

ROAD LOG FROM LAS VEGAS TO
Frehner Construction Company - Sloan Operations and Red Rock Canyon Area

18th ANNUAL NEVADA MINING ASSOCIATION MINERAL EDUCATION WORKSHOP, TOUR

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Field trip leader, Jonathan G. Price

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Tour 1 Description – Frehner-Red Rock

Frehner – Frehner Construction Company's operation is located south of Las Vegas on I-15 at Sloan. The mine has operated for many years and produces high-quality magnesium dolomite for the construction industry. Visitors will have the opportunity to see an active mine and processing facility in operation.

Red Rock Canyon Scenic Loop - National Conservation Area located in the Mohave Desert just six miles west of Interstate 215 on Highway 159. The tour will include a 13-mile scenic drive that offers opportunities to see red and white sandstone formations, faults, a waterfall, wildflowers, and hopefully, desert wildlife.

Cumulative mileage

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| 0.0 miles | Road log starts in Las Vegas at the intersection of Interstate 15 and US Highway 95, heading south on I-15 toward Jean, Nevada. |
| 1.1 | Charleston Blvd. Interchange |
| 3.3 | Sahara Avenue Interchange |
| 5.4 | Flamingo Avenue Interchange |
| 6.4 | Tropicana Road Interchange |
| 7.4 | Russell Road Interchange |
| 8.9 | I-215 Interchange |
| 10.4 | Blue Diamond Road Interchange. Visible several miles to the west at 2 to 3 o'clock are the imposing red and yellow sandstone formations of Red Rock National Recreation area. These are located along the southeastern flank of the Spring Mountains. |
| 16.0 | Henderson exit (Lake Mead Drive aka St. Rose Parkway). The Spring Mountains are visible from 12 o'clock to 3:00. The highest part of the range is Mt. Charleston (elev. 11,918 ft.) in the northern Spring Mountains. |

The Spring Mountains are a classic locality of fold-and-thrust belt geology, with exposures of Cambrian carbonate rocks thrust over Jurassic sandstones. The Spring Mountains themselves exhibit negligible internal extension, but the thrust belt has been severely disrupted by Tertiary extensional tectonics in many nearby mountain ranges.

18.3 Sloan Exit. The McCullough Range is visible southeast of the freeway. Proterozoic metamorphic and granitic rocks and Miocene mafic, intermediate, and silicic volcanic rocks are exposed in the range. The McCullough Range lies within a tract of severely extended crust that extends across the Colorado River, including the Eldorado and Black Mountains.

Visible on the right side of the freeway is the Frehner Construction Company Sloan Quarry. Frehner produces a high quality dolomitic limestone that is crushed and screened for use as construction aggregate in concrete, asphalt, and road base. The company owns and holds large aggregate reserves capable of producing millions of tons of aggregate annually, and the largest of these is here at Sloan, where we will tour the operations.

Some construction projects in which Frehner has been involved are:

- Highway paving for NDOT
- The Cheyenne Overpass at I-15
- Bridge-building and rehab
- Underground pipe and culvert construction
- Freeway sound walls

After touring Frehner's aggregate operations, we will be visiting Red Rock Canyon National Conservation area on our field trip today. Red Rock is located along the east side of the Spring Mountains just 10 miles west of Las Vegas. These mountains rise in a colorful escarpment, formed along a fault zone with peaks over 8,000 feet, and including huge cliffs and ravines composed of bands of gray, white, and red rock, all heavily eroded. The wide empty plains beneath the hills are studded with Joshua trees and other desert plants, contributing to a most impressive landscape. For a description of the geology along our tour route today, please refer to the photocopied section from a book entitled "Geologic Tours in the Las Vegas Area, Nevada Bureau of Mines & Geology Special Publication 16". We will make a brief stop at the Visitors Center, and proceed on the scenic loop drive with time for one short hike along the Lost Creek Children's Discovery Trail. We hope this brief introduction to Red Rock Canyon will inspire you to return with your students!

RETURN TO LAS VEGAS.

WE HOPE YOU HAD AN ENJOYABLE AND INFORMATIVE TOUR!

THANK YOU.

References:

Tingley, J.V., Purkey, B. W., Duebendorfer, E.M., Smith, E. I., Price, J. G., and Castor, S. B., 2001, Geologic Tours in the Las Vegas Area, expanded edition, Nevada Bureau of Mines & Geology Special Publication 16, ordering information on the NBMG website at www.nbmjg.unr.edu

Geological Society of Nevada 1991 Spring Field trip guide: Tertiary Geology and Volcanic-hosted Gold Deposits of the Southern Great Basin and Vicinity: Special Publication No. 13.

Longwell, C. R., Pampeyan, E. H., Bowyer, B., Roberts, R. J., 1965, Geology and mineral

deposits of Clark Co., Nevada Bureau of Mines and Geology Bull. 62.