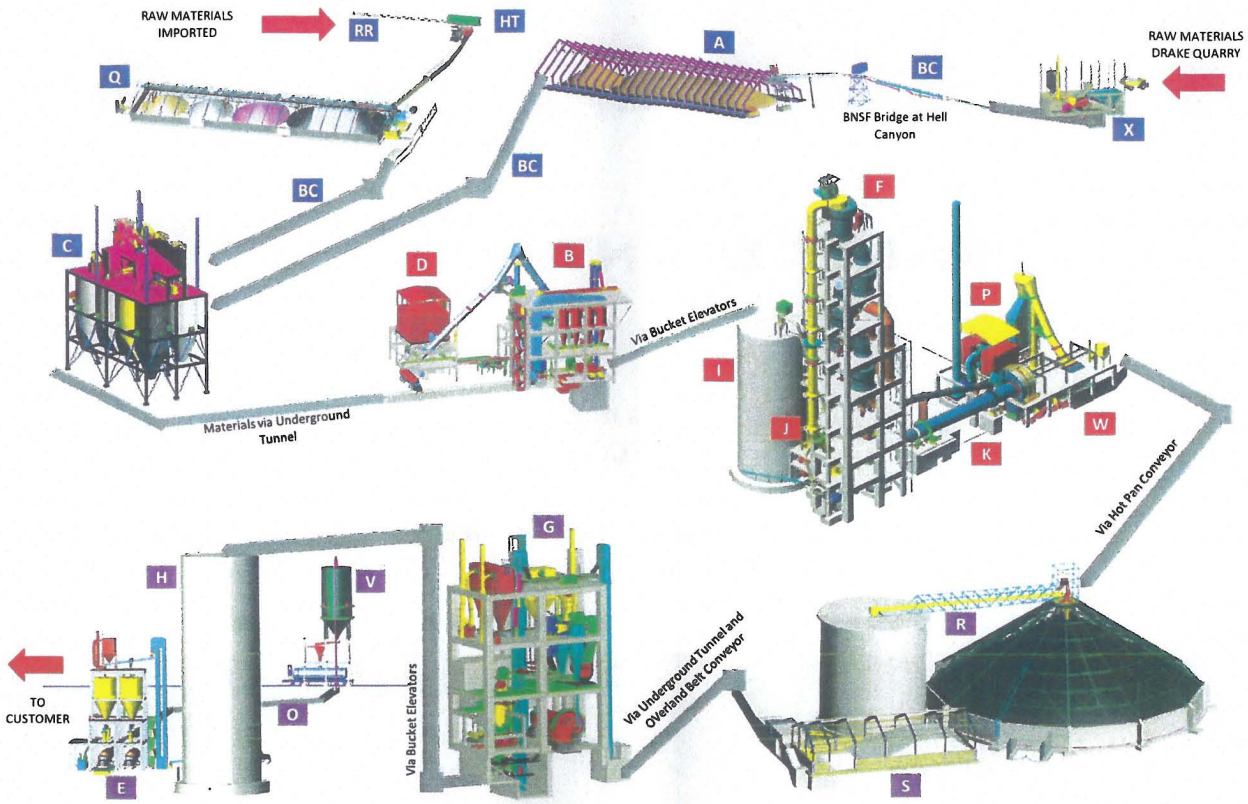
Fax: 480-219-7558

Drake Office (Plant Site)
5001 E. Drake Rd, Drake AZ
PO Box 370, P
aulden AZ 86334
Tel: 928-636-6004
Fax: 928-636-4825



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Fax: 480-219-7558

Drake Office (Plant Site)
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aulden AZ 86334
Tel: 928-636-6004
Fax: 928-636-4825

6-2010

CHAPTER 5 – REFERENCES

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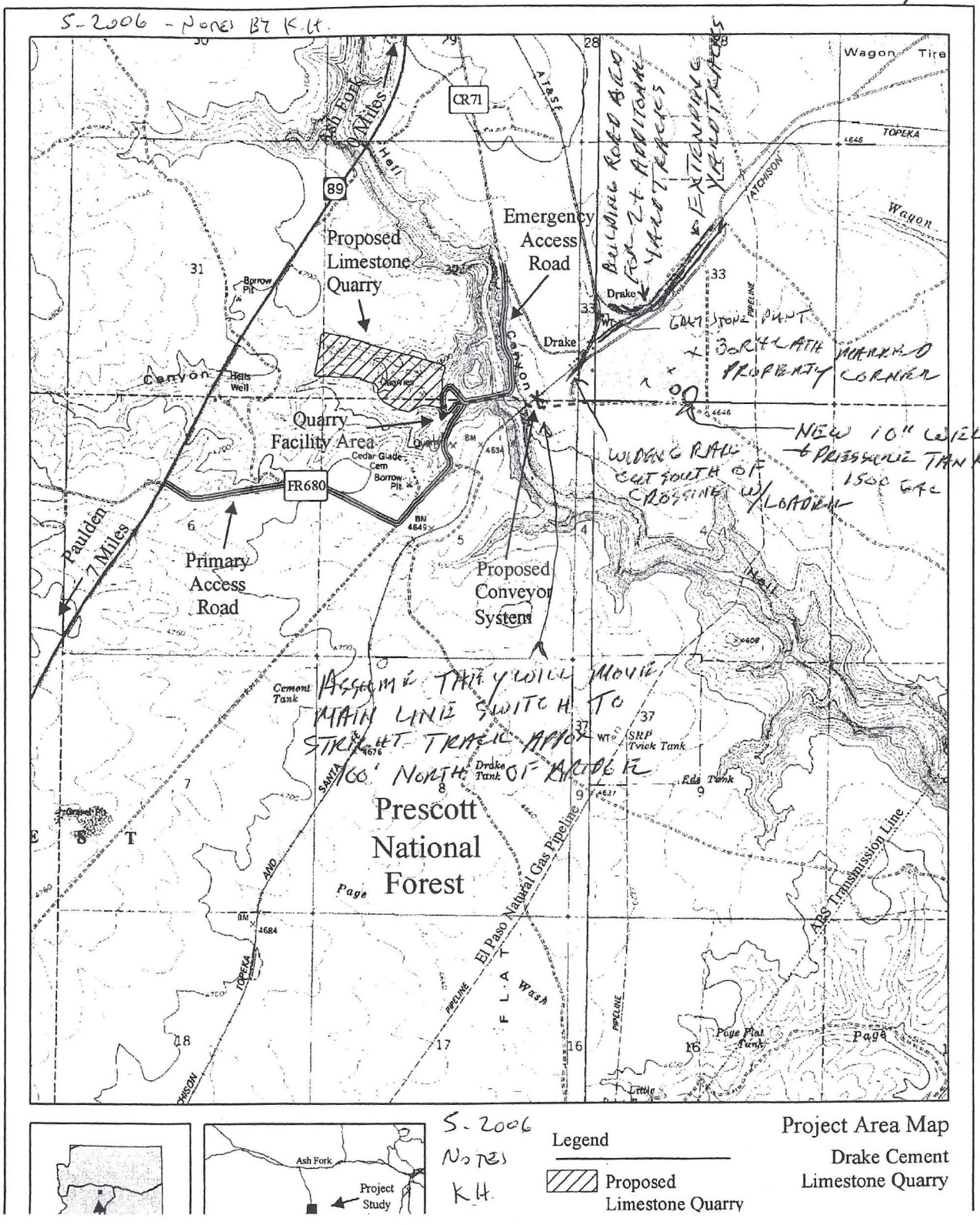
BRAND NEW LOADER PARKED WITH HARLEY CRAYS EQUIP RIGHT SIZE FOR PLANT LOADER - MAY BE LEASED TO VERDE VALLEY RR AND OPERATOR ON THEIR PAY ROLL, THEY WOULD HAVE THE INSURANCE/PERFORMANCE DEAL, TO WORK ON BNSF RIGHT OF WAY



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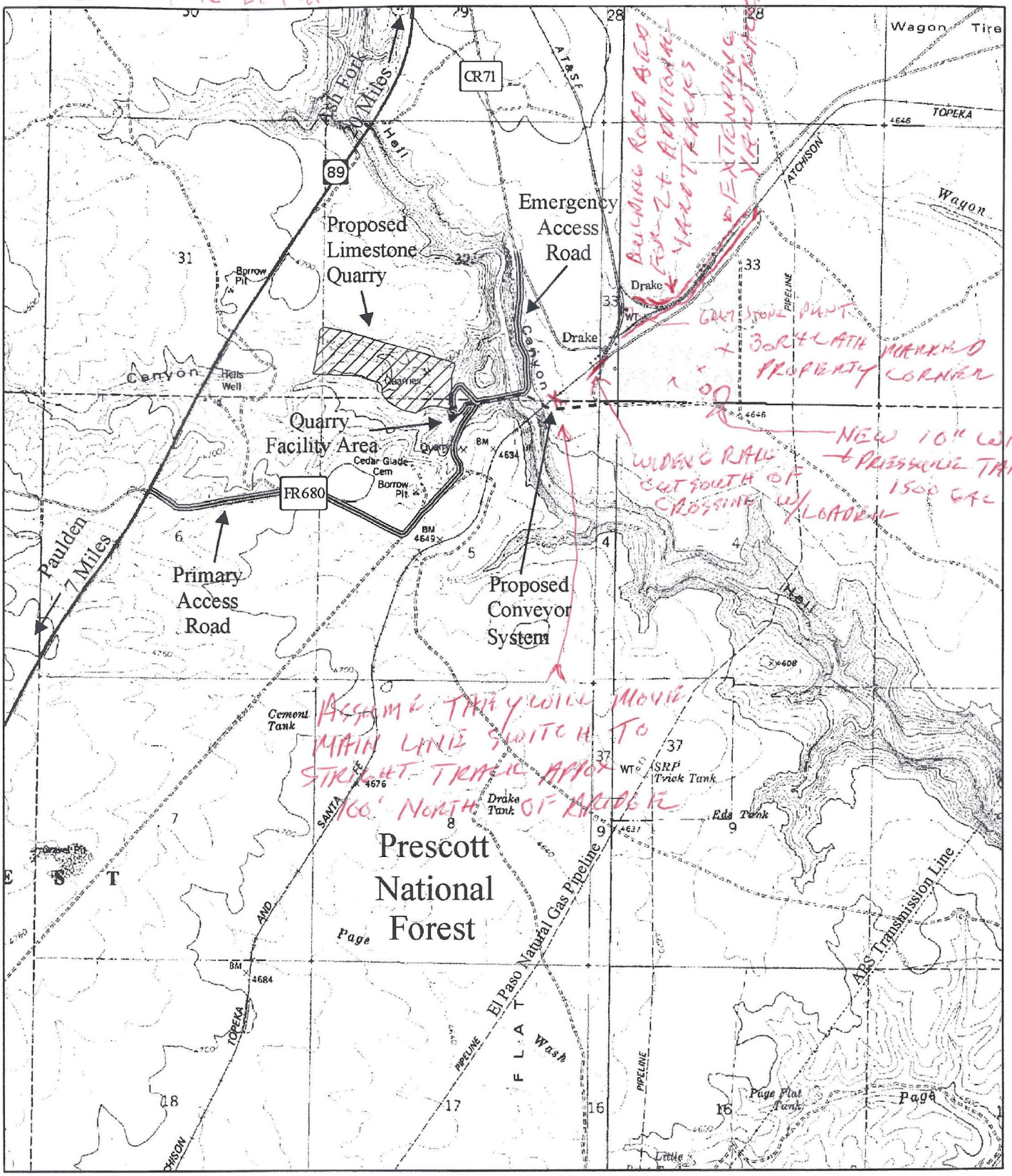
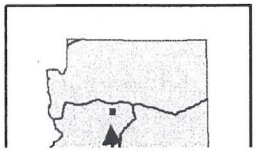
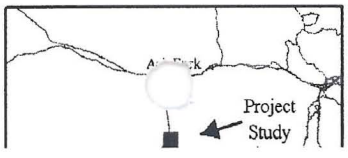
5-2006 - NOTES BY K.H.







5-2006
NOTES
K.H.

Legend

Proposed Limestone Quarry

Project Area Map
Drake Cement
Limestone Quarry

Arizona, September 2005

EXECUTIVE SUMMARY

THE COMPANY

Drake Cement LLC (**DC**) is a company in which the Yavapai Apache Nation holds a significant investment along with other investors that have extensive experience in the construction and operation of cement plants. **DC** owns a substantial number of unpatented mining claims upon which a high grade limestone deposit exists. In addition, DC owns 144 acres of land in fee on which a Portland cement plant will be erected. The project site is located in Drake, Arizona which is 110 miles north of Phoenix and 35 miles north of Prescott. The projected project investment is estimated around 90 million dollars.

THE MARKET

The statistical information about the cement industry in the Southwestern United States in recent years reveals, among other things, that this market is deficient in cement production from 500,000 to a million tons per year. This information along with the continuous growth of urban development in Arizona, particularly in the areas of Phoenix and the Northern Arizona as well as the Southern part of Nevada, including Las Vegas, justify the construction of a new cement plant.

The plant site is strategically located to serve these growing markets. Drake is located 1.5 miles east of State Hwy 89 which is the main north-south ranging highway in this area, giving good access to Interstate 40 to the north and, via Hwy 69, Interstate 15 to the south. The property also has a rail spur and is crossed by the Burlington Northern/Santa Fe Railroad that provides access to major population centers in Arizona and surrounding states, including Phoenix, Flagstaff and Las Vegas.

The erection of the Drake plant will not only satisfy in part the growing demand of cement in Arizona but most probably will also help stabilize the soaring cement prices, that in recent months have surpassed the $90/ton barrier.

PROJECT DESCRIPTION

The plant will be designed to produce 660,000 tons per year of Portland cement types II/V. The engineering design incorporates the most recent advances in cement plant technology, particularly in emissions control. It will include a primary crusher, a limestone covered stockpile, a raw mill grinding system with a tandem crusher for drying plus a short ball mill, an homogenization silo, 6 stage low pressure cyclone preheater tower with tertiary air, a low NOx precalciner that will operate in combination with a Selective Non Catalytic Reduction Process (SNCR) to reduce NOx emissions, an air beam grate clinker cooler, a covered clinker stockpile, a combined cement grinding system (Roller Press plus ball mill), a 10,000 tons cement silo with bulk cement truck discharge and a 700 tons cement silo for bulk cement railcar discharge.

Low sulfur coal will be used as primary fuel. Local gas sources will be utilized for the start up of the kiln and electrical demands are estimated at 16MW which will be served by a transmission line located approximately 1.5 miles from the cement plant site.

DC plans to mine approximately 1,040,000 tons per year of limestone from sources located close to the plant site. Current resource estimates show material availability for 50 years at a production rate of 660,000 tons per year of cement. In addition the design of the plant allows for the provision of raw materials (limestone and others) by rail from nearby suppliers.

ENVIRONMENTAL ISSUES

Air quality

The plant will be located on private property within the Prescott National Forest, about 7 miles away from the closest populated area. Regardless of that, the plant is being designed with the highest standards in environmental controls, guaranteeing emissions of contamination well below the average for similar plants. In many aspects, this plant will serve as a model for the management of NOx emissions.

Dust control technology will keep particulate matter emissions to a minimum.The cloth chosen for the baghouse filters will guarantee minimum dust emission and both the plant and the quarry will have covered storage and transportation of raw materials and clinker to minimize fugitive emissions. In addition, the quality of the raw material and the type of coal to be used will keep the emissions of SO_2 to a minimum and at levels well below the industry average.

In summary, **DC** has done extensive research and carefully chosen the Best Available Control Technologies (BACT) in the industry, both in Europe and in the United States and is applying them in this project.

Water Resources

DC acknowledges that water resources are limited in the project area and its rational utilization is a major concern in the State of Arizona. Therefore, the plant and the quarry operations have been designed to optimize water usage and will only consume 70 acre-foot per year. This level of consumption is very small and guarantees that no significant impact will be produced to the base flow of the Verde River as documented on a recent report called "Hydrogeologic Review of the Drake Cement Project, Yavapai County, Arizona" by Laurie Wirt, published by the US Geological Survey. In this report the author concludes that "Any impact to base flow on the Verde River at this scale would be too small to measure."

MORE JOBS FOR ARIZONA

The plant will require around 70 workers, most of which will be recruited from the area whenever possible. In addition, a project of this size will generate a significant amount of indirect jobs to satisfy the demand of services that the plant will require for its daily operation. An economic multiplier effect is expected with the creation of industry related businesses like ready mix, construction, maintenance, etc.

PERMITS

DC has made significant progress with respect to need permits including the submission of: an air permit application to the Arizona Department of Environmental Quality (ADEQ); and a mine plan of operations to the Prescott National Forest (PNF) related to planned mining operations. **DC** expects to begin final engineering design in the fourth quarter of 2005, construction in June of 2006 and start operating in June of 2008.

c/o Fennemore Craig Att. Dawn G. Meidinger
Ph (602) 916 5470 Fax (602) 916 5670
e-mail dmeidinger@fclaw.com
3003 North Central Avenue, Suite 2600, Phoenix,
Arizona 85012 2913

State of Arizona
Department of Mines and Mineral Resources
1502 West Washington Street, Phoenix, AZ 85007-3210
Telephone: 602/255-3795 • Facsimile: 602/255-3777
1-800-446-4259 in Arizona • www.admmr.state.az.us

JANET NAPOLITANO
GOVERNOR

27 January 2006

Director
Air Quality Division
Arizona Department of Environmental Quality
1110 West Washington Street
Mail Stop 3415 A-1
Phoenix, AZ 85007-2935

Subject: Issuance of Air Quality Control Permit No. 1001770 to Drake Cement LLC.

Ladies and Gentlemen:

This letter is being written in support of issuing the subject permit to Drake Cement LLC within the parameters stated in the permit. It is our understanding that Drake plans to employ the best available technology to control environmental pollution, and hence should be able to meet or exceed the limits set forth in the proposed permit. These will entail restraining emissions of particulate matter (PM), carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide (SO_2), oxides of nitrogen (NO_x), and hazardous air pollutants (HAP).

To the best of our knowledge Drake will comply with all the requirements of the permit, and will pay special attention to all material requirements. It appears that dust is the major area of concern, and Drake will install, maintain, and operate dust collectors to ensure that the limits imposed are adequately met.

There is a growing shortage of cement in Arizona, which is currently affecting and will continue to impact construction costs. This project should be able to alleviate at least some part of the shortfall, and also provide job opportunities for about 70 persons. This will also indirectly improve the economy of the area, and benefit the State.

Based on the above rationale we would strongly encourage that the air quality permit be granted to Drake Cement LLC.

Sincerely,

Madan M. Singh, Ph.D., P.E.
Director

ADMMR
Arizona Department of Mines and Mineral Resources
1502 West Washington, Phoenix, AZ 85007 Phone (602) 255-3795
1-800-446-4259 in Arizona FAX (602) 255-3777 www.admmr.state.az.us

30 November 2005

Prescott National Forest
c/o Drake Cement RAP
344 S. Cortez Street
Prescott, AZ 86303

Attention: Mr. Michael Smith

Subject: Support of Drake Cement Limestone Quarry Project

Ladies and Gentlemen:

This letter is to support the project for the Drake Cement Limestone Quarry as proposed, and specifically the roads analysis. It is evident that the impact of the changes suggested will be minor, and the cost for the upgrades and maintenance required will be borne by the company. This should not impose any major costs on the Forest Service or the local communities.

On the other hand the benefit to the local area will be significant, since 70 new jobs will be created and then there will be the indirect gains for many businesses. Besides, there is a shortage of cement in Arizona, leading to higher construction costs for all new projects. The impact on larger projects, such as highways and large structures, which are often funded by the State, will be greater. Contractors will not bid on those jobs unless they are assured of cement supplies to complete the project. If the cement has to be shipped from out of state, this will increase costs. We believe that the cement shortage figures for Arizona presented by Drake Cement are conservative and the actual shortages are about twice as much.

It appears that the company is planning on the best technology available for environmental control and the use of water has been restricted to a minimum.

In view of the benefits to the State and minimal detrimental impact to the area, we would like to strongly support the project to completion.

Sincerely,

Madan M. Singh, Ph.D.; P.E.
Director

Arizona, September 2005

EXECUTIVE SUMMARY

THE COMPANY

Drake Cement LLC (**DC**) is a company in which the Yavapai Apache Nation holds a significant investment along with other investors that have extensive experience in the construction and operation of cement plants. **DC** owns a substantial number of unpatented mining claims upon which a high grade limestone deposit exists. In addition, DC owns 144 acres of land in fee on which a Portland cement plant will be erected. The project site is located in Drake, Arizona which is 110 miles north of Phoenix and 35 miles north of Prescott. The projected project investment is estimated around 90 million dollars.

THE MARKET

The statistical information about the cement industry in the Southwestern United States in recent years reveals, among other things, that this market is deficient in cement production from 500,000 to a million tons per year. This information along with the continuous growth of urban development in Arizona, particularly in the areas of Phoenix and the Northern Arizona as well as the Southern part of Nevada, including Las Vegas, justify the construction of a new cement plant.

The plant site is strategically located to serve these growing markets. Drake is located 1.5 miles east of State Hwy 89 which is the main north-south ranging highway in this area, giving good access to Interstate 40 to the north and, via Hwy 69, Interstate 15 to the south. The property also has a rail spur and is crossed by the Burlington Northern/Santa Fe Railroad that provides access to major population centers in Arizona and surrounding states, including Phoenix, Flagstaff and Las Vegas.

The erection of the Drake plant will not only satisfy in part the growing demand of cement in Arizona but most probably will also help stabilize the soaring cement prices, that in recent months have surpassed the $90/ton barrier.

PROJECT DESCRIPTION

The plant will be designed to produce 660,000 tons per year of Portland cement types II/V. The engineering design incorporates the most recent advances in cement plant technology, particularly in emissions control. It will include a primary crusher, a limestone covered stockpile, a raw mill grinding system with a tandem crusher for drying plus a short ball mill, an homogenization silo, 6 stage low pressure cyclone preheater tower with tertiary air, a low NOx precalciner that will operate in combination with a Selective Non Catalytic Reduction Process (SNCR) to reduce NOx emissions, an air beam grate clinker cooler, a covered clinker stockpile, a combined cement grinding system (Roller Press plus ball mill), a 10,000 tons cement silo with bulk cement truck discharge and a 700 tons cement silo for bulk cement railcar discharge.

Low sulfur coal will be used as primary fuel. Local gas sources will be utilized for the start up of the kiln and electrical demands are estimated at 16MW which will be served by a transmission line located approximately 1.5 miles from the cement plant site.

DC plans to mine approximately 1,040,000 tons per year of limestone from sources located close to the plant site. Current resource estimates show material availability for 50 years at a production rate of 660,000 tons per year of cement. In addition the design of the plant allows for the provision of raw materials (limestone and others) by rail from nearby suppliers.

ENVIRONMENTAL ISSUES

Air quality

The plant will be located on private property within the Prescott National Forest, about 7 miles away from the closest populated area. Regardless of that, the plant is being designed with the highest standards in environmental controls, guaranteeing emissions of contamination well below the average for similar plants. In many aspects, this plant will serve as a model for the management of NOx emissions.

Dust control technology will keep particulate matter emissions to a minimum.The cloth chosen for the baghouse filters will guarantee minimum dust emission and both the plant and the quarry will have covered storage and transportation of raw materials and clinker to minimize fugitive emissions. In addition, the quality of the raw material and the type of coal to be used will keep the emissions of SO_2 to a minimum and at levels well below the industry average.

In summary, **DC** has done extensive research and carefully chosen the Best Available Control Technologies (BACT) in the industry, both in Europe and in the United States and is applying them in this project.

Water Resources

DC acknowledges that water resources are limited in the project area and its rational utilization is a major concern in the State of Arizona. Therefore, the plant and the quarry operations have been designed to optimize water usage and will only consume 70 acre-foot per year. This level of consumption is very small and guarantees that no significant impact will be produced to the base flow of the Verde River as documented on a recent report called "Hydrogeologic Review of the Drake Cement Project, Yavapai County, Arizona" by Laurie Wirt, published by the US Geological Survey. In this report the author concludes that "Any impact to base flow on the Verde River at this scale would be too small to measure."

MORE JOBS FOR ARIZONA

The plant will require around 70 workers, most of which will be recruited from the area whenever possible. In addition, a project of this size will generate a significant amount of indirect jobs to satisfy the demand of services that the plant will require for its daily operation. An economic multiplier effect is expected with the creation of industry related businesses like ready mix, construction, maintenance, etc.

PERMITS

DC has made significant progress with respect to need permits including the submission of: an air permit application to the Arizona Department of Environmental Quality (ADEQ); and a mine plan of operations to the Prescott National Forest (PNF) related to planned mining operations. **DC** expects to begin final engineering design in the fourth quarter of 2005, construction in June of 2006 and start operating in June of 2008.

c/o Fennemore Craig Att. Dawn G. Meidinger
Ph (602) 916 5470 Fax (602) 916 5670
e-mail dmeidinger@fclaw.com
3003 North Central Avenue, Suite 2600, Phoenix,
Arizona 85012 2913

PUBLIC NOTICE

YOU HAVE A VOICE IN AIR POLLUTION CONTROL IN ARIZONA

The Arizona Department of Environmental Quality (ADEQ) has reached a preliminary determination and is proposing to issue Air Quality Control Permit No. 1001770 to Drake Cement LLC for the operation of a cement manufacturing facility located at Quarry: FR 680: Plant: CR 71 in Drake, Yavapai County, Arizona 86334. The proposed Permit will limit emissions of the following types of air contaminants: particulate matter (PM), carbon monoxide (CO), volatile organic compound (VOC), sulfur dioxide (SO_2), nitrogen oxide (NO_X), and hazardous air pollutants (HAP).

You have an opportunity to submit written comments on the Permit and make oral comments on the Permit at the Public Hearing. ADEQ will be holding a Public Hearing on Wednesday, February 1, 2006 at 6:30 PM at the Town Council Chambers located at 1020 West Palomino Drive in Chino Valley, Arizona 86323. The written comment shall state the name and mailing address of the person, shall be signed by the person, their agent or attorney, and shall clearly set forth reasons why the Permit should or should not be issued. Grounds for comment are limited to whether the Permit meets the criteria for issuance spelled out in the State Air Pollution Control laws or rules.

Materials related to the Permit, including the application, ADEQ's analysis and the draft permit are available for your review at ADEQ's office at 1110 West Washington Street, Phoenix, Arizona and at the Town Clerk's Office at 1020 West Palomino Road in Chino Valley, Arizona 86323.

Persons wishing to submit written comments can do so at the Public Hearing. If mailed, written comments must be received by February 1, 2006. Comments should be directed to: Director, Air Quality Division, Arizona Department of Environmental Quality, 1110 West Washington Street, 3415A-1, Phoenix, Arizona 85007-2935.

ADEQ will consider all comments received in making a final decision on the proposed Permit. Everyone commenting will receive notification of the final decision. People who file comments on the Permit will have the right to appeal the final decision as an appealable agency action to the Office of Administrative Hearing (OAH) pursuant to §41.1092.03, and the appeal must be filed within thirty (30) days after the issuance of the final decision. The OAH may sustain, modify, or reverse the final decision.

Persons with a disability may request a reasonable accommodation such as a sign language interpreter, by contacting Linda Morrison (602) 771-4793 TDD phone 771-4829. Requests should be made as early as possible to allow time to arrange the accommodation.

If you would like to receive copies of future Public Notices of Air Pollution Control Permits, please provide a typewritten or a clearly printed copy of your name, address, and ZIP code, to the Director of Air Quality Division at ADEQ's address shown above. Your request should also state that you wish your name to be placed on the Air Quality Permit mailing list.

If you have any questions or would like to find out more information about this Permit, please contact Eric C. Massey at (602) 771-2288, toll free (800) 234-5677, or at ADEQ's address shown above.

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★ IN PART

ADEQ
Arizona Department
of Environmental Quality

TECHNICAL SUPPORT DOCUMENT
AND
STATEMENT OF BASIS

FOR CONSTRUCTION OF

DRAKE CEMENT, L.L.C.
PORTLAND CEMENT PLANT

Air Quality Permit Number 1001770

TABLE OF CONTENTS

I. INTRODUCTION

This operating permit is issued to Drake Cement, L.L.C., the Permittee, for operation of a Portland cement manufacturing plant and quarry located in the town of Drake (approximately 40 miles north of Prescott) in Yavapai County, Arizona. The proposed Portland cement plant will produce up to 2,000 tons per day and 660,000 tons per year of clinker.

A. Company Information

Facility Name: Drake Cement, L.L.C.
Facility Address: CR 71, Drake, Arizona 86334

B. Attainment Classification

The air quality control region in which the subject facility will be located either is unclassified or is classified as being in attainment of the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants: particulate matter less than 10 microns (PM-10), particulate matter less than 2.5 microns (PM-2.5), nitrogen dioxide (NO_2), sulfur oxides (SO_2), carbon monoxide (CO), lead (Pb) and ozone (O_3).

II. PROCESS DESCRIPTION

A. Limestone Quarry Operations

The manufacture of Portland cement begins with mixing three basic raw materials (limestone, iron ore, and aluminum) in proper proportions to achieve the ultimate product desired. Limestone provides calcium, which is the major component of Portland cement. The limestone will be obtained primarily from an adjacent quarry and will be transported to the cement plant by a series of three overland conveyor belts.

Blasting in the quarry will utilize a mixture of Ammonium Nitrate and fuel oil (ANFO) as the blasting agent and will produce approximately 88,000 tons of limestone rubble per month. Limestone rubble will be loaded to quarry trucks using front-end loaders. The trucks will transport the limestone rubble to a primary crusher, with integral vibrating screen, in order to achieve a material screen size of three inches or less. From the primary crusher, the crushed and screened limestone material is transported to the Portland cement plant using a series of three overland conveyors.

B. Cement Manufacturing Facility

The Portland cement plant comprises four distinct operations:

- Raw material receiving, milling, blending and storage,
- Coal preparation and pulverized Coal storage,
- Pyroprocessing, clinker production and storage, and
- Finish milling, cement storage, and load-out to shipping vehicles and railroad.

1. Raw Material Receiving, Milling, Blending and Storage

Raw materials to be received for the production of Portland cement include two grades of limestone (termed High and Low in reference to calcium content), an iron source (e.g. from iron oxide), an aluminum source (e.g., from high aluminum containing minerals such as Bauxite), coal, and gypsum. Most of the limestone and part of the low aluminum source material will be obtained from a quarry adjacent to the plant site as described in Section II.A. The other raw materials (iron ore, pure aluminum source, coal, gypsum or alternative imported limestone) will be delivered to the site by truck or railcar. Except for gypsum, all raw materials that reach the site via the overland conveyor belts, truck, and rail will be temporarily stored in piles that will be completely enclosed in a building. Gypsum will be stored in open piles.

As needed, the coal, iron ore, and aluminum source will be reclaimed

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* (IN PART)

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS I PERMIT

COMPANY: *Drake Cement, LLC*
FACILITY: *Drake Cement, LLC*
PERMIT #: *1001770*
DATE ISSUED: ***Draft***
EXPIRY DATE:

SUMMARY

This Class I, Title V permit is issued to Drake Cement, LLC, the Permittee, for construction and operation of a Portland cement plant located in Drake, Arizona.

This permit is issued in accordance with Title 49, Chapter 3 of the Arizona Revised Statutes. All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code (A.A.C.) R18-2-101 et. seq., Arizona State Implementation Plan (SIP), Code of Federal Regulations (CFR) Title 40 - Parts 60, 63, and 70 except as otherwise defined in this permit. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency.

The potential emission rates of the following pollutants are greater than major source thresholds: (i) particulate matter, (ii) particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}), (iii) nitrogen oxides, (iv) carbon monoxide, (v) hydrogen chloride, and (vii) total hazardous air pollutants. Therefore, the facility is classified as a major source as defined in A.A.C. R18-2-101(64), and requires a Class I permit pursuant to A.A.C. R18-302(B)(1)(a).

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ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 1001770
for
Drake Cement, LLC

I. PERMIT EXPIRATION AND RENEWAL [ARS § 49-426.F, A.A.C. R18-2-

A. This permit is valid for a period of five years from the date of issuance.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months, prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS [A.A.C. R18-2-306.A.8.a

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona air quality statutes and air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[A.A.C. R18-2-306.A.8.c, -321.A.1, and -321.A.2]

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances

1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such a reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless an application for renewal has been submitted pursuant to A.A.C. R18-2-322.B. Any permit revision required pursuant to this subparagraph shall comply with the provisions in A.A.C. R18-2-322 for permit renewal and shall reset the five-year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by

News Releases: 2004

News Release

USDA Forest Service

Prescott National Forest

Contact: Debbie Maneely, dmaneely@fs.fed.us

Prescott National Forest Announces NEPA Scoping for the Proposed Drake Cement Project

October 28, 2004

PRESCOTT Ariz - The Prescott National Forest is announcing the opportunity for the public to provide input for a proposed limestone mine (the Drake Cement project) in the Chino Valley Ranger District of the Prescott National Forest. Drake Cement LLC, has submitted a 10-year mine plan of operations for a high-grade limestone mine in accordance with the Forest Service surface use regulations (36 CFR 228, Subpart A). The proposed mine would be located approximately five miles north of Paulden, AZ and one mile east of State Route 89 (encompassing parts of sections 31 & 32, T19N, R1W and sections 5 & 6, T18N, R1W).

The Drake Cement project would involve approximately 72 acres over the course of its projected ten-year life. High-grade limestone would be mined from claims filed under the 1872 mining law. As a separate action, Drake Cement has proposed to construct and operate a cement plant to be built on private land approximately one mile east of the proposed mine.

Subject to NEPA compliance findings, the proponent would like to initiate construction of the mine in the Spring of 2005.

We would like to know of any issues, concerns, and suggestions you may have about the proposal. Comments should be as fully informed and specific as possible to assist us in the analysis. Comments will be most effective if received by November 29, 2004. Please submit your comments in writing to:

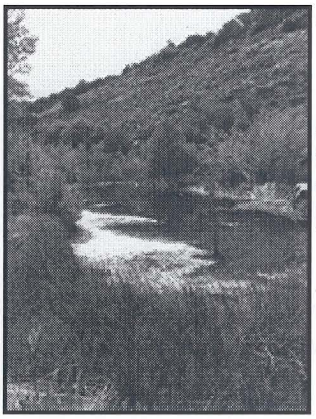
Prescott National Forest, c/o Drake Cement Project, 344 S. Cortez St., Prescott, AZ 86303, Attn: Michael Smith

Members of the public may contact Mr. Smith at 928-443-8000 for additional information or to receive a detailed scoping letter. Comments received in response to this Scoping Notice, including names and addresses of the commenter(s), will be considered part of public record on this project and will be available for public inspection. Comments may be submitted anonymously, however, those who submit anonymously may forfeit standing to appeal the subsequent Agency decision under 36 CFR Parts 215 or 217.

Open-File Report 2004–1439

Hydrogeologic Review of the Drake Cement Project, Yavapai County, Arizona

By Laurie Wirt



(Photograph by L. Wirt, U.S. Geological Survey.)

This report evaluates possible impacts of a mining proposal on the ground-water resources of the Prescott National Forest in the upper Verde River watershed. The report is divided into two parts. The first part describes the geology, hydrology, and stable-isotope chemistry of the regional carbonate aquifer near Drake, in Yavapai County, north-central Arizona. The second part evaluates the adequacy of hydrologic information submitted in the mining application.

Version 1.1

Posted 8 March 2005, updated 6 October 2005

Part or all of this report is presented in Portable Document Format. The latest version of Adobe Acrobat Reader or similar software is required to view it. If you wish to download the latest version of Acrobat Reader free of charge, click here.

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(IN PART, COMPLETE REPORT ON SERVER)
NJN - 2005

Hydrogeologic Review of the Drake Cement Project, Yavapai County, Arizona

By Laurie Wirt

Prepared in cooperation with the Prescott National Forest

Open-File Report 2004-1439

U.S. Department of the Interior
U.S. Geological Survey

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Hydrogeologic Review of the Drake Cement Project, Yavapai County, Arizona

By Laurie Wirt

Introduction

A stated objective of the Prescott National Forest is to manage ground water for the long-term protection and enhancement of the Forest's streams, springs and seeps, and associated riparian and aquatic ecosystems (U.S. Forest Service, 2001). Ground water is an important source of water for recreation, livestock, wildlife, domestic supply, irrigation, mining, construction and other purposes within and adjacent to the Forest. The purpose of this report is to assist the Prescott National Forest in its evaluation of potential cumulative impacts relating to a proposed limestone mining project within the Prescott National Forest.

The project proponent is a company known as Drake Cement, LLC (Drake Cement). In accordance with the Prescott National Forest's scoping notice dated October 25, 2004, Drake Cement submitted a plan of operations to the Prescott National Forest in March 2004 proposing to mine limestone on unpatented claims located near Hell Canyon. Drake Cement proposes to transport limestone across Hell Canyon via a conveyor system and process the material at a privately owned cement plant that is pending construction. The processing of cement at the adjacent plant will necessitate the use of water pumped from an existing well located on the private property where the cement plant will be constructed. The anticipated water use is stated at approximately 70 acre-feet per year (62 ac-ft/yr for the plant and 8 ac-ft/yr for dust suppression and mine use).

The U.S. Forest Service asked the U.S. Geological Survey to conduct a review of available data to address public concerns raised during the scoping process regarding possible impacts to the water resources of the Prescott National Forest associated with ground-water pumping. Accordingly, this report is divided into two parts.

The first part is an assessment of the geology, hydrology, and water chemistry of the regional carbonate aquifer near Drake, Arizona. Part I is largely abridged from Wirt and others (in press), and reproduces selected figures and tables from that report in their entirety. This body of work relies on numerous reports that have been generated on the geology and hydrology of the region, notably Krieger (1965); Owen-Joyce and Bell (1983); Wallace and Laney (1976); Freethey and Anderson (1986); Ostenna and others (1993), Schwab (1995); and Knauth and Greenbie (1997). In addition, the author visited the private property where the well site is located and surrounding region, compiled publicly-available water-level measurements from the Arizona Department of Water Resources (ADWR) 55 database, and used water-quality analyses and geology maps from past and current USGS projects. The author also consulted with Mike Fayhe (USGS, Yucca Mountain project), who is experienced in interpreting aquifer tests in fractured rock and karst terrains. Lastly, the author draws on more than a decade of USGS scientific investigations in the upper Verde River watershed, including Wirt and Hjalmarson (2000), and Wirt and others (in press).

In Part II of this report, the limestone mining proposal is analyzed in the context of a prior hydrological study that was done by Southwest Groundwater Consultants (SWGC) in 2002. The SWGC report was commissioned by a prior project proponent unrelated to Drake Cement and the components of the previously proposed project differ substantially from that of the planned Drake Cement project. Notwithstanding, the SWGC report is analyzed in particular with regard to the following issues:

- Possible changes in low-flow discharge to the upper Verde River between Sullivan Lake and Perkinsville,
- Possible changes to water levels in the carbonate aquifer near Drake,
- Possible effects of sustained pumping on nearby aquifers that may be interconnected with the carbonate aquifer—specifically the Big Chino basin-fill aquifer, and
- Possible impacts to USFS wells used by grazing permit holders and to nearby perennial springs on the Prescott National Forest.

In addition, the appropriateness and adequacy of the hydrogeology information presented by SWGC (2002) is addressed; including the approach, logic, and accuracy of the arguments and conclusions. In particular, the SWGC report was examined for use of all available data, technical deficiencies, use of standard hydrologic methods, and the accuracy of

ing station on the Verde River near Paulden (0939700). The time-weighted mean standard error of the daily low flow at the Paulden gauge has been calculated to be 4.6 percent by the USGS using the Moss and Gilroy method (Anning, 2004). In addition, it would it be difficult to differentiate the impact of the cement plant pumping on the Verde River from future impacts of larger ground-water withdrawals in Big and Little Chino Valleys (both ongoing and future). Of more practical concern then are local effects that the pumping could have on King Spring and nearby wells.

The primary water resources of the Prescott National Forest near Drake include the upper Verde River, King Spring, and several stock wells used by the grazing permit holder, which is the Alimeda Cattle Co. Stock wells near Drake in the regional carbonate aquifer include the Gipe, Bean, Hell, and Glidden wells (table 2). In addition, the privately-owned Bar Hart well is used for ranching and domestic water supply by the Alimeda Cattle Co. The Hell well lies closest to SB-0001, but no well log is available for this or the Glidden well. The Gipe and Bean wells, and King Spring are interpreted as producing from the same water-bearing interval near the base of the Martin Formation as the Drake Cement well, and could be part of the same interconnected fracture system. The reported water levels for the Bean, Gipe, Hell, and Glidden wells are 7±10 to 26±10 ft lower than the water level reported for well SB-0001. On the basis of similar well depths and the small range in water levels, the Gipe, Bean, Hell, and Glidden wells and King Spring are the most likely areas to be affected by long-term pumping. The water level of the Bar Hart well is more than 300 feet lower than the Drake Cement well and, therefore, is unlikely to be influenced by pumping.

Recommendations

Any impact to base flow of the Verde River as a result of proposed pumping at this scale would be too small to measure. The proposed Drake Cement ground-water withdrawals would be impossible to differentiate from larger ground-water withdrawals (both current and proposed) that may reduce base-flow discharge of the upper Verde River in the future. The major concern, then, is to address possible local impacts to USFS permit-holder stock wells and to King Spring. The distribution and orientation of secondary openings in the carbonate aquifer cannot be mapped or predicted. As a result of this uncertainty, it is possible that the effects of pumping could be transmitted as much as several miles in any direction. Because some wells randomly intercept saturated pockets of ground water or the interconnected conduits between them, whereas other wells do not, storage coefficients in this type of aquifer can vary widely. A productive well penetrating a large saturated cavity might be pumped continuously for a long time at a high rate with no apparent effects, and then suddenly go dry when an overlying cavity is drained. Aquifer testing of well SB-0001 is unlikely to provide additional information that would be helpful in predicting this type of outcome. The best means to determine the long-term effects of pumping would be by establishing a monitoring program for existing wells and King Spring, and by conducting surveys of riparian habitat in Hell Canyon.

Therefore, a water-level monitoring program and riparian survey are advised. Ideally, a continuous water-level monitoring program would be established 6 months to a year before any pumping begins, in order to establish baseline conditions. Since 1994, water-level measurements of the Gipe and Bean wells have been conducted annually by the Arizona Department of Water Resources. Water levels in both wells have varied over a range of about 2 ft over this timeframe (table 2). Annual monitoring, however, is insufficient to determine the nature of short- or long-term seasonal waterlevel variations caused by pumping as opposed to long-term climatic changes in evapotranspiration, runoff, and recharge. A greater frequency of measurements, interpreted in conjunction with climatic data, is needed to determine the expected normal range of water-level variations.

Owing to the small number of USFS wells in the vicinity of Drake, continuous water-level monitoring is recommended at all of them, specifically at SB-0001, Gipe, Hell, Bean, and Glidden wells and King Spring. However, there may be constraints to implementing such a plan because monitoring of wells on private lands would only be possible with the consent and cooperation of the private land owners. Assuming such cooperation could be obtained, continuous monitoring could be conducted using small submersible pressure transducers, which can be suspended on a wire cable in wells with active pumps. A simple staff gauge with a pressure transducer could also be installed at King Spring.

Pressure transducers are available that are automatically temperature-compensated and interface with battery-operated data logging devices. The devices can be downloaded without removing the monitoring installation from a well. Atmospheric barometric pressure has an effect on ground-water levels, and therefore should also be monitored at one central location. A suitable pressure transducer at the surface would suffice. Additional climatological data including temperature, precipitation, snowfall, and humidity are available from nearby weather stations at Ash Fork, Williams, and Chino Valley (Western Regional Climate Center, 2004).

The monitoring plan would need to be evaluated after the first year of monitoring to determine what frequency of future data measurements is needed, and to determine appropriate trigger points at which the data need to be reviewed or mitigation provided. An advantage of a long-term monitoring program for all parties is that if future demands for groundwater increase due to new or expanded federal land-use proposals there would be a history of information on which to base a management decision.

In order for water-level measurements to be more accurate, the elevations of well casings need to be surveyed to a precision of less than one foot. Given the relative lack of long-term variation in water-level measurements for the Gipe and Bean wells between 1994 and 2001 (Table 2), a water-level decline

of greater than 2 ft/yr, or more than 5 ft in a 5-yr timeframe at any of these wells would be considered an indication, or trigger point, that area water levels may be affected by ground-water withdrawals. In addition, a baseline survey of riparian habitat along Hell Canyon is recommended before mining commences. The survey should begin one mile upstream from the Drake quarry and extend one mile downstream from King Spring. In addition to vegetation and aquatic species, the occurrence of amphibian, reptile, and mammal species that depend on riparian habitat in Hell Canyon should be included in the survey. The survey should be updated in the event that a water-level decline at King Spring exceeds half its maximum depth, as pre-determined from the baseline water-level monitoring.

In addition, the Prescott National Forest could request a mitigation plan that would be implimented in the event that ground-water withdrawals were to adversely impact wells, springs, or riparian habitat. The mitigation plan, which would be negotiated and could be amended to the plan of operations, would include provisions for deepening wells or providing an alternate water supply for USFS stock wells that go dry as a consequence of dewatering. In the event of a reduction in discharge to King Spring, the proponent could agree to temporarily reduce or cease pumping of well SB-0001 until ground-water levels recover. For example, the proponent could haul water from an alternative water source until the water level of King Spring is restored to a pre-established baseline level.

King Spring at the base of Hell Canyon is the only natural water source within a three-mile radius. An inventory and assessment of wildlife species that depend on this water resource is recommended, regardless of the outcome of this mining application.

References Cited

Anning, D.W., 2004, Uncertainty in low-flow data from three streamflow-gaging stations on the upper Verde River, Arizona, *in* Sehlke, Gerald, Hayes, D.F., and Stevens, D.K., eds., Critical Transitions in Water and Environmental Resources Management, World Water and Environmental Resources Congress 2004, June 27–July 1, 2004, Salt Lake City, Utah, electronic book p. 1-8.

Arizona Department of Water Resources, 1990a, Internal memo from T. Perry to Steven Szyprowski, July 30, 1990.

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ADMMR
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Cedar Glade Quarries (file) Yavapai County
Ken A. Phillips, Chief Engineer March 29, 2004

Current Status
The Cedar Glade Quarries are held by mining claims and are the desired source for limestone for the planned Drake Cement Plant.

Cliff Ayers reported that ARPL Tecnolgia Industrial, S.A. parent company of Peruvian cement company, Cementos Lima, purchased Stirling Bridge Cement, LLC in the spring of 2003. Stirling Bridge had acquired land and mining claims, and was in the design and permitting stage to develop the Cedar Glade limestone quarry and construct a 350,000-ton per year cement plant at Drake, Arizona.

ARPL Tecnolgia Industrial, S.A. has formed and Arizona company, Drake Cement, LLC. The Yavapai-Apache Nation holds a small investment position in the new cement company. Drake Cement has increased the design capacity of the project to 650,000 tons of Type II and Type V Portland cement annually. The new company plans to be an all-Arizona company with Arizona management and a corporate headquarters in Phoenix. They are also seeking USA partners in the project.

Current expectations are for construction of the $130 million project to begin in March of 2005 and production of cement to commence in March of 2007. The Yavapai-Apache Nation has announced that their participation in Drake Cement is part of their plan to diversify investment beyond Indian Gamming. Yavapai Apache Nation Chairman, Jaime Fullmer has written in a recent tribal newsletter that the Nation should expect continued income from mining for the next 50 years from their investment in Drake Cement.

Cementos Lima operates two cement plants in Peru; a 4.5 million ton per year cement plant in Lima and 1.5 million tons per year plant in the mountainous region. They have exported cement into the USA through gulf ports in Texas for numerous years.

The Arizona DEQ Pre-Application meeting for the air quality permits for the planned cement plant is being held the week of March 29, 2004. The Forest Service mining plan of operations pre-public scoping meeting is also being held in the week of March 29, 2004.

Air Quality permit applications at the Arizona DEQ have been signed by Richardo Rizo Patron, President and Marco Gomez Borrios, Environmental Advisor. The plant site contact is listed as Cliff Ayres, Project Consultant, PO Box 2318, Cottonwood, Arizona 86326, and phone 928-634-2979.

Background and 2003 Events
Grant Goodman created and was the principal in a number LLCs; Rockland Materials producing sand and gravel and ready mix concrete, Stirling Bridge Cement planning a Portland cement plant at Drake Arizona, EnviroFuel to produce bio-diesel fuel, Triad Commercial Captive Insurance, New York Newport Assurance, Big Boy (Arizona) to return Bob's Big Boy style restaurants to Arizona, West Highland Water and Power to sell bottled water and co-generation electricity from the Drake site of

what was to have been Stirling Bridge Cement, and Big Brother And the Holding Company to serve a corporate umbrella function.

Financial difficulties throughout the group of companies forced the sale of the land and other assets of the Stirling Bridge Cement project to ARPL Tecnolgia Industrial, S.A. in the spring of 2003 and the subsequent filing for protection under the Federal bankruptcy laws by Rockland Materials. (See separate narrative regarding Rockland Materials and the Salt River Pit [ADMMR mine file]) The insurance license that was required for the operation of both Triad Commercial Captive Insurance and New York Newport Assurance was cancelled. The remaining LLCs will simply fad away or disappear for lack of AZ Corporation Commission filings.

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Cedar Glade Quarry
file
Yavapai Co.

State of Arizona

Jane Dee Hull
Governor

Charles R. Cohen
Director

Insurance Regulator

Arizona Department of Insurance — Third Quarter 2002

FROM THE DIRECTOR...

Most readers of this newsletter are already aware that Arizona, like many other states, is suffering from a significant and persistent decline in revenues. Revenues already lag Fiscal Year 2003 expectations, and despite prior budget reductions a final deficit around $500 million is currently projected. The prospects for Fiscal Year 2004 are no better, with a $1 billion deficit being projected based on the current budget.

> "The on-going energetic effort to modernize and improve state regulation is for naught if the system is undernourished."

Initially, the ADOI was appropriated nearly $7 million for FY03. That amount has been reduced to just over $6 million, a more than 12.5% reduction from the original amount. Measures taken to achieve that reduction include elimination of needed new positions in our producer licensing, consumer assistance and fraud investigations areas, reduction in the number of fraud prosecutor positions funded, and enforced vacancies throughout the agency.

In light of the looming revenue deficit for this fiscal year, state agencies in Arizona are facing the possibility of having to further reduce general fund expenditures. However, even without additional budget reductions for this fiscal year, the situation at the ADOI is serious. We are doing all we can to increase our efficiency and preserve the degree and quality of our core activities and services: consumer assistance, licensing, solvency oversight and market oversight. However, the budget crisis is

(Continued on page 2)

ADOI Issues First Captive Insurer License

On August 20, 2002, less than two months after the law took effect, Arizona issued its first captive insurer license to Triad Commercial Captive Insurance Company, owned by Phoenix businessman, Grant Goodman. Triad will write Commercial Automobile, General Liability and Inland Marine Coverages for Rockland Materials and Stirling Bridge Cement, in which Mr. Goodman has a controlling interest. Rockland Materials, located in Phoenix, is a supplier of premium quality aggregates and ready mix materials. Stirling Bridge Cement, a Rockland affiliate, was recently established in Drake, Arizona, to serve Northern Arizona.

"I am confident Triad Commercial will be the kind of safe, sound, high quality captive insurance program that will typify Arizona captives," said Director Cohen. "I believe the fact that we have our first Arizona captive less than two months after the law took effect, and the seriousness of the other inquiries we have had, demonstrates that Arizona is well positioned to develop into a significant captive domicile."

As of this publication, there are two additional captive insurer applications pending.

What's Inside

Mission Statement

"To faithfully execute state insurance laws in a manner that protects insurance consumers and encourages economic development."

Cedar Glade Quarry (file) Yavapai County

Forest News

FOR IMMEDIATE RELEASE

December 14, 2001 CONTACT: Wes Girard (928) 567-1170
Steve Sams (928) 717-8470

Prescott Forest Offices Have Fact Sheet on Limestone Quarry

CAMP VERDE, Ariz.--Prescott National Forest offices will have fact sheets for the public about a proposed limestone quarry approximately 8 miles Northeast of Paulden, Ariz, in the area known as Drake. Stirling Bridge Cement Company developed the fact sheet to address questions on their proposal to reopen and develop a limestone quarry on mining claims they own. The Forest Service will have the fact sheets as a matter of convenience to the public.

The limestone quarry lies within the Prescott National Forest. The material quarried will be used off site in the manufacture of concrete. The processing plant will be developed on private property at Drake.

Stirling Bridge Cement Company is currently conducting scoping in preparation for development of an Environmental Analysis.

Fact sheets are available at the following locations:

Chino Valley Ranger District
735 N Highway 89
Chino Valley AZ 86323-0485
Phone: (928) 636-2302

Verde Ranger District
300 E Highway 260
Camp Verde AZ 86322
Phone: (928) 567-4121

Bradshaw Ranger District
344 S Cortez
Prescott AZ 86303
Phone: (928) 771-4700

Cedar Glade Quarries (f) Yavapai County
Stirling Bridge Cement
By Ken Phillips, Chief Engineer, October 4, 2002

In a phone conversation with Grant Goodman and Cliff Ayers discussed the status of Stirling Bridge Cement Company's plans, permits, and development schedule for their proposed 350,000 ton per year Portland cement plant in Drake.

The proposed $80 million cement plant is to be built on private near at Drake Arizona. Current expectations are for the plant to be operational in January 2004. Projected full-time employment will be between 75 and 100 employees. Maximum employment during construction will be about 220.

Activity at the quarry and plant site began in October 2000 with the location of mining claims at the previously quarried Cedar Glade limestone quarry and purchase of private property at Drake for a plant site.. The deposit was drilled in the summer of 2001 and sufficient reserves were proven to supply 550,000 tons of limestone per year for the projected 70-year life of the cement plant. Development of a water well to provide the necessary 496 acre-feet of water per year for the plant has been completed.

Stirling Bridge officials have stated that Arizona has long been a net importer of Portland cement for the state's construction industry. The addition of Stirling Bridge cement production will reduce, but not eliminate, Arizona's dependence on out-of-state and foreign supplies of cement. Stirling Bridge Cement is an Arizona family owned company by Grant and Teri Goodman.

STIRLING BRIDGE CEMENT

Corporate Office
5110 N. 40th Street, Suite 110, Phoenix, AZ 85018 – Phone (602) 508-8089 – Fax (602) 508-8982
Chino Valley Office
2235 S. Highway 89, Suite B-2, Chino Valley, AZ 86323 – Phone (928)-636-9226 – Employees: 10 -
350,000 ton per year cement plant to produce Type I/2 Portland cement - Under permitting and development – Startup projected for January 2004.

Chief Executive Officer	Grant Goodman
Chief Operating Officer	Clifford Ayres
General Counsel	Robert Porter

Drake Cement Plant
Portland Cement Plant T19N R1W Sec. 33
Permitting and development
Cedar Glade Quarries T19N R1W Sec. 32
Limestone quarry – permitting and development

CAP & TRADE OVERSIGHT COMMITTEE

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Executive Director
Arizona Rock Products Association
Phoenix, AZ

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Greater Phoenix Leadership, Inc.
Phoenix, AZ

George Dean
Greater Phoenix Urban League
Phoenix, AZ

Ken Driggs, Executive Director
Valley Metro
Phoenix, AZ

John D. Ford
I-10 International Trucks
Phoenix, AZ

Grant Goodman

CEO/Owner
Stirling Bridge Cement
Phoenix, AZ

Richard M. Hayslip, Manager
Environment, Land and Risk Management
Salt River Project
Phoenix, AZ

Michael Hudson
Eagle Distributing, Inc.
Gilbert, AZ

The Honorable Mike Johnson
Phoenix City Council

Updated May 13, 2002

Yavapai County Water Advisory Committee

Item No. 7

Fact Sheet: Sterling Bridge Proposed Cement Plant at Drake

Sponsor: T/AC

Background: The Sterling **Bridge Cement** Company has proposed to construct a **cement** manufacturing facility in Drake. The proposed operation will consist of a limestone quarry on nearby Forest Service land, a conveyor to transport limestone, and a **cement** manufacturing facility on private land at Drake. The **cement** kiln will be coal fired, a co-generation steam turbine electrical plant will be gas fired. The 8-megawatt steam turbine will return excess electrical power to the grid through an electrical transmission line that would run parallel to the gas line across Forest Service land.

Water Resources:

A well has been drilled on the private property near Drake that will provide the water needs of the **cement** and power plants. The well is located within the Verde Valley subbasin of the Verde River groundwater basin. The applicant estimates that up to 496 acre-feet per year of water would be required to provide the needs of the operation. Most of this water will be used to operate the filtration system for processing **cement**. The applicant plans to recycle most of the filtration water and the actual water consumption will be much lower than specified. Some water may also be required at the cogeneration electrical plant if the applicant makes use of the waste heat from the **cement** kiln. Otherwise, the electrical energy will be generated from a natural gas turbine.

A consultant's report (Southwest Ground-water Consultants, Inc. April, 2002, attached) indicates that the well is completed in Martin Limestone; wells completed in this formation are known to have large water production capabilities. The elevation of groundwater in the well is approximately 4240 ft msl, roughly the same elevation as the Verde River springs. This would tend to indicate that the groundwater gradient is not toward these springs. Groundwater flux through the area is likely seen as outflow in the Verde River near Mormon Pocket between Perkinsville and Sycamore Creek, 3720 ft msl

(Owens-Joyce, and Bell, 1983), although the groundwater flow direction is also under some debate among experts. The base flow of the Verde River above Sycamore Creek is estimated to be between 53 and 59 cubic feet per second, or 38,000 to 43,000 acre-feet per year (Owens-Joyce and Bell, 1983). The consultant report states that pumping from the well would not have a direct or appreciable impact on the Verde River.

Comment Period and Permitting:

The operational plan for the proposed limestone quarry is being reviewed by the USFS and an Environmental Assessment (EA) is being developed. A complete draft EA is anticipated by mid-summer 2002. The due date for comments on the proposed 57-acre mining operation has passed. State Statute, in some instances, imposes restrictions on a county's ability to require use permits on mining operations of 5 or more contiguous acres. The State Mine Inspector has determined that the cement kiln on private property in Drake is a mining operation and is exempt from County restrictions per ARS 11-830.

The county is in the process of determining if the power plant would require a use permit or would be exempted under the same regulations.
Groundwater use at this location is only regulated under the doctrine of beneficial use,

water rights beyond a simple well permit are not required by the Department of Water Resources.

T/AC Recommendation: There is a limited ability for local comment concerning this facility. The primary concern is the possible water use impacts to the Verde River. The WAC could recommend that the Board of Supervisors ask the Forest Service to carefully consider the possible impacts to the Verde River.

April 22, 2002

Mr. Cliff Ayres

Stirling Bridge Cement
Windy Valley Plaza
2235 S. HWY 89, Suite B2
Chino Valley, Arizona 86323

SUBJECT: GROUND-WATER AVAILABILITY NEAR DRAKE, ARIZONA.

Dear Mr. Ayres:
In accordance with your request, Southwest Ground-water Consultants, Inc. (SGC) has

reviewed comments made by the United States Forest Service (USFS) regarding their concerns relative to ground-water pumping for the proposed facilities near Drake, Arizona. The principal concern of the USFS appears to be the effect pumping ground water at the facility will have on surface water flows in the Verde River.
To address USFS concerns, SGC has reviewed several available technical documents.

Reports and publications used for this review are as follows:

Owens-Joyce, Sandra J., and Bell, C.K., 1983. Appraisal of Water Resources in the Upper Verde River Area, Yavapai and Coconino Counties, Arizona. Arizona Department of Water Resources Bulletin 2. 219p.

Remick, William H., 1983. Maps Showing Groundwater Conditions in the Prescott Active Management Area, Yavapai County-1982. Arizona Department of Water Resources Hydrologic Map Series Report Number 9. Map Series.

Knauth, L. Paul, and Greenbie, M., 1997. Stable Isotope Investigation of Groundwater-Surface Water Interactions in the Verde River Headwaters Area. Arizona State University Research Paper., 28 p.

Water Resources Associates, Inc., 1989. Hydrogeology Investigation, Big Chino Valley, Yavapai County, Arizona. Unpublished Technical Report. Five Volumes.

Water Resources Associates, Inc. 1991. Application for a Subdivision Water Adequacy Statement, Headwaters Ranch Project, Paulden, Arizona. Unpublished consultants report. 16 p.

Wirt, Laurie, and Hjalmarson, H.W., 2000. Sources of Springs Supplying Base Flow to the Verde River Headwaters, Yavapai County, Arizona. Preliminary USGS Open File Report 99-0378. 50 p.

Langenheim, V.E., Duval, J.S., Wirt, L., and Dewitt, E., 2000. Preliminary Report on Geophysics of the Verde River Headwaters Region, Arizona. Preliminary USGS Open File Report 00-403. 28 p.

Arizona Department of Water Resources, 2000. Verde River Watershed Study. Technical Publication. 223 p.

Arizona Department of Water Resources, 2002. Subflow Technical Report, San Pedro River Watershed. *In Re The General Adjudication of the Gila River System and Source.* ADWR Professional Publication. 50 p.

Transcon Environmental, 2002. Asessment of Potential Groundwater Impacts Associated with a Proposed Limestone Quarry and **Cement** Manufacturing Facility. Consultants Report to the USFS. 6 p.

PROJECT DESCRIPTION

Stirling Bridge Cement Company plans to build and operate a limestone quarry and associated facilities within the Prescott National Forest, near Drake, in Yavapai County, Arizona. The project would involve the extraction of raw materials from a quarry, a conveyor system, and an electrical transmission line. In addition, **Stirling Bridge** is proposing to construct a Portland **cement** manufacturing facility on private land adjacent to the quarry and conveyor system. The project also includes the capability to generate up to eight megawatts (MW) of electricity through the process of co-generation.

PROJECT LOCATION

The **Stirling Bridge** project site is located directly east of the former townsite of Drake, Arizona. The Verde River is 5.8 miles from the property's closest point. The total property owned by the Project developers is approximately 140 acres, of which less than 30 acres will be developed for the **cement** production and co-generation facilities. The location of the **cement** plant is N 34° 58' 77" W 112° 22' 22". The edge of the limestone quarry is N 34° 58' 45" W 112° 23'13", which is less than one mile from the **cement** plant. The mean site elevation is approximately 4,540 feet above mean sea level.

SOURCE OF WATER

Stirling Bridge proposes to utilize ground water from wells on the private land to satisfy their need for water at the proposed project facilities on both the public and private land. **Stirling Bridge** retained Southwest Ground-water Consultants, Inc. to review drilled cuttings and to observe a video survey of a ground-water exploration well located on the private land near Drake. Based on the results of the exploration drilling and the review of the video log, the aquifer serving the project will be the Devonian Martin Limestone. Porosity in this formation, which is typical of the region, consists of discreet fractures and solution cavities. Water wells completed in the Martin Formation east of Paulden, Arizona are known to produce large volumes of water (Water Resources Associates, 1991).

In general, ground water in the exploration well site is approximately 400 feet below the land surface yielding a water table elevation of approximately 4240 feet (MSL). This elevation is consistent with the ground-water elevations presented by Owens-Joyce and Bell (1983) for the aquifer beneath the project site (Figure 1). Owens-Joyce and Bell (1983) also determined that the ground-water flow direction in the regional aquifer near Drake is toward the east-northeast.

GROUND-WATER DEMAND

As presented in the Transcom Environmental report (2002), the total demand for all of the proposed facilities will be 442,800 gallons per day, or 496 acre-feet per year. Reclaimed water will be used for dust suppression.

GROUND-WATER SUPPLY

Ground water is available from the regional aquifer, which is the Devonian Martin Formation. This formation is generally considered to be a dolomitic limestone. Ground water is produced from fractures and solution features relating to karst activity within the formation. Wells producing ground water from this formation in the Paulden area typically produce large volumes of water with minimal drawdown.

Aquifer testing has been completed in production wells in the Ranch Cielo subdivision (formally the Headwaters Ranch subdivision) located just north of the Verde River in Section 2, Township 17 North, Range 2 West. The production well for this project is the

Martin Formation. A 24-hour, constant discharge aquifer test was completed in the production well. After pumping this well for 24 hours at 600 gallons per minute (gpm) the total drawdown in the water level was measured to be 0.56 feet. Calculated aquifer transmissivity based on this test was 122,800 gallons per day per foot (gpd/ft) (Water Resources Associates, 1991). The Arizona Department of Water Resources (ADWR) reviewed the test data and agreed that pumping this well (roughly 1 mile north of the Verde River) would not have an "appreciable and direct impact of the proposed groundwater withdrawal on the Verde River" (ADWR letter dated June 4, 1991). Using the results of the aquifer test from Ranch Cielo, it is possible to estimate the

volume of ground water that may be available to the Stirling Bridge project in Drake to

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the northeast. A common technique for estimating ground-water flow volume available to a project is by calculating the "Darcy Flux" of the aquifer.
This relationship is as follows:

$$Q = KA\ (dh/dl)$$

Where: Q = Volume of Ground water (gpm)

K = Hydraulic Conductivity (gpd/ft2)
A = Cross-sectional Area of Aquifer being Analyzed (ft2)
dh/dl = Slope of Water Table (ft/ft)

And: K can be calculated by:

$$T = Kb$$

Where: T = Transmissivity (122,800 gpd/ft) (WRA, 1991)

K = Hydraulic Conductivity
B = Aquifer Thickness (178 ft)

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
Metal and Nonmetal Mine Safety and Health

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Sand and Gravel)

Fatal Exploding Vessels Under Pressure Accident

July 21, 2000
DOD: September 9, 2000

Rockland Materials Pit 1
GTI Capital Holdings, L.L.C. d/b/a Rockland Materials
Phoenix, Maricopa County, Arizona
ID No. 02-02867

Accident Investigators

Ronald S. Goldade
Supervisory Mine Safety and Health Inspector

Dean Horning
Mine Safety and Health Inspector

Hilario Palacios
Mine Safety and Health Specialist

Stephen B. Cole
Mechanical Engineer

Originating Office
Mine Safety and Health Administration
Rocky Mountain District
P.O. Box 25367 DFC
Denver, CO 80225-0367
Irvin T. Hooker, District Manager

Therefore:

$$122{,}800 = K(178)$$

$$689 \text{ gpd/ft}^2 = K$$

Therefore:

$$Q = 689 \text{gpd/ft}^2 (333 \text{ ft} \times 5280 \text{ ft}) (0.01 \text{ ft/ft})$$

$$Q = 689 \text{ft}^2 (1{,}75{,}840 \text{ ft2}) (0.01 \text{ ft/ft})$$

$$Q = 1{,}211{,}537.6 \text{ gpd}$$

$$Q = 841 \text{ gpm}$$

Hence, based on the 333-foot saturated thickness of the aquifer, ground water passes through a 1- mile wide cross section of the aquifer at a rate of 840 gpm. Based on this analysis, the ground water flux through a 1-mile cross-section would be approximately 1,355 acre-feet per year (ac-ft/y).

IMPACT OF THE DEMAND ON THE SUPPLY

As stated previously, the total anticipated demand for the project is estimated to be 496 ac-ft/yr. This represents approximately 37% of the estimated 1,356 ac-ft/y of ground-water flux (recharge) passing beneath the site. It is important to note that this estimate is

---

recharge only and does not take into account ground water in storage. Therefore, large-scale dewatering is not anticipated based on the demands of the **Stirling Bridge** project.

IMPACT OF PUMPING ON FLOWS IN THE VERDE RIVER

ADWR (2002) has published an initial study on defining the subflow zone for a perennial river. In that study, they attempted to test the most effective ways of determining whether a well is pumping appropriable subflow. In general, since it would be expensive and time consuming to determine the saturated Holocene alluvium, they recommended entire lateral extent of the Holocene floodplain be delineated as the jurisdictional subflow zone. Secondly, ADWR suggested that to determine whether a well located outside the jurisdictional subflow zone has developed a cone of depression that intercepts the saturated Holocene alluvium would require extensive computer modeling.

Given the geologic terrain, the distance between Drake and the Verde River, the east-northeast ground-water gradient, pumping characteristics of other water wells in the same aquifer, and regulatory response to pumping wells much closer to the river, it is SGC's opinion that the ground water proposed to be used by the **Stirling Bridge** project is classified as percolating ground water and not surface water. Pumping ground water for this project will not have a direct nor appreciable impact on the flow of the Verde River. If you have further questions or need to discuss this in more detail, please call.

Sincerely,

Southwest Ground-water Consultants, Inc.

William G. Wellendorf, P.G.
Principal Geologist
c. Stephen D. Noel, P.G., President, SGC

SGC File B.545

Sterling Bridge Cement Company
Interview Notes with Cliff Ayres

Rockland Materials and Sterling Bridge Cement Company are operated by GTI Capital Holdings, LLC of Montreal, Canada. The principal operating official is Grant Goodman, member of Board of Directors. It is not certain what type of companies the two are; possibly a limited partnership.

Rockland materials is 4 years old. Sterling Bridge is only 1 ½ years old.

Apparently, there is also a sister company called Rockland Concrete, a redi-mix concrete company.

Sterling Bridge Cement Company would supply Rockland Cement Company with dry portland cement produced at the proposed Drake facility. It is estimated to produce 100,000 tons of portland cement per year. This quantity would go to Rockland Cement. If there is an excess (remainder), this would be sold on the open market.

The area known as Drake (one full section, 640 acres) was purchased from David Gipe who has the Del Rio grazing permit on the chino Valley Ranger District.

The proposed cement kilm to be built at Drake is stated to be 1/3 in size at that of the cement plant in Clarkdale. They estimate that construction of the cement plant will be 14 months. The estimated life of the cement plant is 35 years; with refurbishing it can go another 35 years.

Incidentally, Kaiser Cement of California was one of the mining claim holders of the site at Drake. Kaiser obtained the claims in order to bid on concrete for the construction of Glenn canyon Dam. However, they were out bid, therefore, never did any limestone quarrying.

The operating plan is to produce their own electrical power using steam generated from the coal fired kilm. The power plant will generate 8 Kw the cement plant operation is estimated to need just over 6 Kw. The excess will be transferred to their sister company, Rockland Cement, via APS in order to reduce Rockland's electrical costs from APS. APS will charge a transfer fee. Therefore, the proposed 1.5 mile powerline easement is part of the Proposed action.

In addition, the proposal includes connecting to a nearby natural gas line. The natural gass will be needed to do a "cold start" of the cement kilm. It would appear that starting with powdered blown coal does not produce a complete burn, thereby clogging up the kilm walls when up to proper heat.

Sterling Bridge has purchased, I believe from Kaiser Portland Cement, the mining claims in the immediate area. There is an estimated 6,200 acres. The claims extend on both sides of Hwy. 89 in the Drake area. Through agreement, Sterling Bridge will not do any quarrying in the area of Paulden. However, Sterling Bridge will pay the annual $100 fee to maintain the claims. This so no one else can stake a claim.

11? A NAFTA guarantee that they won't suffer protects their right to a profit. In essence, it appears that the Forest Service's ability to act in the public interest will almost be non-existent.

Although not a direct Forest Service responsibility, what if there is a challenge centering on quarry dust air quality standards brought about by the Arizona Department of Environmental Quality (ADEQ)? As the PNFF understands it, Sterling Bridge Cement Company can sue because of ADEQ air quality standards.

Our second concern is that already it appears that Rockland materials in its short history has had two serious accidents. What is the potential for Forest Service liability?

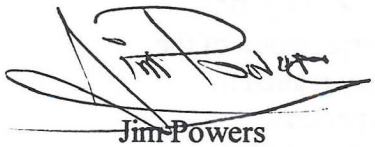
Our third concern is the fact that the other two cement plants in Arizona are unionized. If Sterling Bridge Cement Company becomes unionized, what are the possibilities of a labor strike affecting transportation and recreation opportunities in the area of Drake?

And last, if this is a venture capital operation, what are the possibilities of insufficient financing before the operation becomes profitable? Since it appears that the primary purpose of this limestone quarrying operation is to supply cement to its sister company, can Rockland Cement maintain this type of support operation? Portland cement within Arizona is competitive.

Without sufficient capital to take them through start-up which includes processing plant construction, labor force, and initial production, the Prescott National Forest may be left with a hole in the ground standing there with shovels filling it in. By all means, make sure that a performance and reclamation bond of sufficient amount is obtained.

The PNFF hopes that you will take a moment and seriously think deeply about what can happen under the conditions and circumstances of NAFTA if Sterling Bridge Cement Company is given the go-ahead to quarry limestone. Is the Forest Service ready to accept the potential liability of a foreign company doing business on the Prescott National Forest under NAFTA? Is not this something that should be referred to the Office of General Council?

Sincerely,



Jim Powers

cc: J. Schafer, Director, AZ. Dept. of Environmental Quality
K. Phillips, Chief Engineer, AZ. Dept. Mines & Mineral Resources

Cedar Glade Quarry (F)
Yavapai

Prescott National Forest Friends

PO Box 10642 ▫ Prescott, AZ 86304
(928) 776-1552 jhpowers@commspeed.net

February 10, 2002

Mike King, Supervisor
Prescott National Forest
344 S. Cortez
Prescott, AZ 86303

Dear Mike,

Currently, the Chino Valley Ranger District is in the process of conducting a NEPA evaluation to decide whether or not to issue a permit to Sterling Bridge Cement Company to quarry limestone in the area of Drake

The Prescott National Forest Friends (PNFF) has submitted scoping comments. However, our concerns go beyond NEPA and center on Sterling Bridge Cement Company itself. (See notes from interview with Cliff Ayres.) This company appears to be a Canadian company as evidenced by the two attached Internet documents. It appears that Sterling Bridge Cement Company as well as Rockland Materials and Rockland Cement are venture capital companies of GTI Capital Holdings, LLC operating out of Montreal, Quebec, Canada. Sterling Bridge Cement Company has been in existence for only one and a half years; Rockland Materials for approximately four years.

The PNFF has several concerns. Our first and primary concern centers on the fact that this is a foreign venture capital company and the possible problems that could come about under the North American Free Trade Agreement (NAFTA). (See the Public Citizen attachment.) But what received little attention during NAFTA negotiations was the scope and interpretation of the investment protection provisions contained in NAFTA's Chapter 11, and how they related to environmental protection by the host state (i.e., Arizona). The past few years' experience demonstrates, however, that this is critical. The investor protections provided in NAFTA's Chapter 11 have been used repeatedly to challenge environmental laws and administrative decisions that have **negative economic impacts** for foreign investors. As a consequence, the provisions designed to ensure security and predictability for the investors have now created uncertainty and unpredictability for environmental and other regulators, impacting on a broad range of public values and threatening to undermine the public perception of the entire agreement.

Can GTI Capital Holdings, LLC, dba Sterling Bridge Cement Company invoke NAFTA, Chapter

Foreign Investors Granted Greater Rights than U.S. Corporations or U.S. Citizens:
Taken from Public Citizen (www.citizen.org)

NAFTA's investment rules provide new rights and privileges for foreign investors that go significantly beyond the rights available to U.S. citizens or businesses in U.S. domestic law and provide a venue exclusively available to foreign investors to seek payment of U.S. taxpayer funds for alleged business losses. Previous trade or investment agreements typically focused on ensuring "national treatment" that foreign investors or goods obtained the *same* treatment as domestic businesses and products. But NAFTA establishes new rights applicable only to foreign investors claiming compensation from taxpayers for the costs of complying with the same domestic policies that all domestic companies must follow. The string of cases analyzed in this report show how these NAFTA rules are being used by foreign investors to demand payment for any government action that impacts the value of an investor s property. Yet such a notion of "regulatory takings" does not exist for U.S. citizens or companies because it has been rejected by Congress and the courts. Attempts to legislate a broader definition of property rights through regulatory takings legislation has been repeatedly rejected by Congress. In addition, the U.S. Supreme Court held in the 1993 *Concrete Pipe* case that "mere diminution" of the value of an investment is not sufficient to establish a taking. Yet it is precisely a diminution of value resulting from compliance with government regulations that is at issue in most of these NAFTA cases. In short, these NAFTA cases are giving foreign investors greater rights and remedies on U.S. soil than are available to U.S. companies here at home.

Arizona Corporation Commission

NEWS RELEASES

TO: EDITORS, NEWS DIRECTORS **DATE:** August 10, 2000
FOR: IMMEDIATE RELEASE

Commission Issues Notice in Pipeline Accident

Rockland Materials Failed to Call for Blue Staking

The Arizona Corporation Commission's Office of Pipeline Safety has sent a Notice of Violation to GTI Capital Holdings, dba Rockland Concrete. The Notice of Violation states that the company acted in violation of Arizona Revised Statute 40-360.22 by "excavating prior to determining whether underground facilities would be encountered." A Rockland employee sustained severe burns when the heavy equipment he was operating struck and damaged a 16-inch natural gas pipeline. The pipeline is owned and operated by El Paso Natural Gas.

The company failed to go through the process of identifying the gas pipeline, commonly known as "calling for a blue stake." If the company had called the Arizona Blue Stake Center, a representative of El Paso Natural Gas would have marked the precise location of the gas line.

Notices of Violation are the first step in a process that may result in the payment of up to $5,000 in fines. In addition to a fine, the Commission could require enhanced safety training for the employees or other administrative remedies.

This case brings to light an important public safety issue. Before anyone - from a homeowner to an experienced contractor or excavator - digs underground, he or she should call the Arizona Blue Stake Center. This is the only way to ensure that someone won't encounter underground electric, water, gas, cable or telecommunications lines. Inside Maricopa County the number to call is 602-263-1100. Elsewhere in the state, the number is 1-800-STAKE-IT.

For further information on the Arizona Corporation Commission or its pipeline safety programs, please call the Public Information Office at 602-542-0844.

CEDAR GLADE QUARRIES **YAVAPAI CONTY**
(aka Stirling Bridge Cement)

Prescott Forest offices announced they are distributing a fact sheet on Stirling Bridge Cement's proposed limestone quarry approximately 8 miles Northeast of Paulden in the area known as Drake. Stirling Bridge Cement Company developed the fact sheet to address questions on their proposal to reopen and develop a limestone quarry on mining claims they own. The Forest Service will have the fact sheets as a matter of convenience to the public. A copy was obtained for the Cedar Glade Quarries mine file.

The limestone quarry lies within the Prescott National Forest. The material quarried will be used off site in the manufacture of concrete (*sic.*). The processing plant will be developed on private property at Drake. Stirling Bridge Cement Company is currently conducting scoping in preparation for development of an Environmental Analysis.

Stirling Bridge Cement has acquired a tract of private land at the Drake townsite for eventual construction of a 300,000 ton per year plant to manufacture Portland Cement.

The contact for Stirling Bridge Cement is Cliff Ayers at their Chino Valley office. Phone number 928-636-9226

(Ken Phillips4/23/2002)

FACT SHEET

STIRLING BRIDGE CEMENT COMPANY
LIMESTONE QUARRY AND ASSOCIATED FACILITIES
ENVIRONMENTAL ASSESSMENT
prepared for the PRESCOTT NATIONAL FOREST

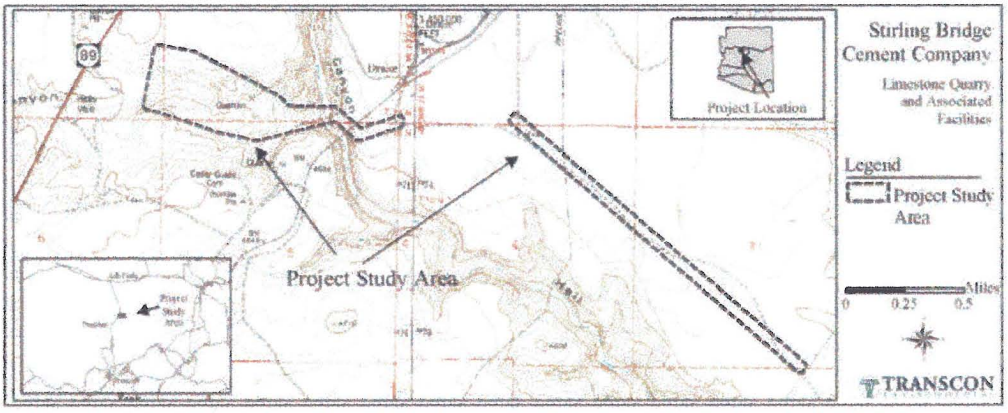
INTRODUCTION

Stirling Bridge Cement Company plans to build and operate a limestone quarry and associated facilities within the Prescott National Forest, near Drake, in Yavapai County, Arizona. The project would involve the extraction of raw materials from a quarry, a conveyor system, and an electrical transmission line. As lead federal agency for this action under the National Environmental Policy Act (NEPA), the US Department of Agriculture, Forest Service is responsible for ensuring that potential adverse environmental effects are avoided or minimized. An Environmental Assessment is being prepared in compliance with NEPA regulations and is expected to be available in the spring of 2002.

PROJECT DESCRIPTION

As described in the 10-Year Mining Plan that has been submitted to the Prescott National Forest by the project proponent, the project would involve the extraction of raw materials from a quarry, materials crushing, and a conveyor system to transport the raw material to the site of a planned cement manufacturing facility on private land. In addition, the proposed action will include 1.5 mile-long 69kV electrical transmission line and access road improvements. The project would involve the extraction of approximately 550,000 tons of limestone annually. The quarry area is approximately 15 acres in size, although only three to five acres would be disturbed at any one time. The project study area, including all project components, would involve about 22 acres.

The quarry operation will consist of the following six phases that will be simultaneously occurring: 1) removal of the vegetation, 2) stripping of the overburden, 3) drilling and blasting, 4) crushing, 5) loading and conveying, and 6) reclamation. Prior to mining activities, trees and brush at the quarry site would be removed. The overburden would then be removed by heavy equipment and drilling and blasting of the limestone would occur. The project proponent has estimated that two blasts per month would occur to produce the required amount of production rock. The primary crushing operation would require a cone crusher mounted on a portable frame that would move as the quarry expands. A loader would deliver blasted rock to the crusher to be reduced to the appropriate size. The rock would then exit the crusher onto a 48-inch belt conveyer in the quarry. The overland conveyor system would consist of three separate belts with two transfer points and would utilize the old Highway 89 bridge to deliver the material to the north side of Hell Canyon. As the mining expands to the west, the overburden would be removed and brought around to fill in the depleted areas of the quarry. The project proponent would then shape the contours, build sediment retention structures to prevent erosion, spread the topsoil, and revegetate the site according to Forest Service specifications.



INSTRUCTIONS FOR COMMENT SHEET

Please share your ideas, comments, and concerns in the space provided below (or send your comments on a separate form or letter to the USDA Forest Service, Prescott National Forest, in care of Carrie Christman) by January 21, 2002.

Last Name: First Name:

Organization (if applicable) : Phone:

Mailing Address:

City: State: Zip:

Comments:

? Please send me a copy of the Envionrmental Assessment when it becomes available for review.

? Please remove my name from the mailing list.

USDA Forest Service
Prescott National Forest
344 S. Cortez Street
Prescott, Arizona 86303

WHY IS THIS PROJECT NEEDED?

Due to the continuing population growth and increased construction in Arizona, the demand for limestone suitable for cement manufacturing is growing. The project proponent has a need to increase production of raw materials, including limestone, to meet the demand for cement and cement products. Currently, much of the cement in Arizona is imported from California or Mexico. Implementing the project will provide a source for quality limestone and other materials required for local production of cement products. Geologic testing indicates that limestone at the proposed quarry is abundant and well suited for cement. The quarry and associated facilities are located a short distance from a planned cement plant. The quarry and associated facilities are also consistent with the policies presented in the Prescott National Forest Plan.

The Mining Law of 1872 states that all valuable mineral deposits in lands belonging to the United States are to be free and open to exploration. The Forest Service Surface Use Regulations (36 CFR 228, Subpart A) set forth rules and procedures for use of the surface of Forest Service lands in connection with mineral operations. These regulations provide miners the statutory rights granted under the 1872 Mining Law.

DECISION TO BE MADE:

The Chino Valley District Ranger will decide whether to implement the Proposed Action as described in this Fact Sheet, whether to implement an alternative to the Proposed Action, or to take no action at this time.

REQUEST FOR PUBLIC INPUT:

This Fact Sheet is designed to give you an opportunity to comment on the proposed project. Please identify issues or concerns that the Prescott National Forest should study or evaluate related to the construction, operation, and maintenance of the proposed quarry and facilities.

You may use the attached self-addressed comment card for this purpose. Comments will be the most useful if they are received by January 21, 2002. If you need additional information or if you have questions concerning the project please contact Wes Girard of the Prescott National Forest at (928) 567-1170.

Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record on this project and will be available for public inspection. Comments submitted anonymously will be accepted and considered: however, those who submit anonymous comments will not have standing to appeal the subsequent decision under 36 CFR Parts 215 or 217. Additionally, pursuant to 7 CFR 1.27(d), any person may request the agency to withhold a submission from the public record by showing how the Freedom of Information Act (FOIA) permits such confidentiality. Persons requesting such confidentiality should be aware that, under the FOIA, confidentiality may be granted in only very limited circumstances, such as to protect trade secrets. The Forest Service will inform the requester of the agency's decision regarding the request for confidentiality, and where the request is denied, the agency will return the submission and notify the requester that the comments may be resubmitted with of without name and address within thirty (30) days.

TO SUBMIT COMMENTS, PLEASE CUT ON LINE BELOW, AFFIX PROPER POSTAGE, AND RETURN TO THE ADDRESSED LOCATION

Postage
Required

_____

_____

_____

_____

Prescott National Forest
Attn: Carrie Christman
344 S. Cortez Street
Prescott, Arizona 86303

Date Received:
Comment Number:

Arizona Corporation Commission
State of Arizona Public Access System

03/12/2002 2:48 PM

Corporate Inquiry
File Number: L-0971171-1
Corp. Name: STIRLING BRIDGE LLC

Domestic Address

2020 N CENTRAL AVE #1020
PHOENIX, AZ 85004

Statutory Agent Information

Agent Name: ROBERT S PORTER
Agent Address:
2020 N CENTRAL AVE #1020
PHOENIX, AZ 85004
Agent Status: APPOINTED 12/05/2000
Agent Last Updated:

Officer and Director Information

Name:	NORTHERN HIGHLANDS II LLC
Title:	MEMBER
Address:	2020 N CENTRAL AVE #1020
	PHOENIX, AZ 85004
Date Assigned: 12/05/2000	**Last Updated:** 12/13/2000

Additional Corporate Information

Business Type:	**Corporation Type:** DOMESTIC L.L.C.
Incorporation Date: 12/05/2000	**Corporate Life Period:** PERPETUAL
Domicile: ARIZONA	**County:** MARICOPA
Approval Date: 12/05/2000	**Original Publish Date:** 01/02/2001

Annual Reports

No Annual Reports on File

Microfilm

Location	Entered	Description
1-1431-017-044	12/05/2000	ARTICLES OF ORGANIZATION
2-0266-078-041	01/02/2001	PUBLICATION OF ARTICLES OF ORGANIZATION

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Arizona Corporation Commission
State of Arizona Public Access System

03/12/2002 3:05 PM

Corporate Inquiry
File Number: L-0955950-4
Corp. Name: NORTHERN HIGHLANDS II, LLC

Domestic Address

2020 N CENTRAL AVE #1020
PHOENIX, AZ 85004

Statutory Agent Information

Agent Name: ROBERT S PORTER
Agent Address:
2020 N CENTRAL AVE #1020
PHOENIX, AZ 85004
Agent Status: APPOINTED 07/11/2000
Agent Last Updated:

Officer and Director Information

Name:	G H GOODMAN INVESTMENT COMPANI
Title:	MEMBER
Address:	% ROBERT S PORTER
	2020 N CENTRAL AVE #1020
	PHOENIX, AZ 85004
Date Assigned: 07/11/2000	**Last Updated:** 08/07/2000
Name:	GRANT H GOODMAN
Title:	MEMBER
Address:	% ROBERT S PORTER
	2020 N CENTRAL AVE #1020
	PHOENIX, AZ 85004
Date Assigned: 07/11/2000	**Last Updated:** 08/07/2000
Name:	TERI L GOODMAN
Title:	MEMBER
Address:	% ROBERT S PORTER
	2020 N CENTRAL AVE #1020
	PHOENIX, AZ 85004
Date Assigned: 07/11/2000	**Last Updated:** 08/07/2000

Additional Corporate Information

Business Type:	**Corporation Type:** DOMESTIC L.L.C.
Incorporation Date: 07/11/2000	**Corporate Life Period:** PERPETUAL

Approval Date: 07/11/2000	Original Publish Date: 08/07/2000

Annual Reports

No Annual Reports on File

Microfilm

Location	Entered	Description
1-1409-002-020	07/11/2000	ARTICLES OF ORGANIZATION
2-0259-048-041	08/07/2000	PUBLICATION OF ARTICLES OF ORGANIZATION

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Arizona Corporation Commission
State of Arizona Public Access System

03/12/2002 3:07 PM

Corporate Inquiry
File Number: L-0753990-3 LATEST DATE TO DISSOLVE 12/31/2025
Corp. Name: G.H. GOODMAN INVESTMENT COMPANIES, L.L.C.

Domestic Address

3624 N 15TH AVE
PHOENIX, AZ 85015

Statutory Agent Information

Agent Name: CHERYL A COX
Agent Address:
3624 N 15TH AVE
PHOENIX, AZ 85015
Agent Status: APPOINTED 05/05/1999
Agent Last Updated:

Officer and Director Information

Name:	GRANT H GOODMAN
Title:	MEMBER
Address:	4920 E EXETER
	PHOENIX, AZ 85018
Date Assigned: 07/21/1995	**Last Updated:** 08/25/1995
Name:	TERI B GOODMAN
Title:	MEMBER
Address:	4920 E EXETER
	PHOENIX, AZ 85018
Date Assigned: 07/21/1995	**Last Updated:** 08/25/1995

Additional Corporate Information

Business Type: OTHER	**Corporation Type:** DOMESTIC L.L.C.
Incorporation Date: 07/21/1995	**Corporate Life Period:**
Domicile: ARIZONA	**County:** MARICOPA
Approval Date: 08/24/1995	**Original Publish Date:** 10/10/1995
Dissolution/Withdrawl: LATEST DATE TO DISSOLVE	**Dissolution/Withdrawl Date:** 12/31/2025

Annual Reports

No Annual Reports on File

Microfilm

Location	Entered	Description
1-0945-011-025	07/21/1995	ARTICLES OF ORGANIZATION
2-0176-053-017	10/10/1995	PUBLICATION OF ARTICLES OF ORGANIZATION
2-0241-050-026	05/05/1999	AGENT APPOINTMENT

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- **Return to Arizona Corporation Commission Home Page**

TRADE NAMES / SERVICE MARKS
SECRETARY OF STATE BETSEY BAYLESS

HOME | ELECTION SERVICES | BUSINESS SERVICES | PUBLIC SERVICES

Registered Name
Information Search
Generated by TnT Names Search Version 2.45

Instructions

General Information

File ID	185420
Description	Trade Name
Status	Active
Name	ROCKLAND MATERIALS
Address 1	3624 N. 15TH AVENUE
City	PHOENIX
State	AZ
ZIP	85015-
Business Type	READY MIX PRODUCTION 602-285-1290
Domestic Begin Date	12/16/97

Agent/Owner Information

Agent ID	Type	Fullname	Address	City	State	ZIP	Phone
256610	Owner	GH GOODMAN INVESTMENTS CO LLC	3624 N. 15TH AVENUE	PHOENIX	AZ	85015-	

Registration Information

Received	Amended	Assigned	Expiration	Cancelled	Revoked
12/16/97		12/30/97	12/16/02		

Correspondence History

Description	Date	Printed	Filmed	Loc. No.	Page No.	Pages
Amendment	12/30/97	12/30/97	12/30/97	00200105	51	2
Application	12/16/97	1/5/01				

Please email your comments or questions regarding this system to trades@mail.sosaz.com. We appreciate any feedback.

Disclaimer

PROJECT LEVEL ROADS ANALYSIS SUMMARY
Drake Cement Limestone Quarry Project, Yavapai County, Arizona

Project Proponent:
Drake Cement, LLC

For Submittal to:
US Department of Agriculture, Forest Service, Prescott National Forest, Chino Valley District

Prepared by:
Transcon Infrastructure, Inc. (dba Transcon Environmental)
3740 East Southern Avenue, Suite 218
Mesa, Arizona 85206
(480) 807-0095

November 2005

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LIST OF FIGURES

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INTRODUCTION

Drake Cement, LLC (Drake Cement) plans to operate a limestone quarry within the Prescott National Forest (PNF) near Drake, Arizona. The proposed quarry is approximately five miles north of Paulden, Arizona, and about one mile east of Arizona State Route 89 (Figure 1). The project will use Forest Roads (FR) for access. A draft project level roads analysis was prepared under the direction of the PNF to examine potential impacts to the relevant roads that could result from project implementation. This document is a summary of the draft project level road analysis, and is intended to provide the public an opportunity to comment on proposed changes to the Forest road system. The final version of the project-level roads analysis will be incorporated into the project record of the Drake Cement Environmental Analysis.

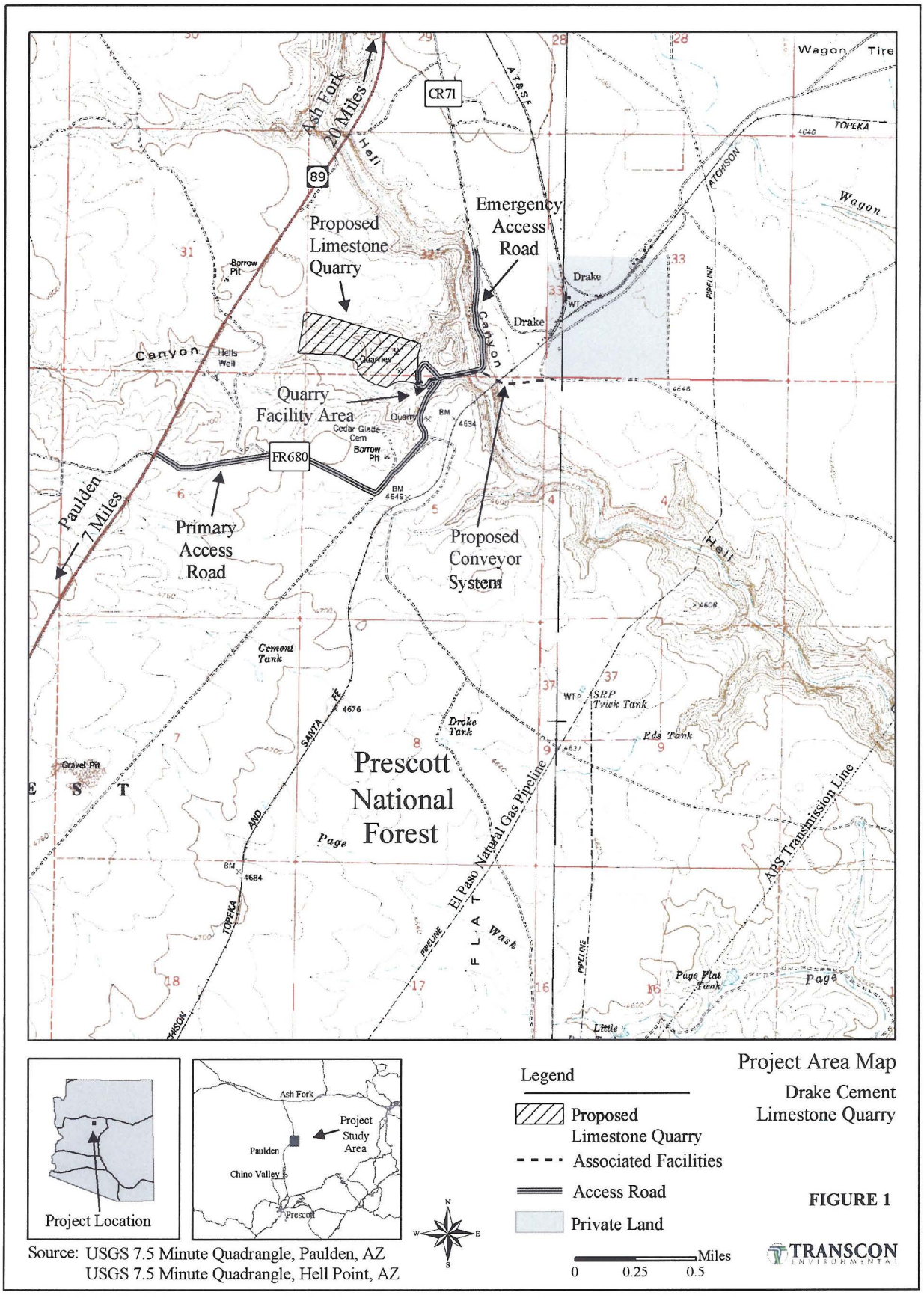
Primary access to the quarry is from Arizona Highway 89 via FR 680, FR 680A and FR 9024B. Emergency access will be from County Road 71 via FR 680A. Access improvements are planned along approximately 1.5 miles of existing roads. Three gates are also proposed to limit access to the quarry for reasons of public safety.

The primary objectives of the analysis are to:

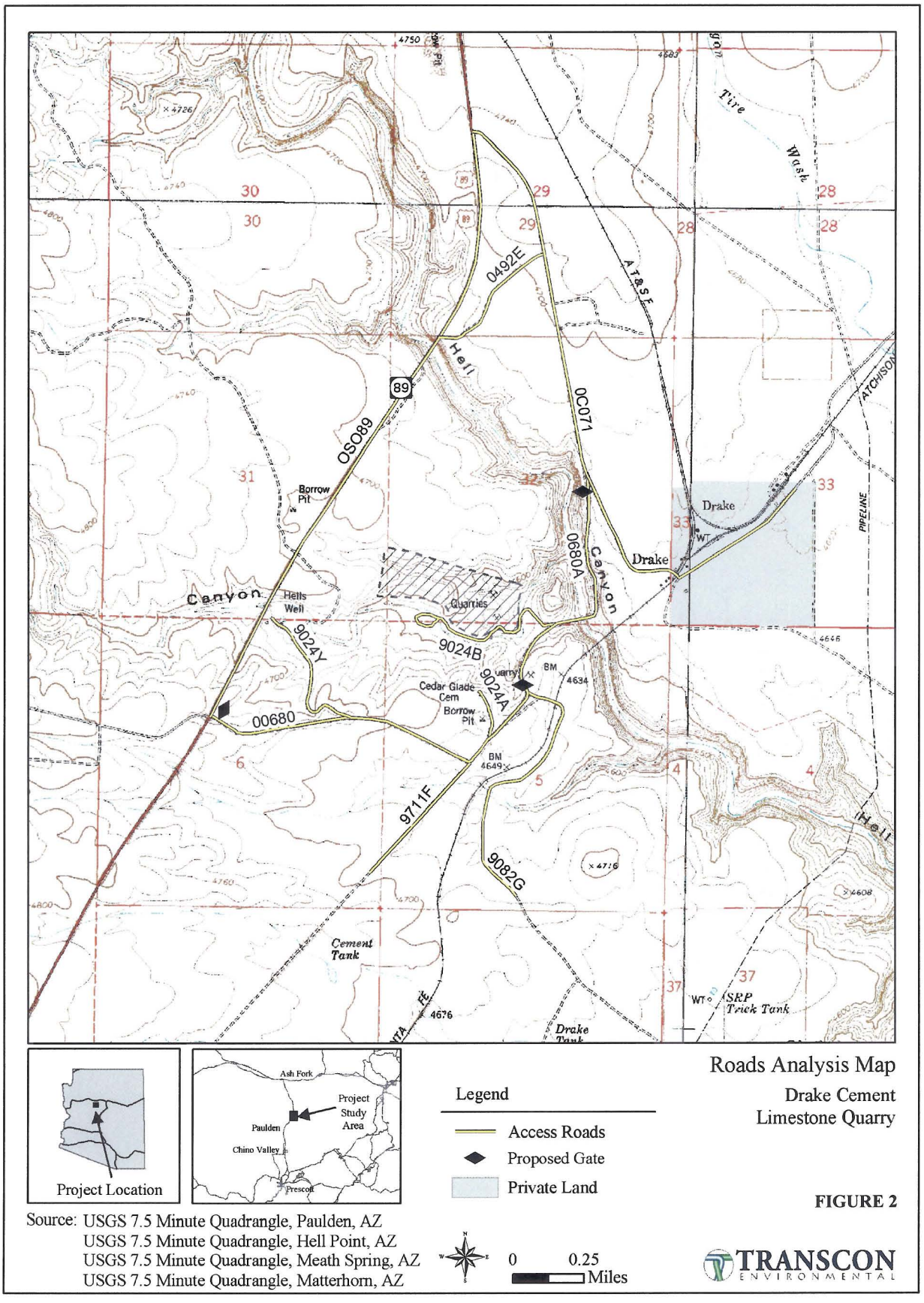
- Analyze the current road system in relation to the planned operations for the Drake Cement quarry. Address all potential activities (needs) on individual roads, such as construction, reconstruction, changing the service level or maintenance level, conversion to other uses, or decommissioning.
- Provide critical information for a road system that conforms to the National Forest Plan and is in balance with available funding for needed management actions.
- Provide and verify existing road conditions, identify proposed changes to the current road system, and identify potential concerns with the proposed changes to the road system.
- Provide Forest Service Line Officers with critical information to ensure that existing and developed road systems are safe and responsive to public needs and desires, are affordable and efficiently managed, have minimal negative ecological effects on the land, are in balance with available funding for needed management actions, and are consistent with road management objectives Forest Service Manual (FSM) 7712.5.

EXISTING CONDITIONS

The study area (Analysis Area) for this project level road analysis is defined by the extent of the various project elements, as depicted in Figure 1. There are approximately 10.4 miles of roads within the Analysis Area. Figure 2 depicts the roads analyzed for the Drake Cement quarry operations. Table 1 summarizes road conditions and maintenance responsibilities for roads in the Analysis Area. Table 2 summarizes the functional class and maintenance levels.



Source: USGS 7.5 Minute Quadrangle, Paulden, AZ
USGS 7.5 Minute Quadrangle, Hell Point, AZ



Source: USGS 7.5 Minute Quadrangle, Paulden, AZ
USGS 7.5 Minute Quadrangle, Hell Point, AZ
USGS 7.5 Minute Quadrangle, Meath Spring, AZ
USGS 7.5 Minute Quadrangle, Matterhorn, AZ

TABLE 1 CURRENT ROAD CONDITIONS				
Road	**Width (feet)**	**Length (feet)**	**Surface Type**	**Maintenance Jurisdiction**
FR 680	12-15	5,087	native material	FS
FR 680A	12-15	6,644	native material (asphalt along certain segments)	FS
FR 0492E	12-15	2,630	native material	FS
FR 9711F	12-15	2,742	native material	FS
FR 9024Y	12-15	2,849	native material	FS
FR 9082G	12-15	5,173	native material	FS
FR 9024A	12-15	935	native material	FS
FR 9024B	12-15	3,950	native material	FS
County Road 71 (OCO71)	25-30	12,518	bituminous surface treatment near junction of SR 89, native material along remainder of road	County
Highway 89 (OSO89)	40	12,138	bituminous surface treatment	State

TABLE 2 FUNCTIONAL CLASS AND MAINTENANCE LEVELS			
Road	**Functional Class**	**Operational Maintenance Level**	**Objective Maintenance Level**
FR 680	L	2	2
FR 680A	L	2	2
FR 0492E	L	2	D
FR 9711F	L	2	2
FR 9024Y	L	2	2
FR 9082G	C	2	2
FR 9024A	L	2	2
FR 9024B	L	2	2
County Road 71 (OCO71)	A	n/a	n/a
Highway 89 (OSO89)	A	5	5

Functional Classes:

A = Arterial – Provides service to large land areas and usually connects with other arterials or public highways.

C = Collector – Provides service to smaller land areas than an arterial road, usually connects arterial roads to local roads or terminal facilities.

L = Local – Connects terminal facilities with forest collector or arterial roads or public highways, usually single purpose transportation facilities.

T = Trail – Convert back to Trail (not an official designation in the data dictionary, used for this document only and applies to one road).

Maintenance Levels:

1 = Basic custodial care (closed)
2 = High clearance vehicles
3 = Suitable for passenger cars
4 = Moderate degree of user comfort
5 = High degree of user comfort
C = Convert use
D = Decommission

Results from field inspections confirmed PNF data with a few exceptions. Approximately 1,060 feet north of the junction of FR 680, FR 9711F and FR 680A, the road splits, re-directing travel to an east branch. The west branch is the original alignment along FR 680A and was either washed out or deliberately blocked by excavation. Additionally, access along FR 680A across the bridge spanning Hell Canyon is blocked by excavated trenches in front of the bridge. Finally, the asphalt surface along segments of FR 680A that appear to follow the old Highway 89 alignment are deteriorating.

ANALYSIS SUMMARY

The analysis considered benefits, problems, and risks. This project level analysis incorporates the work of the *Prescott National Forest, Forest Level Roads Analysis Report* (PNF 2003) which analyzed maintenance levels 3, 4, and 5 roads throughout the PNF. The project level analysis also incorporated findings from related and concurrent studies associated with the proposed Drake Cement project including the Wildlife Specialist Report, Biological Assessment, and resource analysis being prepared for the Environmental Assessment underway with the PNF. These reports, although preliminary, support the finding that impacts resulting from road use and improvements will be minor.

PROPOSED CONDITION

The current road condition was compared to the proposed plan. The recommended improvements will meet the Forest's strategic intent for road management. These improvements are necessary to balance the proposed Drake Cement quarry operations with the need to minimize risk to public safety and damage to natural resources.

In summary, the current road system would not accommodate Drake Cement's plan to operate a quarry facility without the following improvements listed below. In addition, the plan will create approximately 800 to 900 feet of a new, temporary, non-system road. The new road is exclusively for access to the quarry and will be reclaimed at the conclusion of the project and, therefore, is not analyzed as part of the project level roads analysis. Impacts for the new road will be analyzed as part of the Environmental Assessment prepared for the project.

FR 680: This road provides regular ingress and egress to the quarry. It is currently maintained as a level 2 road (high clearance vehicles). To accommodate the proposed use, the road would need to be maintained as a level 4 road.

FR 680A: The segment begins at the junction of FR 680 and FR 9024B. This road is currently maintained as a level 2 road. The segment would need to be maintained as a level 4 road. The segment of this road east of Hell Canyon would be used exclusively as an emergency access road and will not require a change to the maintenance level. However the trenches in place at the Hell Canyon Bridge would need to be filled in to facilitate emergency travel.

FR 9024B: This road currently provides regular ingress and egress to the quarry. It is currently maintained as a level 2 road. To accommodate the proposed use as emergency access escape, the road would need to be upgraded and maintained as a level 4 road. Once the road enters the quarry site, the road would be left in its current condition.

FR 9024Y: No changes.

FR 0492E: No changes.

OCO71: No changes. This road would only be used by quarry personnel to accommodate emergency travel.

FR 9711F: No changes.

FR 9082G: No changes.

FR 9024A: No changes.

Currently the roads are open for travel to the public. Public travel within the quarry site during quarry operation would pose safety concerns. As a result, Drake Cement proposes to install three gates. Two gates would control access to the quarry near the site boundaries, and one to facilitate travel of oversized equipment at the SR 89 and FR 680 junction. The gate at the SR 89 and FR 680 junction would be installed adjacent to the existing cattle guard and opened when only when large vehicles need access. Regular ingress and egress on FR 680 would remain open continuously over the existing cattle guard. The other two gates will prevent public access and remain closed. They are proposed for the junction of County Road 71 and FR 680A, and the intersection of FR 680A and FR 9082G, respectively.

SUMMARY OF IMPACTS

The evaluation concludes that impacts to roads as a result of the proposed project would be minor. In addition, impacts to existing land use and environmental resources as a result of road improvements and changes would be minor. The reasons for these findings are as follows:

1. The planned road use and proposed improvements will not impact PNF road maintenance activities or budgets. Road maintenance and improvements will be performed by Drake Cement.
2. Some road segments are proposed for improvement and will change the level of service rating. The proposed improvement will improve the condition and safety of the roads.
3. The public will continue to access the surrounding PNF land from existing roads.
4. Existing permittees will continue to access their permitted uses from existing roads.
5. Modifications are planned on existing alignments and will create minor increases to the existing road prism by increasing the width and providing drainage.
6. The continued use of the existing roads, rather than constructing new roads, would limits impacts to sensitive species. Impacts to sensitive species or ecosystems from road improvements and use are expected to be low.

OPPORTUNITY TO COMMENT

As part of the project-level roads analysis, we are providing the public an opportunity to inform the Agency of any issues, concerns and suggestions regarding the proposed changes to the roads system outlined in this summary. Comments should be as fully informed and specific as possible to assist us in the analysis. Comments need to be received by the close of business (4:30 p.m.) on December 15, 2005. Please submit your comments in writing to:

Prescott National Forest
c/o Drake Cement RAP
344 S. Cortez St.
Prescott, AZ 86303
Attn: Michael Smith

If you have any questions, or require additional information, please contact Michael Smith of the PNF at (928) 443-8000. Comments received in response to this Scoping Notice, including name and address of those who comment, will be considered part of public record on this project and will be available for public inspection. Comments submitted anonymously will be accepted and considered; however, those who submit anonymous comments may lose standing to appeal the subsequent decision under 36 CFR Parts 215 and 217.

REFERENCES

Forest Service 1966. U.S. Department of Agriculture, Forest Service – Region 3, Minimum Standards for Single Lane All Weather Road (R3-7100-87 8/66).

Prescott National Forest 2003. *Forest Level Roads Analysis Report.* U. S. Department of Agriculture, Forest Service.

Prescott National Forest 2004. *Prescott National Forest Land and Resource Management Plan.* Republished 2004 U.S. Department of Agriculture, Forest Service.

Prescott National Forest 2005. Geographic Information System Roads Database.

PROJECT PROPOSAL AND ALTERNATIVES
Drake Cement Limestone Quarry Project
Prescott National Forest

Project Proponent:
Drake Cement, LLC

For Submittal to:
United States Department of Agriculture
Forest Service
Southwestern Region

Prepared by:
Transcon Infrastructure, Inc. (dba Transcon Environmental)
3740 East Southern Avenue, Suite 218
Mesa, Arizona 85206
(480) 807-0095

November 2005

United States Department of Agriculture
Forest Service
Chino Valley Ranger District
735 N. Highway 89
Chino Valley, AZ 86323-0485
Phone: (928) 777-2200
Fax: (928) 777-2208

File Code: 1950-1 **Date:** November 10, 2005

Subject: Opportunity to Comment: Drake Cement Mining Proposal

Dear Interested Parties:

Enclosed you will find information, including alternative management strategies, about the Drake Cement Project proposed for the Chino Valley Ranger District of the Prescott National Forest.

The Forest Service notice, comment and appeal regulations (36 CFR 215, dated June 4, 2003) require us to send the proposed action out for review and comment prior to reaching a decision on projects (215.5). The intent of the comment period is to allow the public an opportunity for early and meaningful participation, thus allowing their comments to help shape the completion of the environmental assessment. For the Drake Cement comment period, we are sending you the required proposed action (from the October 28, 2004 scoping effort), along with a working draft of alternatives to that proposed action, a summary comparison of alternatives displaying preliminary environmental effects, and a summary of the project-level roads analysis. Your comments on this material will be most useful to us as we finalize the environmental assessment. Please note that there will not be an additional comment period on the completed environmental assessment. The completed environmental assessment will be sent to those who comment during this current 30-day comment period as well as those who request a copy.

How to Comment and Timeframe
The opportunity to comment ends 30 days following the date of publication of the required legal notice. Written, facsimile, hand-delivered, oral, and electronic comments concerning this action will be accepted for 30 calendar days following the publication of this notice in the *Prescott Daily Courier*. The publication date in this newspaper is the exclusive means for calculating the comment period for this analysis. However, we expect the legal notice to be published on November 15, 2005, and that the comment period would therefore close at 4:30 p.m. on December 15, 2005. To be sure of the closing date, check the date of publication in the *Courier* or call us. Regulations prohibit extending the length of the comment period.

All written comments must be submitted to:

Prescott National Forest
Drake Cement Proposal
c/o Michael Smith
344 S. Cortez Street
Prescott, AZ 86303
fax: 928-443-8008

If you have any questions about the included document, or if something is unclear, please contact Michael Smith at 928-443-8000.

We hope you will take advantage of this opportunity to provide us with substantive comments on this project. As always, we thank you for your interest in the Prescott National Forest.

Sincerely,

Linda L. Jackson

LINDA L. JACKSON
District Ranger

cc: Joy Kimmel

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This public comment document consists of the first two chapters (in draft form) of the environmental assessment (EA) that will be completed for this project. As such, there may be references to chapters, appendices and other documents that are not yet included, but will be in the final EA document. Your comments will be used to help finalize the remaining chapters of the EA.

CHAPTER 1 – INTRODUCTION

1.1 Document Structure and Purpose

The U.S. Department of Agriculture (USDA) Forest Service has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This document consists of an overview of the proposed Drake Cement Limestone Quarry and alternatives to it, as well as a preliminary comparison of effects of implementing the proposal and alternatives. Chapter 1 introduces the proposed project, provides information about the project's purpose and need, describes the Forest Service's decision framework, and summarizes the public involvement process. Chapter 2 describes the proposed action in detail and alternatives to the proposed action. These alternatives were developed based on key issues raised by the public and agencies. This discussion also includes possible mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.

The purpose of this document is to allow the public an opportunity to review the proposal, alternatives and effects summary and to then provide comments on this proposal, as provided in 36 CFR 215.

1.2 Project Record Location and Incorporation by Reference

This EA incorporates by reference the project record (40 CFR 1502.21). The project record contains specialist reports and other technical documentation used to support the analysis and conclusions in this EA. The specialist reports provide additional detailed analysis. This EA incorporates by reference the Cultural Resources Inventory Report, Wildlife Specialists Report, Watershed Condition Assessment, and Roads Analysis Report.

This document relies on specialist reports and the project record to implement the Council on Environmental Quality (CEQ) Regulations' provision that agencies should reduce NEPA paperwork (40 CFR 1500.4), and that NEPA documents be analytic rather than encyclopedic and kept concise (40 CFR 1502.2). The objective is to furnish enough site-specific information to demonstrate a reasoned consideration of the environmental impacts of the alternatives and how these impacts can be mitigated, without repeating detailed analysis and background information available elsewhere. The project record is located at the Chino Valley District Office, 735 N. Highway 89 in Chino Valley, Arizona, 86323.

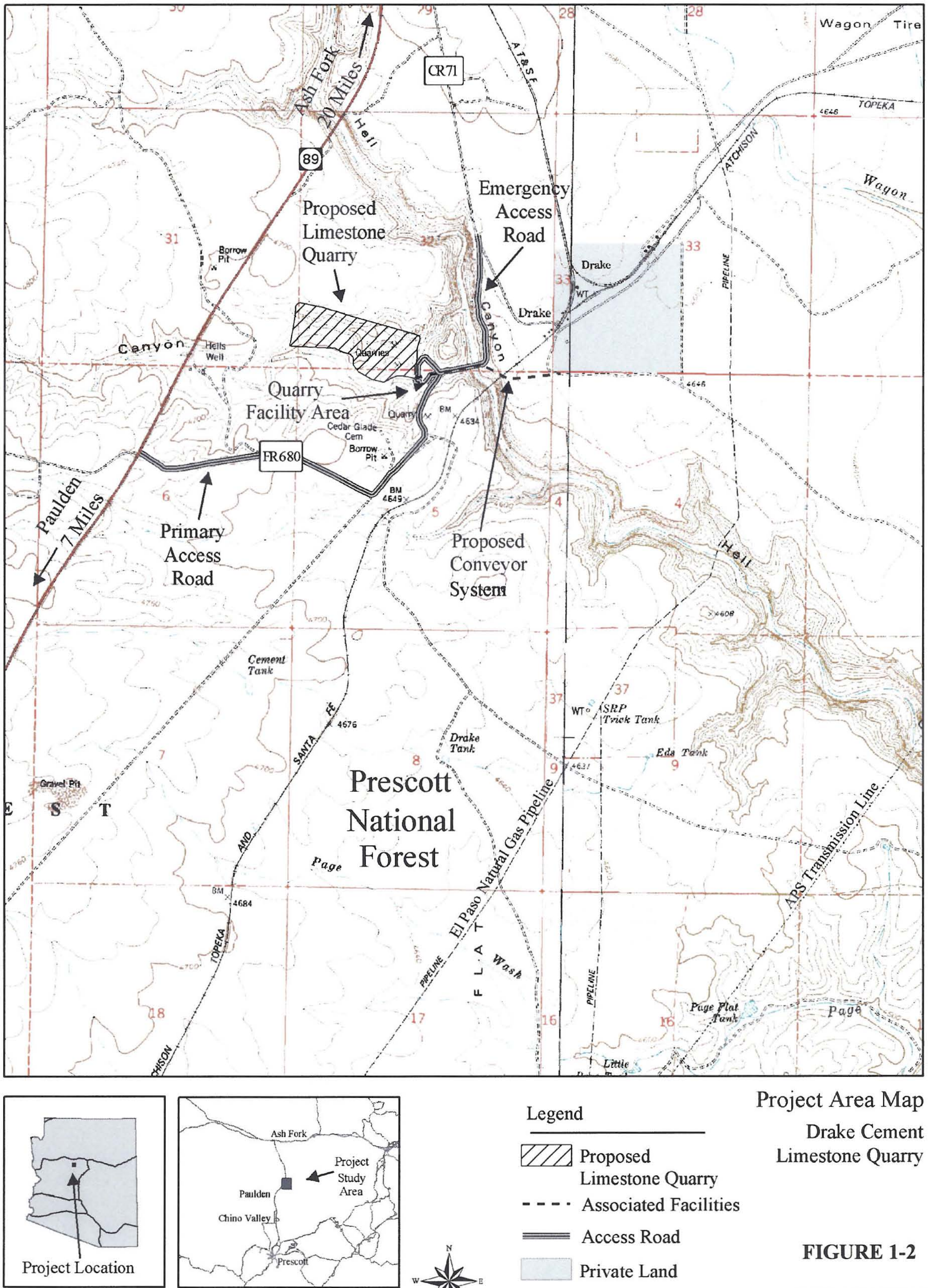
1.3 Background

Drake Cement, LLC (Drake Cement) plans to operate a limestone quarry within the Prescott National Forest (PNF) near Drake, Arizona. The proposed quarry is approximately five miles north of Paulden, Arizona, about one mile east of Arizona State Route 89. Portions of Sections 31 and 32, T19N, R1W and Section 5 and 6, T18N, R1W in Yavapai County are involved. The location of the proposed facilities is depicted on the Vicinity Map (Figure 1-1) and the Project Area Map (Figure 1-2). The project site is composed entirely of PNF lands, which are used mostly for ranching activities, mining activities, and dispersed recreation. The area is located in the Hell Canyon Watershed (HUC #15060202B). Features adjacent to the project area include ranching infrastructure, State Route 89, County Road 71, various Forest roads, a gas pipeline, electrical transmission lines, the Burlington Santa Fe Railroad line, and a flagstone storage and processing facility.

Project Vicinity Map
Drake Cement
Limestone Quarry

FIGURE 1-1

TRANSCON ENVIRONMENTAL



Project Area Map

Drake Cement Limestone Quarry

FIGURE 1-2

TRANSCON ENVIRONMENTAL

Source: USGS 7.5 Minute Quadrangle, Paulden, AZ
USGS 7.5 Minute Quadrangle, Hell Point, AZ

Limestone mining has been conducted in this location since around 1880, and on and off again through 1985. Historic mining activities (i.e. surface disturbances) and numerous existing roads are evident on and in the vicinity of the limestone quarry. In 2002, an unaffiliated company named Stirling Bridge proposed limestone mining activities at this location and a cement plant and electrical cogeneration facilities on nearby private land. That project was never initiated. Subsequently, Drake Cement acquired the mining claims and private land from Stirling Bridge and has recently prepared and submitted a Plan of Operations (POO) to the PNF detailing their 10-year plan to mine limestone in this area. This POO was developed in accordance with the Forest Service surface use regulations (36 CFR 228, Subpart A). Drake Cement proposes to develop approximately 70 acres of mining claims over a 10-year timeframe. The lands occupied by mining claims are currently administered by the PNF Chino Valley Ranger District. Drake Cement has indicated that they are also planning to construct a cement plant on the private land near the Drake Townsite, but are not proposing electrical cogeneration facilities at that location.

The Chino Valley District Ranger has reviewed the POO and has determined the need for NEPA compliance. As lead federal agency for this action under NEPA, the USDA Forest Service is responsible for ensuring that potential adverse environmental effects on federal lands and resources are avoided or minimized. As stated in the PNF Land and Resource Management Plan, management direction for minerals is to "Administer the mineral laws and regulations to minimize surface resource impacts while supporting sound energy and minerals exploration and development". The EA is being prepared in compliance with NEPA, CEQ Regulations (40 CFR 1500-1508).

1.4 Purpose and Need for Action

Drake Cement has filed claims for limestone deposits on National Forest lands. These deposits are defined as locatable minerals and are managed by the Secretary of Interior. The Forest Service is responsible for examining plans to quarry or mine these materials and ensure that environmental impacts are minimized. As stated in the POO, the project proponent desires to mine limestone at this site to meet current and projected needs for raw material required in the production of cement.

The Mining Law of 1872 states that all valuable mineral deposits in Public Domain lands of the United states are to be free and open to exploration and development (30 USC 22, 28). The Forest Service administers such exploration and development on National Forest Systems land under mining regulations defined in 36 CFR 228, Subpart A. Mine operators planning mineral exploration and development activities which are likely to cause significant disturbances to surface resources are required to submit a POO for review by the District Ranger (36 CFR 228.4(a)). The purpose of agency review of the POO is to prevent undue and unnecessary disturbances to the surface resources (36 CFR 228.5(a).3) while ensuring the operator may conduct necessary activities for developing mineral resources.

1.5 Proposed Action

As detailed in the POO, Drake Cement is proposing to conduct limestone extraction activities by reactivating and developing an old quarry and develop it further to the west-northwest. As proposed, limestone quarried at the site would be crushed and transported across Hell Canyon via a conveyance system to the site of a future cement plant or transfer facility near the former townsite of Drake. In addition to the quarry and conveyor system, other primary project elements include a quarry facility operations area and access road improvements (refer to Figure 1-2).

As described in the POO, the project would involve the extraction of limestone from an abandoned quarry that would be expanded to about 55 acres. The quarry operation would consist of several general phases occurring simultaneously: (1) removal of the vegetation; (2) stripping and salvage of the topsoil; (3) stripping and placement of overburden into staging areas or final reclamation areas in the pit; (4) drilling

and blasting; (5) loading and hauling to the primary crusher located in the pit; (6) primary crushing; (7) transport crushed raw material (limestone) offsite via an overland conveyor system; and (8) reclamation. Although the quarry area is approximately 55 acres in size, only about 15 to 20 acres would be disturbed at any one time. Reclamation activities would occur throughout the 10-year mine plan.

An adjacent quarry operations facility would include a designated parking area, a small portable (modular) office-lunch building, portable storage buildings, portable toilets, a 2,500 gallon fuel tank and concrete pad to fuel and service vehicles and equipment, and a 12,000 gallon water storage tank. The quarry facility area would cover approximately 0.5 acre.

As proposed, the conveyance mechanism is approximately 0.75 mile in length and up to ten feet wide. The conveyor belt is proposed to be approximately three feet wide and portions of the conveyor apparatus would include walkways adjacent to the conveyor. The conveyor system consists of three linked conveyers that would be used to move the rock from the quarry to the parcel of private land near Drake. It is proposed that the conveyer system would cross Hell Canyon on the existing, but abandoned, concrete highway bridge and go under the currently used Atchison, Topeka and Santa Fe Hell Canyon railroad trestle. The height of the conveyance system would vary based on the underlying topography and engineering requirements. As it crosses the old Highway 89 Hell Canyon Bridge, it would be four feet above the surface of the bridge. A corridor of 10 to 100 feet in width would be required adjacent to the portions of the conveyer located between the quarry and the old highway bridge and between the top of the east side of Hell Canyon and the private property. Based on these assumptions, ground disturbance associated with the conveyor system would be expected to be about 2.6 acres.

Primary access to the proposed quarry would extend from State Route 89 via Forest Service Road (FR) 680 and FR 9711F (also known as the old Highway 89). Most of the existing access road to the quarry has been crowned and ditched or graded in the past, although re-grading and improvements at wash crossings would likely be required. Near the quarry, a new access road less than 1,000 feet long is proposed to enable access to the quarry operation facility area. Drake Cement also proposes to improve the existing road near the quarry and another portion of the old Highway 89 on the east side of Hell Canyon as emergency access routes. Drake Cement has proposed to improve the existing roads and construct the new road per Forest Service road specification standards. These road improvements and new construction would cause about 7.0 acres of ground disturbance.

1.6 Decision Framework

Based on the analysis disclosed in the EA, the Forest Supervisor (Deciding Officer) of the Prescott National Forest can: (1) select an action alternative that has been considered in detail, (2) select a modified action alternative, or (3) require that an Environmental Impact Statement be prepared for the project. As required by the NEPA, the Forest Service is also required to evaluate a No Action Alternative; however, the Forest Supervisor can not select this alternative because, under the 1872 Mining Law, the PNF is obligated to accept and analyze the project proposal and authorize mining activities to occur with appropriate mitigation. The No Action Alternative will be used as a baseline of comparison from which action alternatives can be measured.

The Responsible Official will determine (1) what mitigation measures and monitoring requirements the Forest Service will require; and (2) if additional environmental documentation is needed. Implementing this project will require a non-significant Forest Plan Amendment (changing the existing Visual Management System classification for about 66 acres from Partial Retention to Modification).

1.6.1 Applicable Laws and Executive Orders

USDA Forest Service Administration of the General Mining Law of 1872

Mining on public lands is authorized under the General Mining Law of 1872 (as amended) (30 USC §§ 21-42), the Mining and Minerals Policy Act of 1970 (30 USCA § 21a), Federal Land Policy and Management Act (FLPMA) of 1976 (as amended) (43 USCA §§ 1701-84), and the National Materials and Minerals Policy, Research and Development Act of 1980 (30 USCA §§ 1601-05). The Forest Service's regulatory responsibilities for oversight of mining activities on federal lands are set forth in the Forest Service Surface Use Regulations (36 CFR 228, Subpart A–also known as the 228 Regulations), which provides rules and procedures for use of the surface of National Forest System Lands in connection with mineral operations. These regulations direct the Forest Service to prepare the appropriate level of NEPA analysis and documentation when proposed operations may significantly affect surface resources. These regulations do not allow the Forest Service to deny entry or preempt the miner's statutory rights granted under the 1872 Mining Law. The regulations state that an operator is entitled to access in connection with the operation, and that access must be approved in writing before use can begin. The regulations also require the Forest Service to develop mitigation measures to minimize adverse impacts on National Forest resources and include requirements for reclamation.

The Forest Service Manual (FSM) 2800 also discusses specific responsibilities and considerations for dealing with a POO. It states that the Forest Service should minimize or prevent adverse impacts related or incidental to mining by imposing reasonable conditions that do not materially interfere with operations. It also requires the Forest Service to evaluate proposals for road construction and reconstruction and consider alternatives that may be less damaging to surface resources (see FSM 2817.25).

Other State and Federal Laws and Executive Orders

For other specific regulatory programs, the Forest Service operates in compliance with state and other federal regulatory agencies. Shown below is a partial list of other federal laws and executive orders pertaining to project-specific planning and environmental analysis on federal lands. While most pertain to all federal lands, some of the laws are specific to Arizona. Disclosures and findings required by these laws and orders will be contained in Chapters 2 and 3 of the EA.

- National Environmental Policy Act (NEPA) of 1969 (as amended)
- National Forest Management Act (NFMA) of 1976 (as amended)
- Multiple-Use Sustained-Yield Act of 1960
- Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (as amended)
- Endangered Species Act (ESA) of 1973 (as amended)
- Wild and Scenic Rivers Act of 1968, (as amended)
- Clean Water Act of 1977 (as amended)
- Clean Air Act of 1970 (as amended)
- National Historic Preservation Act of 1966 (as amended)
- American Indian Religious Freedom Act of 1978
- Archeological Resource Protection Act of 1980
- Executive Order 11593 (cultural resources)
- Executive Order 11988 (floodplains)
- Executive Order 11990 (wetlands)
- Executive Order 12898 (environmental justice)
- Executive Order 12962 (aquatic systems and recreational fisheries)
- Executive Order 13186 (Migratory Bird Treaty Act)

1.7 Public Involvement

1.7.1 Process and Results

The proposal was listed in the October 2004 Schedule of Proposed Actions for the PNF. The proposal was provided in writing to the public and other agencies for a 30-day comment period during project scoping in October and November 2004. Thirty-five letters, e-mails, and phone calls were received as a result of this scoping.

1.7.2 Issues

Comments received as a result of the scoping process were analyzed by the project Interdisciplinary (ID) Team to determine issues. The Forest Service's definition of an issue is: "A point of discussion, debate, or dispute with a proposed action based on some anticipated environmental effect". Issues are used to develop alternatives, mitigation measures, or analyze environmental effects.

The Forest Service separates issues into two groups: significant and non-significant issues. The CEQ regulations specifies that environmental analysis focus on significant issues. Issues determined not to be significant shall be discussed only briefly and eliminated from detailed study [40 CFR 1500.1(b), 1500.4(C), 1501.7(3), and 1502.2(B)]. Non-significant issues must meet one of the following criteria:

1. The issue is outside the scope of the proposed action.
2. The issue is already decided by law, regulation, Forest Plan, or other higher-level decision.
3. The issue is irrelevant to the decision to be made.
4. The issue is conjectural and not supported by scientific (or factual) evidence.

The significant issues will be analyzed in Chapter 3 of the EA and will be considered in the decision making process.

1.7.3 Significant Public Issues

Significant issues resulting from an ID Team review of the public scoping comments are depicted in Table 1-1.

Table 1-1 Significant Issues and Evaluation Criteria

Issue	Issue Statement	Primary Evaluation Criteria
Watershed Impacts	The limestone quarry will negatively impact the watersheds of Limestone Canyon, Hell Canyon, and the Verde River, especially stream flow, water quality, plant and animal species, and human culture.	Effects on drainage pattern of the area, including through the alteration of a wash, stream, or river resulting in (1) substantial erosion or siltation; or (2) substantial increase in the rate or amount of surface runoff. Creation or contribution of runoff water, especially additional sources of polluted runoff. Degradation of water quality. Compliance with ADEQ, EPA, and ADWR regulations regarding erosion control and storm water management. Effects to the "outstandingly remarkable values" of the portion of the Verde River eligible for Wild and Scenic River designation. Effects to plant and wildlife species.

Table 1-1 Significant Issues and Evaluation Criteria		
Issue	**Issue Statement**	**Primary Evaluation Criteria**
Transportation Impacts	Increased vehicle traffic (especially truck traffic) on State Route 89 due to quarry operations would cause traffic congestion and safety concerns.	Effects on the local population and demographics; impacts on infrastructure, including requirements for improvements and costs; increased risk of accidents. Historic and projected traffic counts for State Route 89.
Wildlife Impacts	The project will disrupt and have negative impacts on wildlife.	Nature and extent of impacts on habitat and wildlife as a result of quarry and other facilities construction, operation, and maintenance. Effects of the proposed action on ecosystems includes: (1) effects on native vegetation; (2) effects on protected plants and animals (Forest Service sensitive, threatened or endangered species and habitats).
Riparian Area Impacts	The project will disrupt and have negative impacts on riparian areas within the project area.	Effects on wetland areas or aquatic habitat due to changes in stream flow and sediment loadings from quarry construction, operation, and closure; short and long-term impacts on aquatic habitat or wildlife from spills, leaks, or other failures of quarry facilities.
Landscape impacts	The project will disfigure the landscape.	Effects of the proposed action on visual resources include the following: (1) qualitative evaluation of the federal lands' visual quality and whether the foreseeable uses are consistent with established visual quality objectives of surrounding forest lands; (2) effects to views from travel routes and recreation areas; and (3) effects to scenic resources, including historic structures or other locally recognized desirable aesthetic natural feature.
Air Quality Impacts	Quarrying and associated activities will decrease the air quality, especially in nearby Class I airsheds (e.g., Sycamore Canyon Wilderness Area).	Nature and extent of air quality impacts as a result of quarry and other facilities construction, operation, and maintenance. Effects to sensitive receptors from substantial pollution concentrations. Compliance with local, state and federal regulations regarding air quality.
Public Access Impacts	Access to Hell Canyon (for hunting, hiking, etc.) will be limited at the location of the proposed project.	Effects to recreation and public access. Effects of the potential loss or modification to trails leading into Hell Canyon.
Impacts to Historic Properties	Quarry and cement plant construction will negatively affect local historic resources.	Evaluation of the number and eligibility of sites impacted on federal lands. Effects of a substantial adverse change in the significance of a historical or archaeological resource. Mitigation for eligible historical or archaeological sites.

Additional environmental components to be considered in the EA include geologic hazards, soils, minerals, wilderness resources, wild and scenic rivers, noise, fire hazards, recreation, land use, and a variety of social and economic factors.

1.7.4 Non-significant Public Issues

One issue identified during the public scoping process was determined to be non-significant. The issue dealt with groundwater depletion and the issue statement is: "The proposed cement plant adjacent to the proposed quarry will pump excessive amounts of groundwater and affect water flow in the Verde River". This public issue was determined to be non-significant because it is outside the scope of the proposed action. The proposed cement plant is located on private land and is, therefore, not under the purview of the PNF. Activities on the private land near the Drake Townsite, as well as other past, present, and reasonably foreseeable projects in the area will be addressed as cumulative effects in the EA.

CHAPTER 2 – ALTERNATIVES

Chapter 2 describes alternatives the Forest Service considered in addition to the proposed action. It also compares each alternative.

2.1 Alternative Development Process

The range of alternatives developed and analyzed by the ID Team was driven by the purpose and need underlying the proposed action, and by the significant issues responding to the proposed action. An alternative to the proposed action should (1) reasonably respond to the purpose and need and (2) address one or more key issues. The only exception is the No Action Alternative, which is required by regulation [40 CFR 1502.14(d)].

The ID Team considered three additional alternatives to the proposed action. Following internal review, these three alternatives were eliminated from detailed study for the reasons stated in Section 2.2.3.

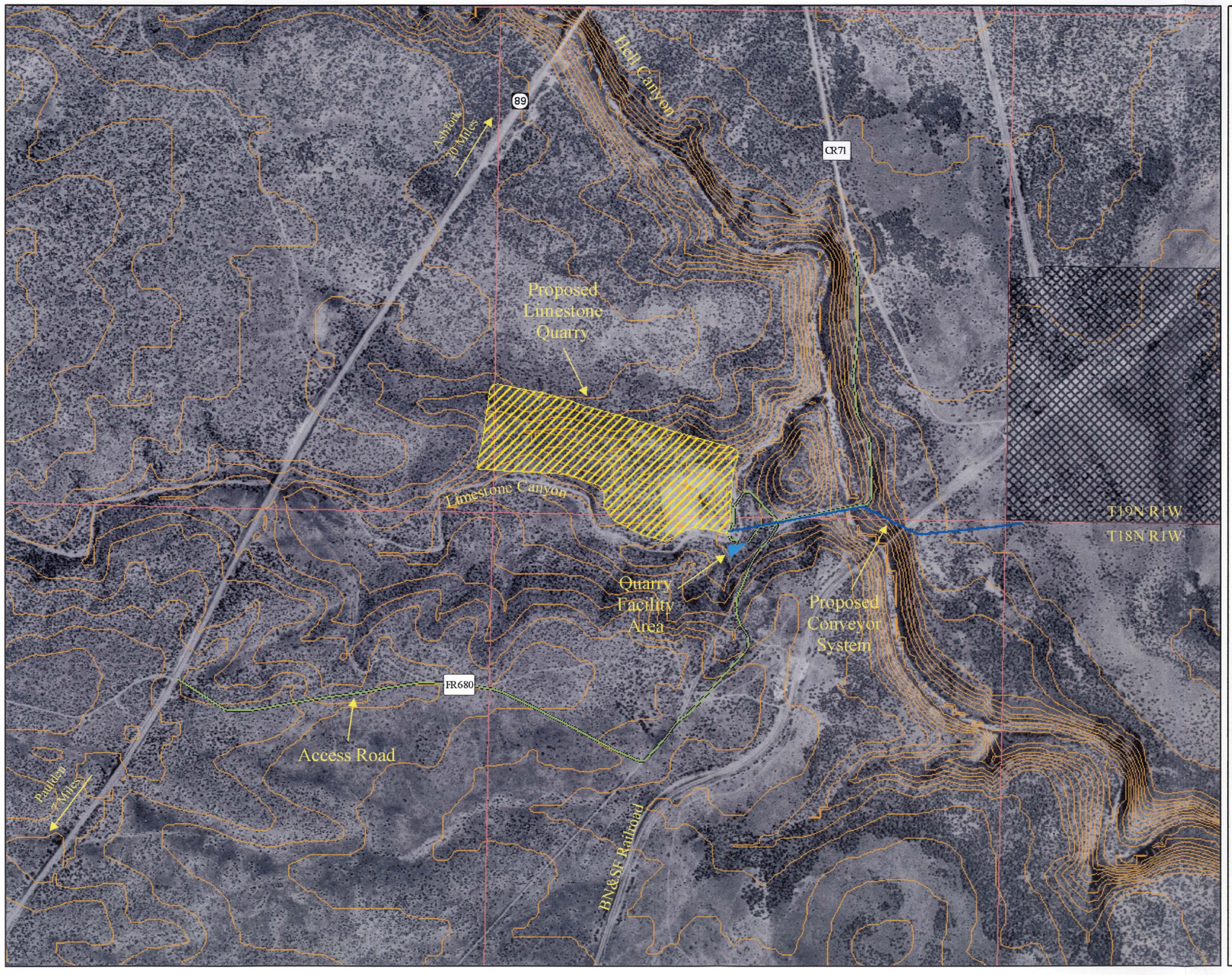
2.2 Description of Alternatives

2.2.1 Alternative A – No-Action

Under Alternative A – No-Action, no activity would be undertaken by the project proponent. Although under the 1872 Mining Laws the Forest Service cannot deny the proponent the right to work their mining claims, this alternative is analyzed in detail to provide a baseline of comparison for the action alternative.

2.2.2 Alternative B – Proposed Action

Under Alternative B – Proposed Action, project components would include the quarry, a quarry facility area where quarry support activities would be located, an overland conveyor, and access roads. These project components would involve approximately 65.5 acres, of which about 60 acres would be new disturbance. In year 10 of this plan, the size of the quarry would be approximately 55.4 acres. Figure 2-1 depicts the proposed project facilities on an aerial photograph of the project area. Each of the primary project elements are described in the remainder of this section.



Drake Cement
Limestone Quarry EA
Major Project Elements

Legend

- Conveyor Alignment
- Access Road
- Quarry Boundary
- Facility Area
- Private Land

0 0.5 Miles

Source: USGS DOQQ, Paulden, AZ, NE Quadrant, 1992
USGS DOQQ, Hell Point, AZ, NW Quadrant, 1992

FIGURE 2-1

TRANSCON ENVIRONMENTAL

Limestone Quarry

The proposed quarry would be located in Sections 31 and 32, T19N, R1W, Gila and Salt River Baseline and Meridian (GSRBM) on unpatented mining claims (Table 2-1).

Table 2-1 Drake Cement Limestone Quarry Mining Claim Information

Claim No.	BLM AMC No.	Legal Description	Book/Page	Recording No.
37	354001	Section 32, T19N, R1W	3773/976	3281414
38	354194	Section 32, T19N, R1W	3791/317	3301903
39	354195	Section 32, T19N, R1W	3791/318	3301904
40	354002	Section 32, T19N, R1W	3773/977	3281415
45	354200	Section 32, T19N, R1W	3791/323	3301909
46	354201	Section 32, T19N, R1W	3791/324	3301910
47	354202	Section 32, T19N, R1W	3791/325	3301911
66	354212	Section 5, T18N, R1W	3791/335	3301921

Note: Book/Page and Recording No. are Yavapai County Recorder's filings

Drake Cement has identified several types and grades of limestone in the proposed quarry that would meet specifications for the various grades of Portland cement. Drake Cement proposes three to four major sequences delineated primarily by phases when topsoil and overburden are removed from the surface to accommodate the progression of mining. During the 10-year proposed plan of operations, the quarry or pit would progress continuously from east to west. The overburden and some of the limestone would be placed in staging areas or mined-out areas within the quarry pit. Once overburden is placed in its final configuration it would be graded and reclaimed within the pit. The full extent of the proposed 55.4 acre quarry is depicted on the POO map in Appendix A, although the final quarry topography would be different because partial backfilling and reclamation activities would be performed with the progression of the pit.

The quarry operation would consist of the following activities during each sequence:

1. Removing vegetation
2. Removing and salvaging topsoil and overburden
3. Drilling and blasting
4. Loading and hauling material to the primary crusher
5. Primary crushing
6. Transporting crushed raw material (limestone) offsite via an overland conveyor system

Except for dust control, these activities represent a dry process and do not consume any water. As proposed, the mining activities would not involve any type of chemical processing.

The following equipment is proposed for the mining activities:

- Impact crusher with receiving hopper, apron feeder, vibrating screen and dust control
- Two rubber-tire front end loaders
- Three heavy duty haul trucks, and one water truck
- One tracked rotary drilling machine
- Two diesel-powered electrical generators

Removing Vegetation

Trees and vegetation would be removed from areas within the proposed quarry in 5 to 20 acre increments in advance of mining operations. Vegetation would be removed by clearing and grubbing those areas with tracked dozers or crawlers. Cleared vegetation would be disposed of at the time of clearing consistent with Forest Service recommendations, which may include burning or chipping.

Removing and Salvage of the Topsoil and Overburden

At commencement of operations, approximately 10-20 acres would be mined on the eastern third of the proposed quarry pit. Approximately three acres of this area have already been mined to a floor elevation of approximately 4,550 feet MSL. The area just to the west and above the existing working faces has only minor quantities of overburden. Since the pit would need to be lowered on this end before backfill or stockpiles can be placed there, the topsoil and any overburden would be excavated and moved into stockpiles.

Once operations require a pushback of the working faces of the pit and the initial phase of the pit has been mined to its floor elevation, another sequence of topsoil and overburden stripping would be undertaken. Previously stockpiled and new topsoil and overburden would then be excavated from the next sequence of the pit. Depending upon material balances of both raw material and overburden, this could include between 5 and 20 acres. Topsoil and overburden would be removed here and either placed on surfaces within the pit that have been completed, or stockpiled or staged for final reclamation in the pit.

The removal of overburden would be performed periodically, perhaps every one to three years, to make additional limestone strata face available for blasting. Removal of the overburden is expected to vary in depth from five to eighty (5-80) feet.

The overburden would be handled by a rubber tire front-end loader and transported by truck to stockpiles or reclamation areas within the footprint of the proposed quarry. Material that meets cement-quality raw material specifications may be processed through a portable screening plant to separate the gravels from the clays. A portion of the undersize clays could be used in the manufacturing process as a source of alumina, silica, and iron; the remainder would be used for topsoil for the reclamation.

Drilling and Blasting

As proposed, two types of drilling would be conducted within the footprint of the proposed 10-year mine: confirmation drilling and blast hole drilling. Confirmation drilling would be conducted in advance of mining to develop more detailed geology of the deposit and would use reverse circulation or core drilling. No blasting is associated with this activity. Blast hole drilling would consist of an array of holes drilled to place explosives and blast the limestone. Drilling and blasting would be conducted during normal working hours. In undeveloped areas, site preparation is required to get the drill into position before drilling commences. This requires a dozer or loader to prepare a road or level pad on which to set the drill rig. The drill patterns consisting of the amount of holes, spacing and number of rows to produce a desired tonnage after detonation would be designed to each specific blast. The geology of the material to be broken is the most important factor in determining the overall blast design. Borehole diameter, hole spacing, and burden would change as varied conditions such as stratification or thick basalt are encountered. Blasting would be conducted approximately once per week or four times per month.

Loading and Hauling

Blasted limestone rubble would be loaded into up to three heavy duty haul trucks using one or two a front-end loaders. The haul trucks would then transport the limestone to the primary crusher located on the southeast corner of the quarry. Limestone loading operations would normally occur 48-50 hours per week.

Crushing

Primary crushing would be done with an impact crusher, or similar equipment. The crusher would initially be located in the southeast corner of the quarry. The crusher includes a receiving hopper, apron feeder and vibrating screen placed on a concrete foundation in the pit. The limestone material would be crushed to about three inches in size, and discharged directly onto the overland conveyor belt for transport offsite (conveyor facilities are described below). Primary crushing operations would normally occur 48 to 50 hours per week.

Quarry Facility Area

Drake Cement plans to construct a quarry operation facility area adjacent to the proposed quarry to support quarrying activities. The quarry facility area would be constructed in a small, partially disturbed area on the south side of Limestone Canyon (Figure 2-2). The quarry facility area would be approximately 0.5 acres.

Figure 2-2. Quarry facility area. View to the southwest.

Drake Cement proposes the facilities area at this location because it is located outside of the quarry area where hauling and crushing activities would be conducted, thereby reducing safety concerns associated with general vehicular access, maintenance and administrative activities.

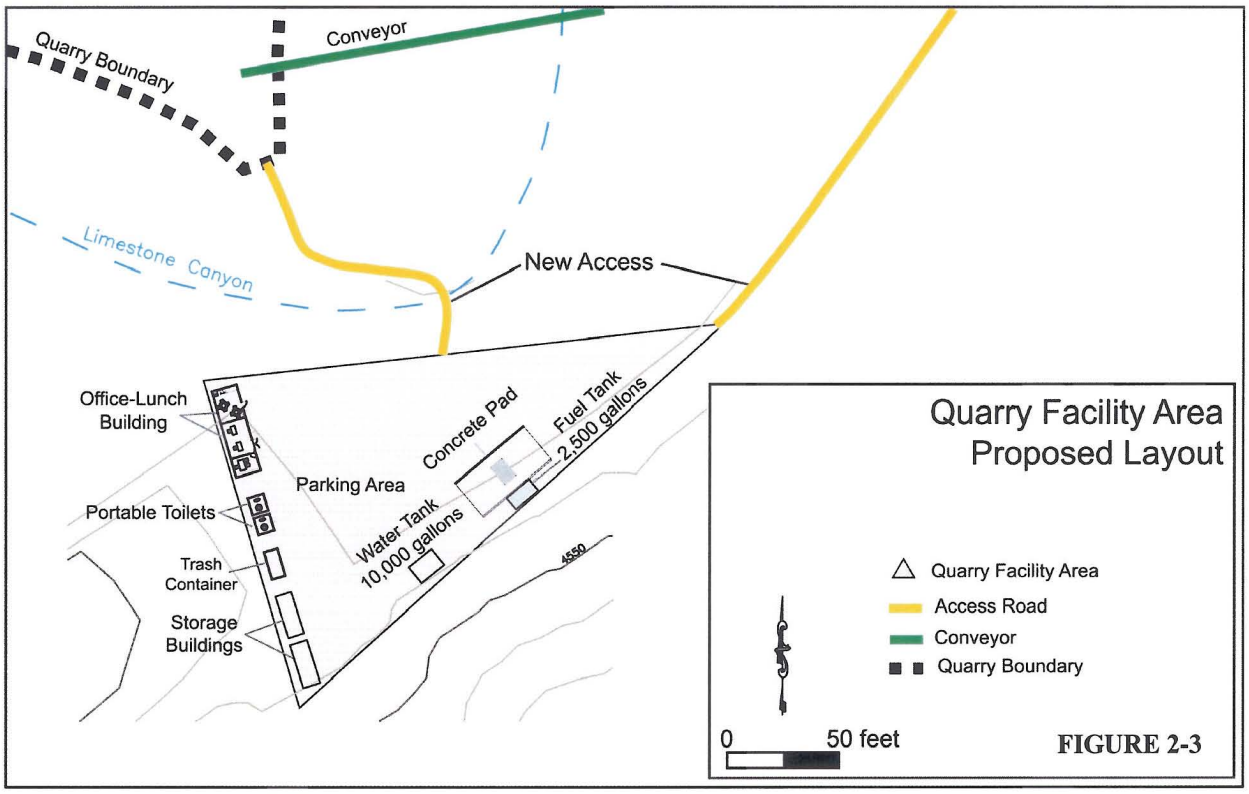


FIGURE 2-3

As depicted in Figure 2-3, the facilities area would include:

- A designated parking area for up to 12 vehicles;
- A small portable (modular) office-lunch building on blocks;
- Up to two portable storage buildings;
- Two portable toilets;
- One double-walled diesel fuel tank (approximately 2,500 gallons);
- A water storage tank;
- A concrete pad approximately 20 feet by 40 feet to service and fuel equipment; and
- Miscellaneous equipment and materials including waste receptacles, waste oil storage containers, and other facilities.

All mining equipment would be operated and stored within the pit areas, except when being fueled or serviced, which would be conducted at the quarry facility area.

The fuel tank would be an aboveground, fire-resistant (meeting requirements of the Uniform Fire Code), double-walled storage tank with built-in secondary containment and interstitial monitoring. The tank would be secured and locked during times when Drake Cement personnel are not on site. Placards would identify contents and list emergency procedures and relevant contact information. Fueling and equipment servicing would be performed on a service pad, located immediately adjacent to the fuel tank. The pad would consist of 12 to 14 feet of un-reinforced concrete with curbs on two sides and a spill containment sump.

Conveyor System

The three-inch minus crushed rock would exit the crusher at the quarry site and be transferred onto an overland conveyor system with a 36-inch wide belt. The conveyor system would consist of three separate conveyors (referred to as the First Conveyor, Second Conveyor and Third Conveyor). The system would have three transfer points (including the end transfer) and dust collection at each transfer point. In total, the proposed conveyor system is approximately 3,500 feet (0.66-mile) long.

The First Conveyor would extend approximately 1,770 feet from the primary crusher in the quarry, over Limestone Canyon on a suspended structure, up the hill between the quarry and old Highway 89, then proceed along the current footprint of old Highway 89, then across Hell Canyon bridge to approximately 20 feet past the east end of the bridge (Figure 2-4).

Figure 2-4. First Conveyor alignment. View to the east toward Hell Canyon Bridge.

As designed, this conveyor segment would span Limestone Canyon and would not require any fill or structures in the channel. Concrete footings would be constructed on both sides of the canyon to support the steel framework of the conveyor. Vehicular access for conveyor maintenance and emergency ingress and egress would be on the existing bedrock base of the channel bottom.

The first conveyor would range from approximately ten feet above ground over Limestone Canyon to three feet above ground going up the hill from Limestone Canyon. A 300-foot long segment of the First Conveyor corridor would be placed in an excavated trench to optimize the grade up the hill on the west side and then back down the hill towards the Hell Canyon Bridge. This 300-foot long trench of the First Conveyor would be excavated to a maximum depth of approximately 15 to 20 feet at the top of the hill. The conveyor would be approximately five feet above ground at the bridge. Appendix A contains a map from the POO that depicts the alignment and cross-sections of the proposed conveyor, including the area of excavation. The First Conveyor would transfer to the Second Conveyor at a point on the east side of the bridge. As proposed, the transfer point, including the dust collector, is approximately 15 to 20 feet above ground.

The Second Conveyor would extend approximately 600 feet southeast upslope along the side of Hell Canyon and under the north end of the Burlington Northern Santa Fe Railroad Bridge (Figure 2-5) to a point approximately 150 feet south of the railroad, where it would transfer to the Third Conveyor. As proposed, the Second Conveyor does not have a roadway for maintenance but would utilize pedestrian catwalks attached to the conveyor framework. The width of this corridor would be approximately 12 feet. Concrete footings would support the conveyor framework.

From the transfer point from the Second Conveyor, the Third Conveyor would extend approximately 1,130 feet north-northeast to its terminus. The last 200 feet of this conveyor would incline to approximately 70 feet in height as it exits National Forest lands.

Figure 2-5. Approximate proposed conveyor alignment (shown in gray) across Hell Canyon Bridge, up the hillside and under the railroad trestle. View to the southeast.

The 36-inch wide conveyor belt would be connected to a steel framework approximately six to eight feet wide, including structures and walkways. The conveyor structure would be suspended above the ground by vertical and diagonal steel supports spaced approximately 15-20 feet apart. Each support point along the conveyor would be anchored into two concrete footings approximately two feet by two feet. The depth of the footings is dependent upon structural and geotechnical characteristics at any given point along the conveyor. For the portion of the First Conveyor that crosses the old highway bridge, the steel supports would be set onto steel plates, thereby eliminating the need to attach directly to the bridge. The conveyors require a corridor about 12-20 feet in width for the conveyor steel framework, including walkways. The width of the conveyor structure would be wider on hillsides where footings may be set out from the conveyor diagonally to meet structural requirements. Surface disturbance also includes the 10-12 foot wide access road parallel to and on the north side of the First Conveyor and alongside the Third Conveyor. The Second Conveyor would not have an access road because of the steep terrain up the side of Hell Canyon. Including construction, grading, steel support structures, walkways, concrete footings, activities and access, a corridor of up to 100 feet wide along the First and Third Conveyors has been assumed for calculating surface disturbance. The actual final footprint of the conveyor and access roads would be approximately 20-40 feet wide once construction is complete. The actual footprint of the Second Conveyor is assumed to be less (approximately 15-20 feet) because it is on the hillside and no access road is planned.

Access Roads

Drake Cement plans to use existing roads for primary and emergency access to the quarry and quarry facility area. Locations of roads and gates proposed for improvement or construction are depicted on Figure 2-6. A project-level roads analysis for the proposed project was conducted in conjunction with the NEPA analysis. A summary of the roads analysis is available for public review. The results of the roads analysis will be incorporated into the EA.

Primary Access

Primary access to the quarry would be from the west off State Route 89 via FR 680 and then on the old Highway 89 (also shown as FR 9711F). Near the quarry, a new access road would be constructed to enable access to the quarry facility area. Additionally, smaller maintenance/access roads (10-12 feet wide) would be constructed alongside certain segments of the proposed conveyor and would be used for maintenance and emergency access to the site. In total, approximately 1.4 miles of existing access roads would be improved and 0.2 mile of new roads would be constructed for this project.

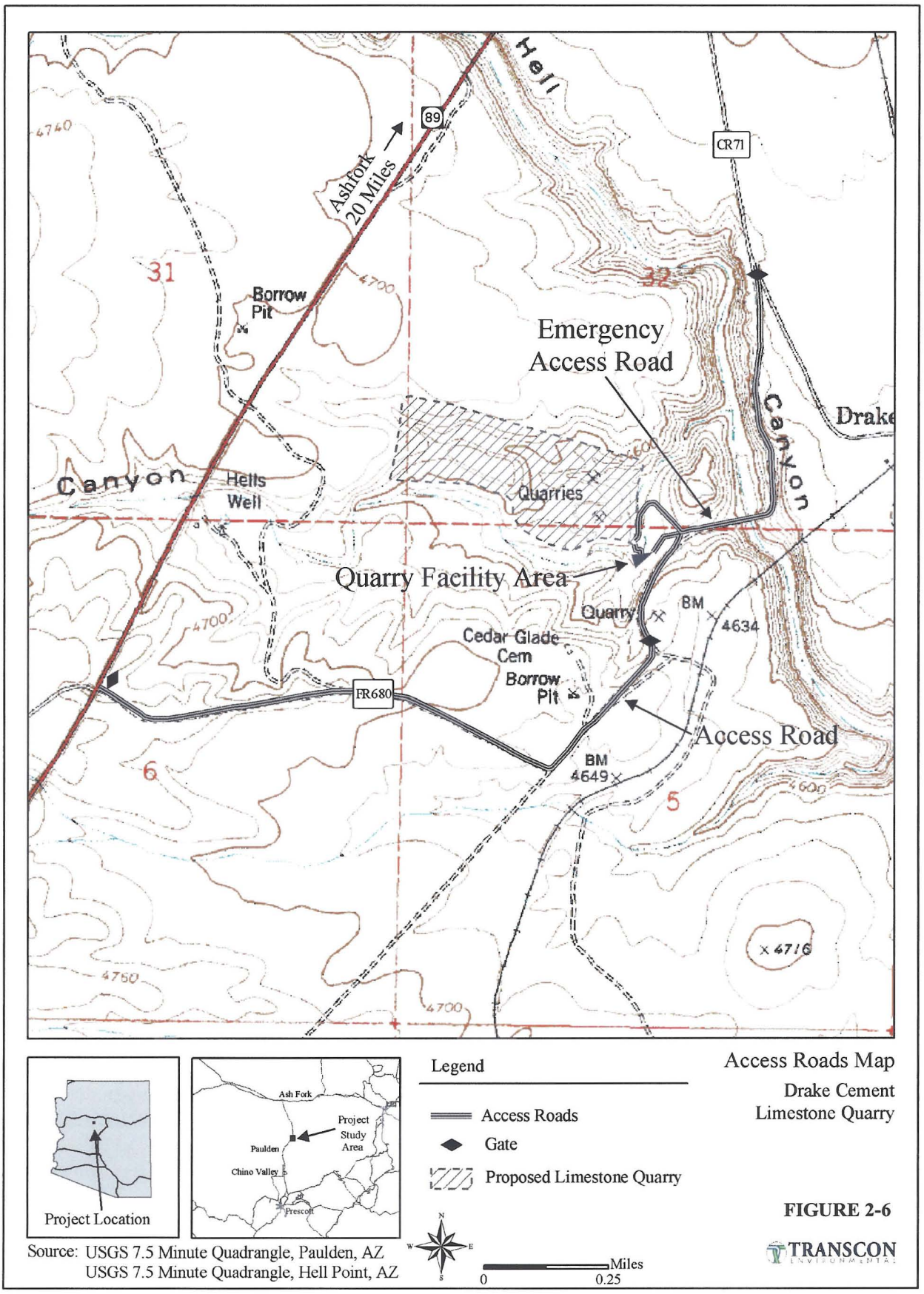
As old Highway 89 approaches the quarry area, a new spur road would be constructed on the west side of old Highway 89 down toward the quarry facility area and the road crossing proposed for Limestone Canyon. The current travel width of FR 680 and FR 9711F is approximately 12 to 15 feet wide. Drake Cement proposes to widen these roads to an 18 to 20 foot travel width and install drainage (road shoulders and water bars), turn-outs and widening on curves per Forest Service road specifications. Old Highway 89, like FR 680 and FR 9711F, would need to be widened to an 18 to 20 foot travel width.

One gate would be installed at the junction of FR 680 and State Route 89 and would remain closed and locked the majority of time. Regular ingress and egress would continue over the existing cattle guard. The new gate would be installed just adjacent to the cattle guard to accommodate larger, heavier vehicles at times when mining equipment or supplies are being delivered to or from the site. A second gate would be installed on the access road near the quarry, approximately 1,500 feet south of the quarry on old Highway 89 to control access to the project area.

This gate would be a 24 foot-wide double gate (each gate wing is 12 feet wide). Under normal usage, one side of the gate would be open during quarry operations. The other side of the gate would be opened periodically to accommodate the occasional transport of mining equipment and supplies by larger vehicles. This gate would be locked during non-operating hours. These roads would be maintained periodically as needed. The access roads would be regularly graded by Drake Cement to maintain the drainage on the travel surface and shoulders.

Maintenance and Emergency Access Roads

Drake Cement also proposes to construct a 10 to 12 foot wide service maintenance road paralleling the First Conveyor and the Third Conveyor. The Second Conveyor is located within Hell Canyon and would not have a service maintenance road due to steep terrain. The First Conveyor road would link to the segment of old Highway 89, which proceeds from the east end of the Hell Canyon Bridge to the intersection of County Road (CR) 71 (approximately 1,315 feet from the bridge to the intersection). This route would be used both for conveyor maintenance and secondary emergency access, but not for ingress and egress to the quarry. The old Highway 89 segment is currently blocked with an earth berm and trench at the top of the hill; the proposed project would eliminate these impediments and a locking gate would be installed at this location.



Source: USGS 7.5 Minute Quadrangle, Paulden, AZ
USGS 7.5 Minute Quadrangle, Hell Point, AZ

Limestone Canyon Crossing

Drake Cement proposes to access the quarry from the quarry operation facility area via a low-water crossing in Limestone Canyon (Figure 2-7). Portions of this drainage are scoured to bedrock, with only minor amounts of streambed sediment. To provide an even travel surface across the drainage, a shallow layer of coarse and durable native limestone would be placed at the stream channel bottom. This layer is expected to be about 6 to 18 inches deep and would allow stream flow to cross through or over the travel surface of the crossing. This coarse material, with a minimum of fines would be used to reduce potential sediment loads. The proposed crossing would also entail pulling back material on the banks of the channel to provide properly sloped approaches on each side. The crossing would be approximately 20-feet wide and constructed at-grade. The base would extend horizontally on the approaches to a point above the high water for a 25-year design flood frequency.

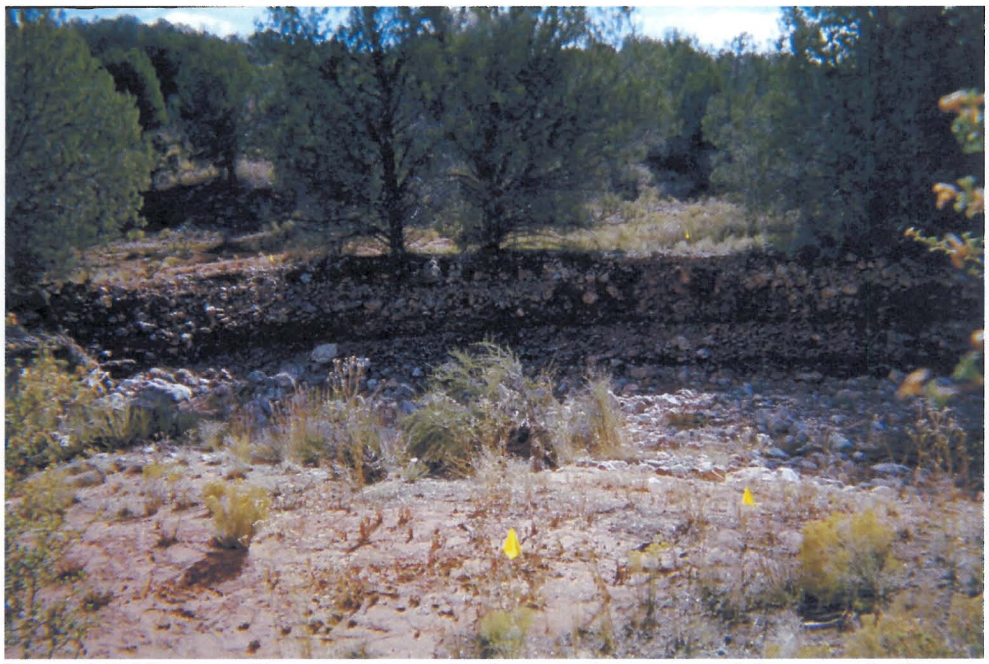


Figure 2-7. Limestone Canyon road crossing between the quarry and the quarry facility area (in background). The yellow flagging indicates roads alignment. View to the south.

General Reclamation Requirements

Reclamation applies not only to the activities that would be undertaken following the completion of mining activities but also to the measures undertaken on an interim basis. Interim reclamation would be implemented to reduce the potential for erosion by stabilizing road cuts and stockpiles and other disturbances that result from exploration, construction, and operational activities. Interim reclamation measures would include seeding, fertilizing, and mulching in accordance with the Forest Service BMPs included in the *Soil and Water Conservation Handbook* (Forest Service, 1996b).

Reclamation would be performed whenever the project proponent determines that an area is no longer necessary for mining. Once quarry operations are complete, which may include additional time beyond the 10-year mine plan, the remaining reclamation would be performed over a two- to five-year period using on-site personnel and equipment, and contractors.

Final reclamation would begin at the final stages of mining operations. Facilities not necessary for the reclamation process, including buildings, crushers, conveyors, and storage tanks, would be decommissioned and either salvaged or demolished. These materials would be removed from the site. After facilities were removed, concrete pads would be broken into pieces and covered with fill material. Compacted areas (excluding the buried concrete pads) would be ripped, and all areas would be graded to blend with the surrounding natural topography. Roads would remain in place as long as required to conduct monitoring activities. Stream crossings would be returned to their original condition.

As proposed by the project proponent in the POO, reclamation measures would include:

- Removal of mining equipment, materials, and structures;
- Placement of low earth berms around the quarry to serve as drainage control to prevent storm water run-on from adjacent undisturbed areas on the north and west side of the quarry, diverting these flows away from quarry disturbances and into natural drainage ways;
- Constructing the final (upper) vertical quarry benches on the north and west perimeter of the quarry to a 2.5:1 slope during excavation; then ripping, contouring and seeding those concurrent with final stages of the 10-year POO;
- Placement of unusable basalt and alluvium from later stages of the 10-year quarry development into the mined-out portions of the pit;
- Grading of slopes on overburden placements (in the quarry) to reduce slopes to no steeper than 2.5:1;
- Placement of native surface soils or alluvium on horizontal pit benches and backfilled portions of the pit to facilitate long term revegetation. Materials would be placed during bench construction, so those areas can be safely accessed prior to excavation of the quarry below the benches. Final cover materials would be placed on backfilled areas when those areas have been constructed to their final configuration;
- Grading and contouring of the disturbed bench areas to provide a stable, free-draining surface for revegetation;
- Installation of settlement basins within the quarry boundaries to prevent storm water run-off from flowing out of the quarry;
- Placement of topsoil or other suitable growth medium on benches and backfill areas;
- Scarifying and seeding of benches and backfill areas;
- Appropriate monitoring and maintenance of revegetation and drainage controls.

Overburden

It is estimated that there would be approximately 220,000 loose cubic yards of overburden moved during the10-year mine plan. The actual quantity of overburden could vary depending upon the actual quality of raw material suitable for use in cement production and blending requirements for different grades. However, the capacity of the pit exceeds the estimated amount of overburden which would be produced. As depicted in the POO, the post-reclamation topography maps show that the quantity of material estimated would be accommodated in the pit and no overburden would be placed outside of the quarry footprint.

Quarry Highwalls

As proposed, quarry walls would be benched with 50-foot-wide benches and 33-foot bench heights. Bench slopes would be 70 degrees. At end of the ten-year mine plan, the pit would have four benches on the west wall, and two to three benches on the south and north walls. The east side of the pit would eventually be partially backfilled, and, depending on the amount of backfill, could result in one wall. If the quantity of overburden increases, backfill on this end of the pit could be brought up to the elevation of the edge of the pit.

Quarry Benches

Once the pit benches have been excavated, soil or alluvium would be placed on them to facilitate revegetation. Reclaiming each subsequent bench while the pit is being excavated would allow them to be worked on safely. Once the subsequent bench is cut, reclamation activities would become impractical and unsafe. After placement of soil or other suitable growth medium, the benches would be seeded.

Soil Preparation

Once areas have been graded and contoured, each area would be ripped to provide a rough and furrowed surface to hold seed and moisture. In the arid west, rough surfaces on slopes enhance water capture, infiltration and retention of meteoric water. Seeds of different species of plants have different ideal planting depths. As precipitation strikes the furrowed surface or snowfall melts, the soil material collapses on top of the seed.

Seeding

When reclamation is conducted, seed mixes would be adjusted in consultation with Forest Service personnel and based upon availability. Local seed sources would be utilized where possible. Otherwise seed would be purchased from commercial seed suppliers. Most seeding would be accomplished with broadcast seeding. Seeding would be conducted during the fall months, to maximize utilization of winter rain and cool spring season. Spring seeding may also be conducted if fall seeding is not possible. Certified weed-free straw and/or hydromulch would be applied in conjunction with the seeding effort.

The project area would be inspected the third growing season following initial seeding to determine the success of vegetation establishment. Vegetation establishment would be deemed successful if perennial vegetation is providing adequate groundcover to stabilize soils and dissipate rain impact. If not successful, the area would need to be reseeded following the prescription for the initial seeding.

2.2.3 Alternatives Considered but Eliminated from Detailed Study

As per 40 CFR 1502.14(a), the following alternatives were considered but eliminated from detailed study:

Project Location Alternative

Implementation of this alternative would require the relocation of the proposed limestone quarry and associated facilities to another location. The successful development of the proposed project at an alternate location would depend on a number of geologic, environmental, and economic factors, primarily the existence of marketable quantities of high-quality limestone. Therefore, options for suitable offsite alternative sites would be limited. Other factors would also affect the feasibility of quarry development on a particular site including the availability of land with a willing seller or lessor, the nature of the mineral deposit, the method of extraction, depth of overburden, and the distance between the quarry and the storage or processing area.

The objective of the proposed project is to provide limestone and cement products to a regional consumption area. The distance to these markets is important in determining the feasibility of the quarry and associated facilities. Other potential limestone quarry locations have not been identified in close proximity to the Chino Valley area. However, areas of potential limestone deposits have been identified throughout northern Arizona. The quality of limestone reserves found in the region, when compared to the quality of the limestone found on the project site, has not been determined.

Comparison with the Proposed Project

The proposed project has been designed to minimize the area of disturbance and minimize environmental impacts as described in this document. The development of the proposed project at an alternate site would result in as yet undetermined environmental impacts. These potential impacts would likely include those described above and would therefore be similar to those identified for the proposed site as described in this document.

Consistency with Project Objectives

The degree to which an alternative location could meet the project objectives would depend upon the specific site, the available limestone resources, access, and other considerations. This alternative was eliminated from further consideration because the claims are filed under the 1872 Mining Law and the Forest Service does not have the authority to re-locate mining claims. In addition, no other sites in the region would meet the basic project objective of cost-effective mining and processing high quality limestone to feasibly serve the region. Drake Cement has determined the availability of high-quality limestone at the quarry site and has valid mining claims for the area. Furthermore, the quarry location is located within one mile of Drake Cement's private land, upon which they could develop a facility to process the limestone.

Reduced Project Area Alternative

For purposes of comparative analysis, it is assumed that a Reduced Project Area Alternative would reduce the area of active mining under the proposed project by 50 percent. The proposed project would result in the mining of approximately 55 acres of forest land over a period of 10 years. Under the Reduced Project Area Alternative, this acreage would be reduced to approximately 28 acres using the same mining and processing methods and rates. The life of the quarry would also be reduced by approximately 50 percent to a period of five years since the mining and processing methods and rates would not change under this alternative.

Comparison with the Proposed Project

The proposed project would disturb approximately 55.4 acres in the quarry area and another 10.1 acres associated with the quarry operation facility area, access roads, and conveyor system. The Reduced Project Area Alternative would result in the quarry size being reduced to approximately 28 acres, and all other elements remaining the same for a total of about 38.1 acres. Potential environmental impacts would be reduced as a result of the reduction in quarry size, but all other project elements and related impacts would be the same.

Consistency with Project Objectives

The development of the Reduced Processing Rate Alternative would achieve only a portion of the project objectives. The Reduced Project Area Alternative would leave approximately 50 percent known limestone reserves untapped thereby reducing the economic feasibility of the proposed mining project. This alternative artificially restricts the mining claim operator's ability to develop their mining claim in the manner described in the POO, and as allowed in the Mining Law of 1872. As a result, the alternative was dropped from further consideration.

Raw Material Conveyance Alternative

Under this alternative, the project proponent would transport the crushed limestone materials to their private land near Drake by truck, rather than constructing the conveyor system. Raw materials would be transported from the quarry along the improved Forest roads (FR 9711F and FR 680) about 1.8 miles and onto State Route 89. The trucks would the travel north along State Route 89 for a distance of about 2.6 miles, exiting at CR 71. The trucks would then travel southeast on CR 71 for a distance of about 2.1 miles to the private land. The trucks would unload the crushed limestone and return to the quarry using the same route. In total, the length of this travel route is about 6.5 miles each direction.

Comparison with the Proposed Project

The proposed conveyor system would extend across approximately 1.8 miles of Forest Service land. Portions of this alignment are already disturbed or would be disturbed by some other element of the proposed project. Approximately 2.6 acres of land would be disturbed as a result of conveyor construction. In comparison, the truck conveyance method would utilize existing Forest Service, state and county roads, or roads proposed to be improved as a result of some other project element. A new crossing of Limestone Canyon would be required that would allow large trucks access to the quarry.

Under this alternative, the conveyor system would not be needed, and would therefore not be constructed. Potential impacts associated with the conveyor would be reduced or eliminated. Ground disturbance from construction, operation, or maintenance activities along this alignment would not occur and potential cultural and visual impacts resulting from project implementation would be reduced. By transporting the raw materials by truck, some environmental impacts may be greater than that for the proposed project due to the increased traffic and safety issues on National Forest lands and on State Route 89. Other potential impacts could result from truck maintenance activities, truck refueling, truck parking when not in use, and additional dust generation from travel along non-paved roads.

Consistency with the Project Objectives

Implementation of the Raw Material Conveyance Alternative would generally achieve the project's objectives, although project costs primarily associated with fuel use and vehicle acquisition and upkeep would substantially increase, thereby reducing the economic feasibility of the proposed mining project. This alternative restricts the mining claim operator's ability to develop their mining claim in the manner described in the POO, and as allowed in the Mining Law of 1872. As a result, the alternative was dropped from further consideration.

2.3 Mitigation

The CEQ defines *mitigation* as avoidance, minimization, and reduction of impacts and compensation for unavoidable impacts (40 CFR 1508.20). Regulations defined in 36 CFR 228 subpart A require the prevention of undue and unnecessary environmental impacts during mining and related operations. A variety of environmental protection measures have been incorporated into the POO to meet applicable standards including those of regulatory agencies such as the Arizona Department of Environmental Quality (ADEQ) that have review and approval authority over the proposed Project. Table 2-2 presents a summary of mitigation and control measures by resource for the proposed action alternative. Unless noted otherwise in the decision document, these mitigation measures would become mandatory if the responsible official selects the proposed action alternative for implementation.

Table 2-2 Summary of Mitigation Measures		
Environmental Factors	**Mitigation and Control Measure**	**Authority**
Visual resources (blocked vistas, building colors and heights)	The conveyor would be installed as low to the ground as possible for most of its length and be painted with neutral earth tone colors to blend with the surrounding landscape. Land forming and grading associated with reclamation activities should include topographical variation and grading similar to the existing landscape. Revegetation should include the addition of juniper and pinion pine trees.	POO and Forest Service Recommendations
Heritage resources (archaeological, historical, architectural)	Minimize or avoid adverse impacts on significant archaeological sites to the extent practicable. Mitigation would include site treatment and data recovery, as needed.	Forest Service and Arizona State Historic Preservation Office
Water resources (water quality, streamflow, floodplains, wetlands, groundwater recharge)	Maintain drainage patterns, water quality, and water quantity to the extent possible; develop Best Management Practices and Storm Water Pollution Prevention Plans; develop Spill Prevention, Containment, and Countermeasures Plan; groundwater protection measures include storm water controls, tank containment systems, and other features and operations designed to meet Aquifer Protection Plan requirements.	ADEQ – AZPDES permits for storm water discharges; POO; US Army Corps of Engineers - 404 Permit; State of Arizona's Aquifer Protection Plan Program
Air quality	The Project would meet applicable state and federal air quality standards. These standards prescribe emission limits, operational practices and administrative requirements. The purpose of these standards is to ensure that emissions are sufficiently reduced so as to prevent any exceedance of health-based, maximum allowable ambient concentrations. Particulate matter would be controlled in the quarry by using water spray. Dust collectors would be used at the primary crusher, and at conveyor transfer points.	POO; ADEQ Draft Air Quality Permit
Vegetation (forest, rangeland, other major vegetation types, threatened or endangered plants, unique ecosystems, plant diversity)	Use plants native to the area and originating near the project area for reclamation to the extent possible. Revegetate and reclaim disturbed areas, including the quarry floor and benches.	Forest Service Recommendations; POO
Hazardous Substances Storage, Handling, and Transport	Fuel and other petroleum products used in the operations would be stored in above-ground tanks. Fuel storage and fueling activities and lubricants would be contained on a concrete pad with spill containment. None of this material would be left or disposed of onsite.	POO

Table 2-2 Summary of Mitigation Measures		
Environmental Factors	**Mitigation and Control Measure**	**Authority**
Hazardous Substances Storage, Handling, and Transport (continued)	No explosives would be stored on the Forest Service lands. The explosives for each shot would be delivered down hole and detonated the same day. All materials needed for the blast on the scheduled day of detonation would be delivered to the site on the day of blasting and all unused explosives would be removed from Forest Service lands after the detonation. All safety procedures for drilling and blasting would follow federal and state regulations as well as all environmental requirements. MSDS information for all explosives would be filed and kept on site for review.	
Roads/Access	Gates would be installed at the junction of FR 680 and FR 9711F and the junction of the old Highway 89 alignment and County Road 71 to control access to the quarry. A third gate would be installed adjacent to the current junction of FR 680 and SR 89. This gate would not control access and would only be used to facilitate the ingress and egress of equipment too large to pass along the existing route. FR 680, and the segment of old Highway 89 alignment leading to the quarry would be improved from a maintenance level 2 (high clearance vehicle road) to a maintenance level 4 (moderate degree of user comfort) road.	Forest Service Recommendations as part of the Roads Analysis

2.4 Comparison of Alternatives

2.4.1 Forest Plan Consistency

The 1986 Prescott National Forest Land and Resource Management Plan, as amended (Forest Plan), establishes goals and objectives for multiple-use and sustained-yield management of renewable resources without impairment of the productivity of the land. As stated in the Forest Plan, management direction for minerals is to "Administer the mineral laws and regulations to minimize surface resource impacts while supporting sound energy and minerals exploration and development".

The Forest Plan contains Forest-wide Standards and Guidelines for special-use management, which applies to authorizations such as the proposed action. The mission, goals, and objectives for the PNF are attained through applying groups of management activities to specific units of land. Groups of management activities are called "prescriptions" and the land units are called "management areas".

The project area lies within Management Area 2, Woodland. The predominant vegetation in the Management Area is pinyon/juniper and juniper with some inclusions of chaparral. In this Management Area, the emphasis is on wildlife management and on improving and maintaining watershed condition. Range management is focused on maintaining current range conditions. Dispersed recreation is managed to maintain environmental quality and reduce conflicts between users. Visual Quality Objectives (VQO) in this Management Area are primarily Modification and Partial Retention (Forest Plan 1986).

Consistency with the management directives for Management Area 2 would be required for implementation of the proposed action. Current analysis indicates that management guidelines defined in the Forest Plan for Management Area 2 can be met in all areas with exception of visual quality. The PNF has determined that the current VQO ratings for this portion of the Forest are generalized over a larger area and not specific to the project area. As a result, the Forest is expected to prepare a Forest Plan Amendment to assign the appropriate VQO classification to the project area if the Proposed Action Alternative is chosen.

2.4.2 Response of Alternatives to Significant Public Issues

Table 2-3 provides a summary of potential impacts of the Proposed Action Alternative and the No-Action alternative by the significant issues identified during the public scoping process.

Table 2-3 Summary of Potential Impacts of Each Alternative by Significant Issue

Issue: **The limestone quarry will negatively impact the watersheds of Limestone Canyon, Hell Canyon, and the Verde River, especially stream flow, water quality, plant and animal species, and human culture.**	
Alternative A No-Action	No change from current conditions.
Alternative B Proposed Action	The proposed conveyor system and associated access roads would cross Limestone Canyon and Hell Canyon. In addition, the quarry operation Facility area would be located immediately adjacent to Limestone Canyon and primary access between the quarry facility area and the quarry would require a crossing of Limestone Canyon. As proposed, there would be minimal effects on drainage pattern of the area. Alteration of the banks of Limestone Canyon to allow the at-grade crossing between the quarry facility area and the quarry could result in increased erosion or siltation. This at-grade crossing would not require filling any portion of the wash. Surface run-off as a result of project implementation would be minimal. No runoff into either Limestone Canyon or Hell Canyon is expected from quarry; construction of the new access road and quarry facility area would increase runoff into Limestone Canyon. Project facilities would comply with ADEQ, EPA, and ADWR regulations and Forest Service requirements regarding erosion control and storm water management. Approximately 60 acres of vegetation and potential habitat would be removed by the proposed project, resulting in potential impacts to wildlife. Wildlife would be expected to move from the area and avoid project features. People do not reside within or in the immediate vicinity of the project area. Human use of the area is minimal and is primarily associated with authorized and unauthorized recreational activities. The project would not affect the "outstandingly remarkable values" of the portion of the Verde River eligible for Wild and Scenic River designation.
Issue: **Increased vehicle traffic (especially truck traffic) on State Route 89 due to quarry operations would cause traffic congestion and safety concerns.**	
Alternative A No-Action	No change from current conditions.
Alternative B Proposed Action	Truck traffic on SR 89 would not increase as a result of quarry operations under this alternative. No hauling of extracted quarry materials and subsequent increase in traffic will result because materials will be transported via the conveyor system. Daily access to the quarry area by employees would incrementally increase traffic levels in the project area, although total traffic to the project area may decrease as a result of eliminating non-authorized activities. Cumulative traffic levels and safety impacts on SR 89 may result due to increased truck traffic associated with the planned cement plant near Drake.

Table 2-3 Summary of Potential Impacts of Each Alternative by Significant Issue	
Issue: **The project will disrupt and have negative impacts on wildlife.**	
Alternative A No-Action	Wildlife in the project area would continue to be minimally affected by public use of the project area.
Alternative B Proposed Action	Approximately 60 acres of vegetation and potential habitat would be removed by the proposed project, resulting in potential impacts to wildlife. Wildlife would be expected to move from the area and avoid project features. No direct effects to Forest Service sensitive, threatened or endangered wildlife species, or critical habitats would be affected by project implementation. Indirect impacts to threatened and endangered fish species in the Verde River may result from use of groundwater for this and other actions. Decreased water flow in the Verde River resulting from groundwater drawdown is not expected to be measurable, however, and impacts to threatened and endangered fish species would not be expected.
Issue: **The project will disrupt and have negative impacts on riparian areas within the project area.**	
Alternative A No-Action	No change from current conditions.
Alternative B Proposed Action	The project would not result in impacts to wetland areas or aquatic habitat, because riparian areas were not identified within the project area. Potential changes to stream flow and sediment loadings in Limestone Canyon from the quarry, quarry facility area, or other project elements would be minimized because project facilities would comply with ADEQ, EPA, and ADWR regulations and Forest Service requirements regarding erosion control and storm water management.
Issue: **The project will disfigure the landscape.**	
Alternative A No-Action	No change to current conditions. Disturbance associated with the existing quarry would remain.
Alternative B Proposed Action	The proposed project would disturb approximately 65.5 acres and would permanently alter the existing topography in the proposed quarry and along a small section on the conveyor alignment. The proposed conveyor system would be an added feature on the landscape for the life of the project. Impacts to visual resources from the disfigurement of the landscape are generally localized due to topographical and vegetation screening associated with the project area. There are no residences or designated recreational areas within or near the proposed project. Views from SR 89 and CR 71 to the quarry area are generally momentary in nature and constrained by topography and vegetation. The project elements would not be consistent with the Forest Service Visual Quality Objectives for the area and would therefore require a non-significant Forest Plan Amendment (changing the existing Visual Management System classification for about 66 acres from Partial Retention to Modification). The project would not be expected to substantially impact scenic resources, including historic structures or locally recognized desirable aesthetic natural features, because views to the project area are limited and the project area is a small portion of the entire viewshed.
Issue: **Quarrying and associated activities will decrease the air quality, especially in nearby Class I airsheds (e.g., Sycamore Canyon Wilderness Area).**	
Alternative A No-Action	No change from current conditions.

Table 2-3 Summary of Potential Impacts of Each Alternative by Significant Issue	
Alternative B Proposed Action	Emission sources of particulate matter associated with the operation of the limestone quarry include drilling, blasting, material handling, and crushing. Fugitive emissions would also result for the use of vehicles in the quarry. Emissions would also result from the conveyor systems, especially at the transfer points. PM_{10} generation from these activities would be reduced through the use of water spray and dust collectors; therefore, the dust generated from these activities would not affect sensitive receptors. The project would comply with local, state and federal regulations regarding air quality.
Issue: **Access to Hell Canyon (for hunting, hiking, etc.) will be limited at the location of the proposed project.**	
Alternative A No-Action	No change from current conditions.
Alternative B Proposed Action	Under the proposed action, current unauthorized access to Hell Canyon at this location would be eliminated. Although this access point would be closed to the public, other access to Hell Canyon exists. Elimination of access to this area does not affect applicable Forest plans, policies, or regulations regarding recreation and public access.
Issue: **Quarry and cement plant construction will negatively affect local historic resources.**	
Alternative A No-Action	No change from current conditions.
Alternative B Proposed Action	Construction and operation of the quarry, quarry facility area, conveyor system, and access road improvements may result in impacts to historic and prehistoric sites. Within the project area, five historic or prehistoric sites have been identified as eligible for the National Register of Historic Places. An additional 25 Isolated Occurrences were identified during field surveys, but were determined to be ineligible for listing. Effects to the old Highway 89 Hell Canyon Bridge, the Santa Fe, Prescott & Phoenix Railway trestle over Hell Canyon, and the remains of a narrow gauge railroad associated with the Puntenney lime works, would be minimal. The Cedar Glade/Drake Townsite and a prehistoric site located within the proposed quarry boundary would require mitigation to minimize impacts.

2.4.3 Resource Impacts

Table 2-4 summarizes the key environmental effects of each alternative.

Table 2-4 Preliminary Comparison of Key Environmental Effects		
Resource	**Alternative A – No-Action**	**Alternative B – Proposed Action**
Land Use and Recreation	No changes in livestock grazing activities or management. No effects on existing land uses, including recreation, livestock management, and other Forest Service authorized special uses. No changes to existing noise levels. The status quo would be maintained.	Public access on FR 9711F would be discontinued. Grazing in the project area would be eliminated. The Limestone allotment covers 57,190 acres and accommodates 918 animal unit months. About 65 acres would be removed from this allotment, less that 0.2 percent of the overall allotment size. Surface use could cause game to move out of the area and reduce the hunting opportunity. Public lands available for hunting in Arizona Game and Fish Department (AGFD) Game Management Unit 8 would be reduced by about 65 acres (lands associated with the proposed project). Access to Hell Canyon would still be available at other locations in the project vicinity. Unauthorized recreational firearm practice at the existing quarry would be eliminated. Noise would result from quarry activities, including drilling, blasting, loading, hauling, and primary crushing of limestone, and from construction and operation of the conveyor system. The noisiest equipment associated with the proposed action, including the apron feeder, vibrating screen, primary crusher, and compressor would be enclosed with buildings to minimize noise. There are no primary receptors within 500 meters of the proposed quarry. At that distance, noise levels for all activities, including blasting are generally acceptable. In the closest residential areas, short-duration noise and vibration impacts from mine blasts would not reach levels commonly considered to be annoying; these impacts would last the life of the project (10 years). The Recreation Opportunity Spectrum objectives for the area are identified by the PNF as Roaded Natural Altered (RNA) and Rural (R), which classify the project area as containing more developed and more highly used access routes and where the vegetative communities show various levels of modification. The proposed project elements would meet these objectives.
Visual Resources	No direct or indirect impacts to public lands visual resources. The current visual character of the area would be retained. The No-Action Alternative would not result in effects on achievement of Visual Quality Objectives (VQOs).	Visual character of the landscape within the project area would be modified by changes in topography and the addition of infrastructure associated with the proposed action. The visual elements associated with the proposed action would introduce contrasting forms, lines, and colors from that of the existing landscape character.

Table 2-4 Preliminary Comparison of Key Environmental Effects		
Resource	**Alternative A – No-Action**	**Alternative B – Proposed Action**
Visual Resources (continued)		Visual elements associated with the proposed action will be visible to people traveling on SR 89 and CR 71. However, views of the project facilities from SR 89 and 71are generally momentary and limited due screening from topography and vegetation. Visual impacts to residences are not anticipated. Visual Quality Objectives for the project area would not be met and a non-significant Forest Plan Amendment would be required to change the objective from partial retention to modification for the affected 65-acre project area.
Air Quality	No direct or indirect impacts on air quality would result from this alternative. Current ambient air quality would be retained.	The topsoil removal, aggregate processing, and truck and equipment travel onsite would produce a net short-term increase in PM_{10} from dust and construction. The local ambient air quality is expected to decrease but stay within federal and state standards. Model predicted emissions of criteria pollutants at a localized level during the life of the Project would not exceed State standards.
Topography, Geology and Soils	Topographic, geologic and soil conditions would remain in their current condition, except that natural processes (including erosion) would continue.	The proposed project would result in a permanent modification of the project area's topography, disruption of native soils, compaction of soils, and displacement of soils as a result of onsite excavation, crushing, and conveyance activities. An estimated 65 acres could be disturbed by development activities. Other than lowering the land surface in the quarry area, the long-term (after reclamation) effects would be minimal and even unnoticeable to most casual observers. Direct, long-term impacts to soil complexes (generally poor, low-productivity soils) would result from stripping of overburden and limestone extraction. Some soil productivity would be regained through reclamation. Direct, permanent impacts to locatable mineral resources as allowed by the General Mining Law of 1872 and other surface management regulations would occur. The proposed action would meet the Forest's management direction for minerals by minimizing surface resource impacts while supporting sound energy and minerals exploration and development.

Table 2-4 Preliminary Comparison of Key Environmental Effects		
Resource	**Alternative A – No-Action**	**Alternative B – Proposed Action**
Water Resources	No direct or indirect impacts on surface water quantity or quality, waters of the U.S., or surface flows of Limestone Canyon, Hell Canyon, or the Verde River would result from this alternative. No ground water impacts would result.	The Proposed Action would have minimal effects on drainage pattern of the area. Proposed project facilities would affect the Limestone Canyon wash with an at-grade crossing for quarry equipment; an above-grade crossing of conveyor; and an at-grade crossing paralleling conveyor alignment. At-grade crossings would require some down-cutting of wash banks, which may result in changes to channel morphology, including minor cutting, pooling, soil erosion, and sedimentation. These crossings would not be expected to affect the overall flow of the Limestone Canyon wash. Potential direct effects to Hell Canyon are minimized because the conveyor would be placed on the existing but abandoned Hell Canyon highway bridge. Highest potential for sediment loading to Limestone Canyon would be during construction activities associated with the access roads and the quarry facility operation area. With proper construction and maintenance, sediment loadings should be consistent with natural conditions. As designed, the quarry would be self-contained and would not drain into Limestone Canyon or Hell Canyon, eliminating sediment loading from mining activities. The potential for water quality impacts from spills at the quarry facility operations area would be minimized by use of a concrete pad. Low potential for spills of diesel, concentrate, and supplies at the access road crossing of Limestone Canyon. The area planned for the quarry facility operations is previously disturbed and protected from normal storm events within Limestone Canyon. Development of these facilities in this area does not appear to likely impact the flow or water quality in the drainage. Compliance with ADEQ, EPA, and ADWR regulations regarding erosion control and storm water management would minimize surface water impacts. Water use for the mining activities is estimated to be about 8 acre-feet per year. Minimal impacts on regional hydrology and hydrogeology would be expected as a result of project implementation.

Table 2-4 Preliminary Comparison of Key Environmental Effects		
Resource	**Alternative A – No-Action**	**Alternative B – Proposed Action**
Water Resources (continued)		Project implementation is not expected to affect groundwater quality. Equipment servicing, refueling and other operations in the quarry facility operation area could result in a higher potential for contaminants being delivered to the water table directly beneath the area, although this potential is minimized through compliance with ADEQ, EPA, and ADWR regulations.
Biological Resources, Wildlife	No direct or indirect impacts to wildlife would occur from this alternative. Wildlife resources would remain in their current condition under this alternative. Natural ecological processes would continue to be the predominant factor influencing populations. No direct or indirect impacts to special status wildlife species would result from implementation of this alternative.	The proposed project would disturb existing wildlife through loss of habitat, disruption of natural movement patterns, and noise. About 65.5 acres of wildlife habitat would be lost as a result of the quarry, quarry facility operation area, conveyor system, and access road improvements. Permanent habitat loss (after reclamation) would be associated with the quarry walls and benches. Natural movement patterns through the project area by wildlife would be affected by quarry development and the conveyor system. Wildlife would also be affected by noise generated from drilling and blasting activities, front end loaders, material handling equipment and the primary crusher. Wildlife would not be expected to be killed or harmed as a result of project implementation because wildlife would move from or avoid the quarry activities and facilities. No impacts to federally listed wildlife species would be expected. Potential habitat for the *Maricopa Tiger Beetle* (a Regional Forester's Sensitive Species) is found within Hell Canyon and along the ephemeral drainages located within the project area. Impacts to this species would not be expected since the conveyor system would be installed on higher portions of the canyon, thereby not affecting the area where the beetle is most likely to occur. Indirect impacts to threatened and endangered fish species in the Verde River may result from use of groundwater for this and other actions. However, because groundwater drawdown is not expected to have a measurable impact to the water flow of the Verde River, impacts to the threatened and endangered fish species are not expected to be measurable.

Table 2-4 Preliminary Comparison of Key Environmental Effects		
Resource	**Alternative A – No-Action**	**Alternative B – Proposed Action**
Biological Resources, Plants	No direct or indirect impacts to upland and riparian vegetation, sensitive plants, and no increased need for noxious weed treatment.	A total of about 65.5 acres of land would be directly impacted, most of which is pinyon juniper woodland, with less than three acres of chaparral, grassland, and late seral grassland community. Approximately 14.5 acres have been previously disturbed. No direct or indirect impacts to federally listed plant species would be expected. Potentially suitable habitat for the *Hualapai Milkwort* and *Mearns Sage* (Regional Forester's Sensitive Plant Species) are found within the project site and could be affected by this project, although neither of these species were identified during habitat field reviews. This alternative is unlikely to cause or promote the introduction or spread of invasive species because the project activities, facilities, and vehicles are generally contained within a specific area, minimizing the likelihood of introducing new species.
Socioeconomic Conditions	The No-Action Alternative would not result in direct or indirect impacts to the local population, employment opportunities, economic benefits, or environmental justice concerns.	Implementation of the proposed action would result in minor impacts to population, demographics, and minority and low income populations on or near the project area. The quarry operation would employ about eight people. Population growth in the Paulden/Chino Valley area associated with the operation of the quarry would be minimal. Likewise, anticipated growth and the subsequent increased demand upon public services and schools would not be expected.. Noise impacts would be limited because there are no residents within 500 meters of the proposed quarry. Visitors to the area may experience noise annoyance during quarry operations, especially associated with short-duration noise and vibration impacts from mine blasts. Minimal hazardous substance impacts are expected because OSHA, RCRA, EPCRA, and other regulations for hazardous materials, all regulated materials are expected to be transported, handled, stored, and disposed of properly. There would be no disproportionate adverse human health or environmental effects on minority and low-income populations as a result of project implementation, because the largest populations of minority and low income populations, including Native Americans, are geographically distant from the Paulden area.

Table 2-4 Preliminary Comparison of Key Environmental Effects		
Resource	**Alternative A – No-Action**	**Alternative B – Proposed Action**
Heritage Resources	The No-action Alternative would not result in effects on the majority of cultural or historic sites in the project area. However, the Hell Canyon highway bridge would continue to deteriorate due to lack of maintenance, unauthorized access, and target shooting.	The proposed project has the potential to result in the disturbance of subsurface archaeological, historic, or cultural resources. Project survey revealed five sites within the project area and are all considered eligible for nomination to the National Register of Historic Places. The proposed project facilities would directly impact two of the five archaeological sites recorded within the project area on federal land. However, adverse impact to the information potential of archaeological sites is not expected to be significant because of mitigation requirements under the National Historic Preservation Act (NHPA). The proposed project is not known to be the site of any unique cultural values or existing religious or sacred uses that would be affected or restricted by the project. No determination of eligibility as Traditional Cultural Places has yet been made for impacted sites.
Roads/Access	The No-Action Alternative would not impact existing transportation facilities or trails.	As a result of the project proposal, a project-level roads analysis was conducted. Under the Proposed Action Alternative, public access on FR 9711F north of FR 680 would be discontinued through installation of locked gates at the junction of FR 9711F and FR 680 and where the old Highway 89 alignment junctions with CR 71. Quarry employees would account for about eight round trips daily during operations. Transportation impacts would be limited to a small overall increase in vehicle and truck traffic in the project area, including State Route 89. This increase is not expected to reduce the Level of Service ratings of roads in the area. All roads and intersections would continue to operate at acceptable levels of service. No authorized trials would be impacted as a result of implementing this alternative.

APPENDIX A

Plan of Operations Maps

373,000-E

373,500-E

4675

4650

4625

4600

4575

North Quarry Access Road

South Quarry Access Road

Quarries

Sediment Basin 100'x120'

2'371,500-N

Limestone Canyon

Hell Canyon

Emergency road - no concrete crossing at Limestone Canyon

Trench

Emergency road

Corridor 100'

First Conveyor

Primary Crusher

Old Highway 89 Bridge

New Access

Existing Access Road

Quarry Facility Area

BN&SF Railroad

PROPOSED LIMESTONE QUARRY

QUARRY FACILITY AREA

ACCESS ROADS

GRAPHIC SCALE

50 0 50 100

NOTE: MAP SHOWS OPERATIONS DURING PROPOSED 10-YEAR PLAN OF OPERATIONS

This drawing shows the estimated extent and depth of the proposed quarry operations after approximately ten (10) years of removal of limestone, the proposed time period for this plan of operations. The actual configuration of the pit will change with time as mining proceeds from the east to the west. The estimated configuration of the quarry at the end of the ten-year period is shown in Drawings DC04-04 through DC04-06.

This map is based on USGS digital topo data and NOT from survey data. All data shown is approximate.

COORDINATES SHOWN ARE UTM (NORTH AMERICAN DATUM Nad 27)

Prepared For:

DRAKE CEMENT LLC

THE MINES GROUP

1325 Airmotive Way, Reno, NV 89502

Title: PLAN OF OPERATIONS PROPOSED OPERATIONS

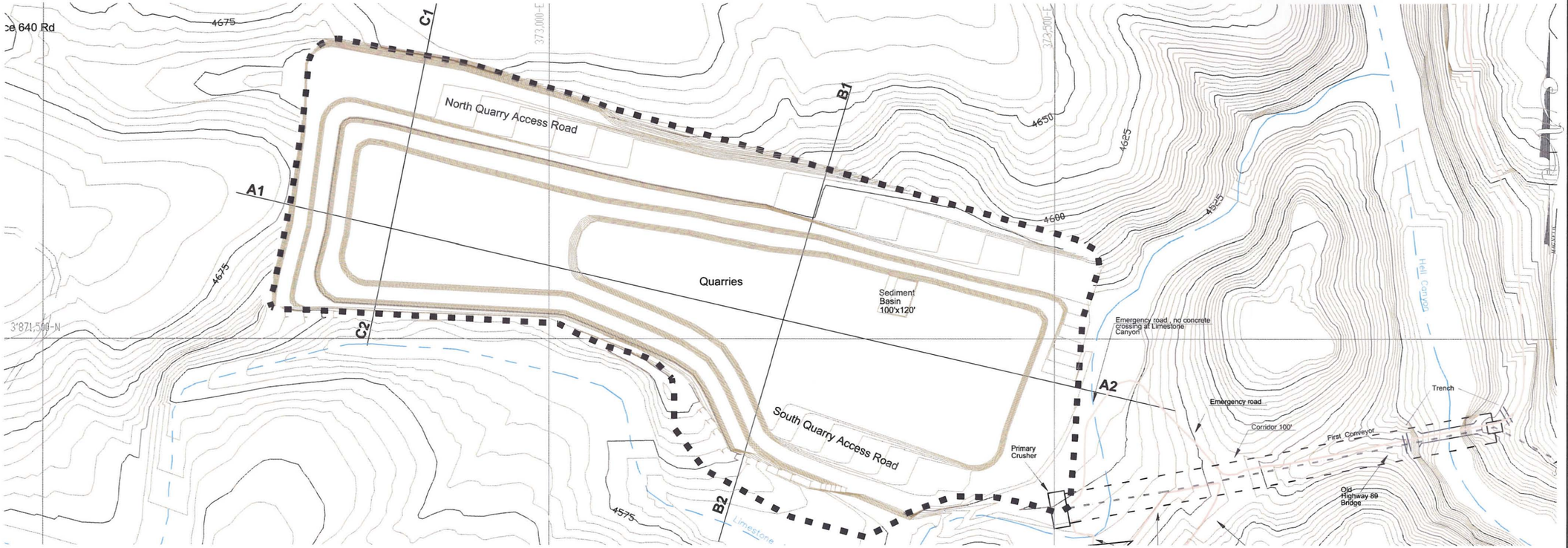
Scale: 1 / 1,750

Date: 22/07/05

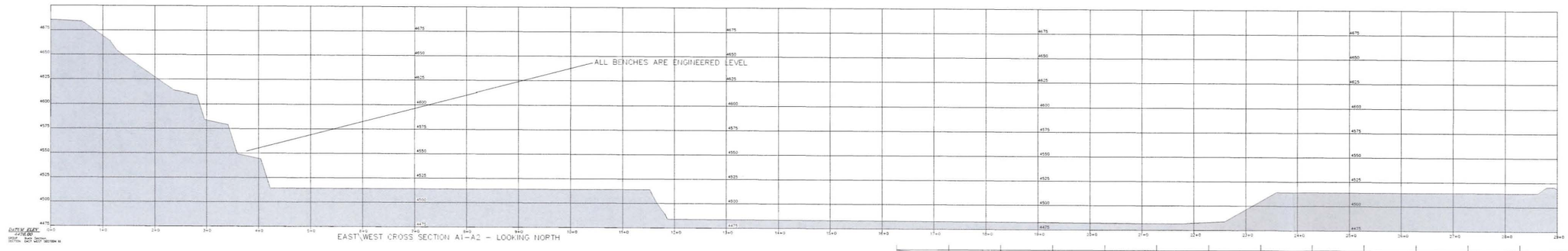
Rev. 6

Drawing No. DC04-03

Drafted By: BREEN



PIT TOPOGRAPHY IS 1 / 2,000 SCALE



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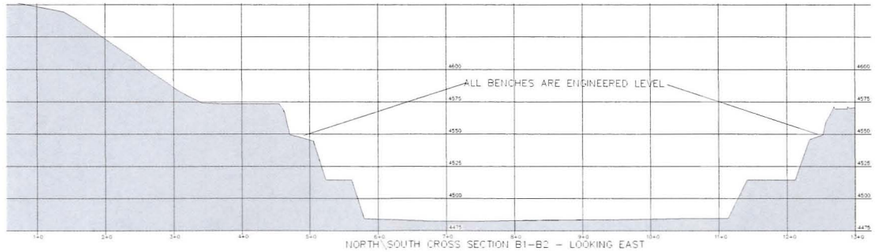
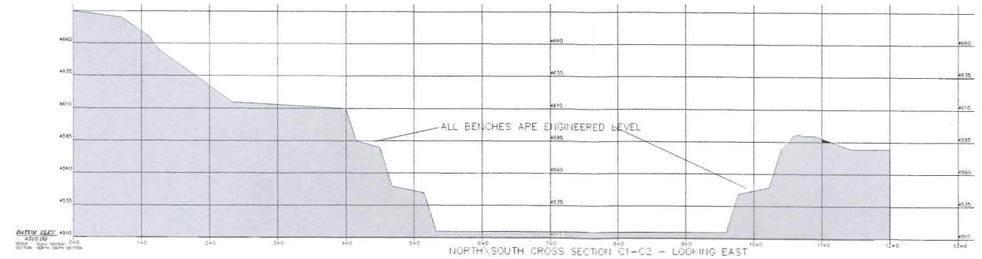


NORTH\SOUTH CROSS SECTION B1–B2 – LOOKING EAST



NORTH\SOUTH CROSS SECTION C1–C2 – LOOKING EAST

PROPOSED LIMESTONE QUARRY

QUARRY FACILITY AREA

ACCESS ROADS

GRAPHIC SCALE

50 0 50 100

NOTE: MAP SHOWS OPERATIONS DURING PROPOSED 10-YEAR PLAN OF OPERATIONS

This drawing shows the estimated post-reclamation topography of the proposed quarry operations after ten (10) years of removal of limestone and backfilling based upon the current estimated quantity of material that would not be suitable for cement production (basalt and soil cover). The actual configuration of the quarry could change dependent upon the actual quantity of unusable material and if the quarry were expanded under a revised plan in future years.

This map is based on USGS digital topo data and NOT from survey data. All data shown is approximate.

COORDINATES SHOWN ARE UTM
(NORTH AMERICAN DATUM Nad 27)

Prepared For:
DRAKE CEMENT LLC

THE MINES GROUP INC.
1325 Airmotive Way, Reno, NV 89502

Title: PLAN OF OPERATIONS
POST RECLAMATION
CROSS-SECTION A-A THROUGH C-C

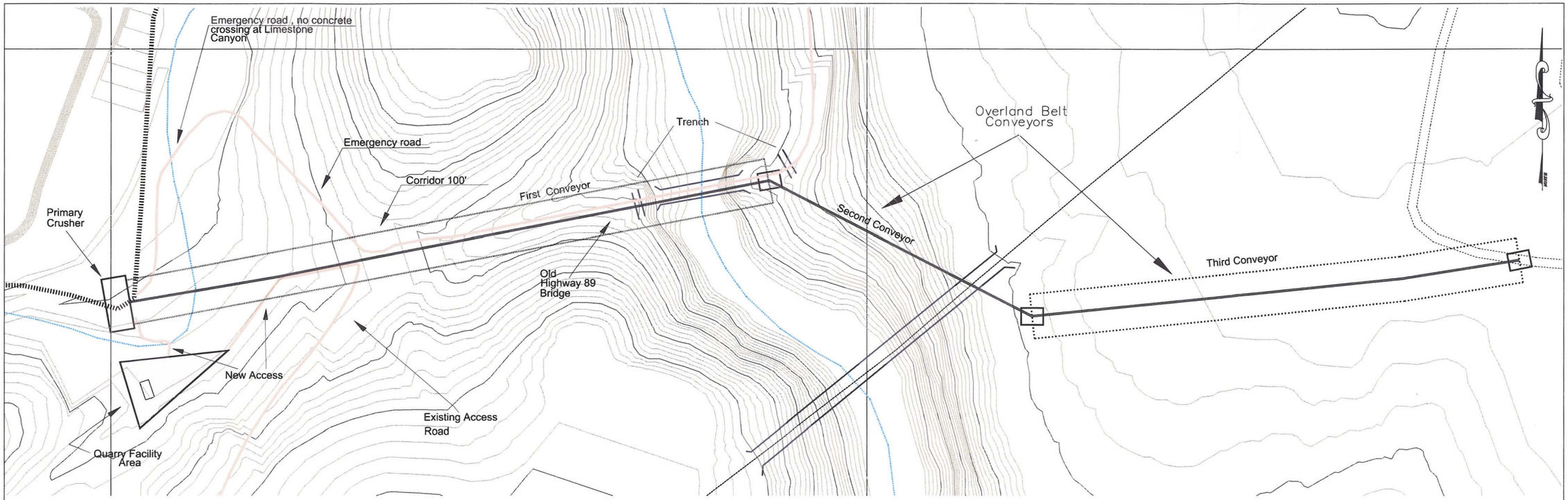
Scale: 1 / 2,000

Date: 22/07/05

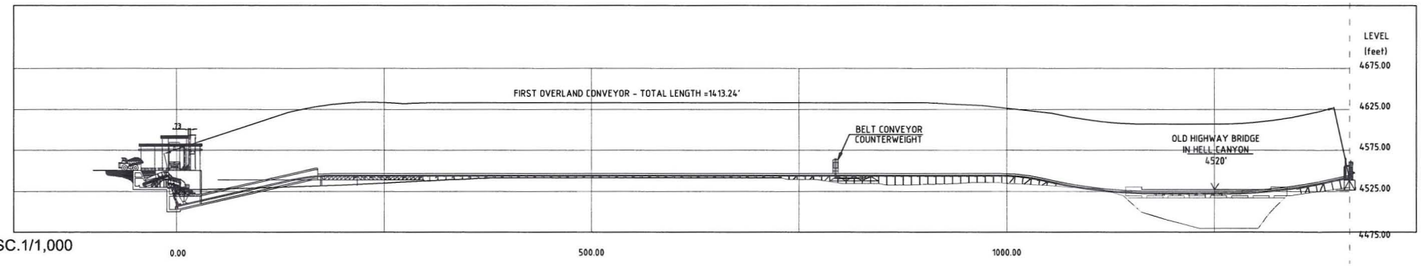
Rev: 6

Drawing No. DC04-06

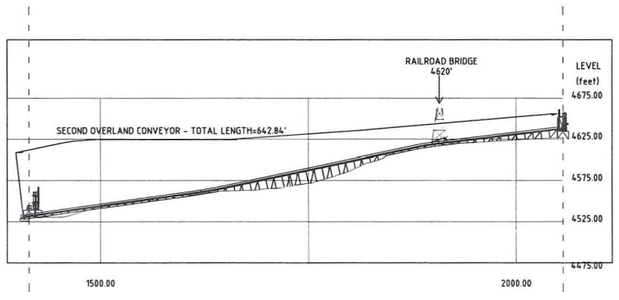
Drafted By: BREEN



PLANT. SC. 1/1,250



SECTION A1-A2. SC.1/1,000



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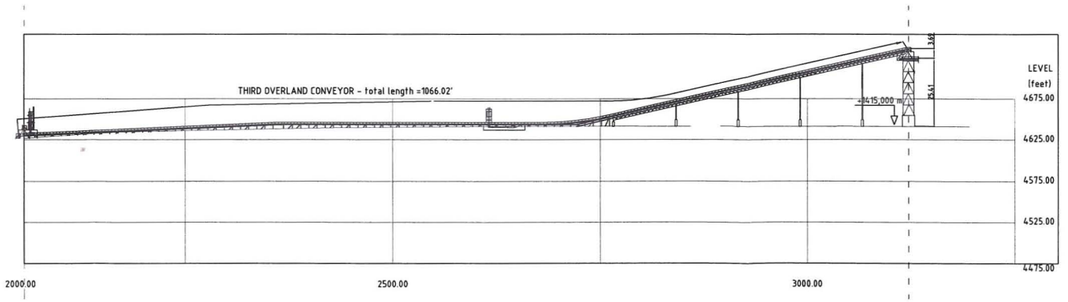

SECTION C1-C2. SC.1/1,000

PROPOSED LIMESTONE QUARRY

QUARRY FACILITY AREA

ACCESS ROADS

This drawing is only a conceptual layout developed to illustrate longitudinal sections for the proposed conveyor and the estimated cut for the first conveyor corridor. It is based upon USGS 5- foot contour data. Use of this data is not suitable for final desing and construction.

This map is based on USGS digital topo data and NOT from survey data. All data shown is approximate.

COORDINATES SHOWN ARE UTM
(NORTH AMERICAN DATUM Nad 27)

Prepared For:
DRAKE CEMENT LLC

THE MINES GROUP
1325 Airmotive Way, Reno, NV 89502

Title: PLAN OF OPERATIONS
LONGITUDINAL SECTIONS
A1 THROUGH C2

Scale: AS SHOWN

Date: 22/07/05

Rev. 3

Drawing No. DC04-09

Drafted By: BREEN