



OGMCOAL DNR <ogmcoal@utah.gov>

Fwd: Subsidence Mitigation

Steve Christensen <stevechristensen@utah.gov>
To: OGMCOAL DNR <ogmcoal@utah.gov>

Tue, Sep 8, 2020 at 1:16 PM

----- Forwarded message -----

From: **Bryant Bunnell** <BBunnell@wolverinefuels.com>
Date: Thu, Aug 27, 2020 at 11:41 AM
Subject: Subsidence Mitigation
To: Steve Christensen <stevechristensen@utah.gov>
Cc: Chris Hansen <chansen@wolverinefuels.com>, Jacob Smith <jsmith@wolverinefuels.com>

Hi Steve,

I've attached the mitigation plan that the Manti-La Sal FS has approved. Essentially, we are going to be filling the cracks with omega block and juniper where available. The project is pretty straight forward and will most likely begin next month.

Thanks,

Bryant Bunnell
Environmental Engineer



Canyon Fuel Co.

Sufco Mine

597 South SR 24

Salina, UT 84654

(435) 286-4490

bbunnell@wolverinefuels.com

--
Steve Christensen, Coal Program Manager
Utah Division of Oil, Gas and Mining
1594 W North Temple, Suite 1210
Salt Lake City, Utah 84116
(801) 538-5350 w

9/9/2020

State of Utah Mail - Fwd: Subsidence Mitigation

(385) 290-9937 c
stevechristensen@utah.gov



3R4E-4R4E Mitigation Plan_FINAL.pdf

2291K

Subsidence Mitigation Plan
 3R4E & 4R4E Panels - SUFCO Mine
 August 2020

INTRODUCTION

Subsidence cracks were found by SUFCO personnel above the 3 Right 4 East (3R4E) and 4 Right 4 East (4R4E) areas of the mine. Several cracks in both areas are large enough to warrant mitigation. Figure 1 below shows the approximate location of the mitigation areas in respect to the location of the SUFCO mine site.

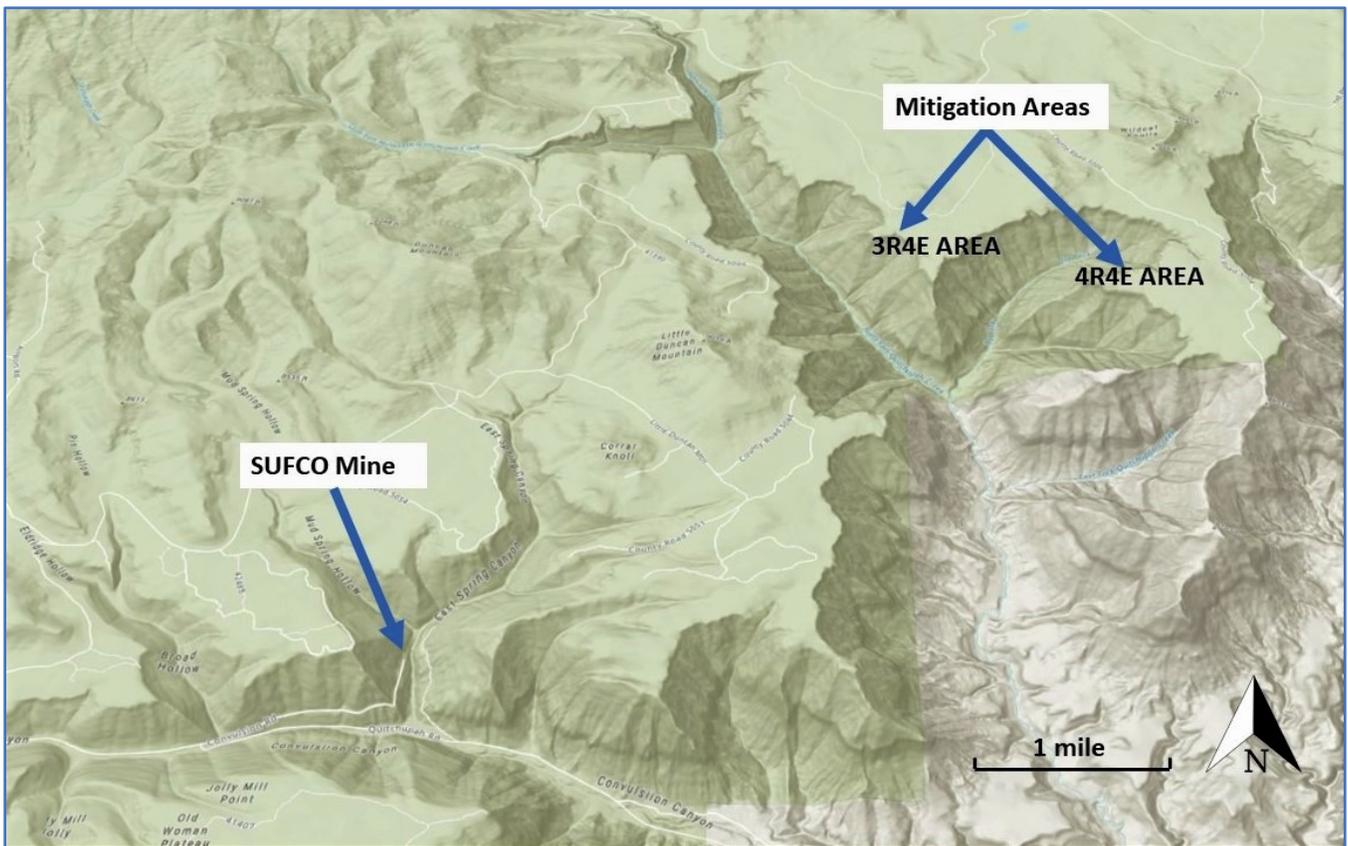


Figure 1. Mitigation Location Map

The approximate location of each mitigation area is as follows:

Area	Easting	Northing	Datum	Elevation (ft)
3R4E	467651.55 m E	4311872.69 m N	UTM, Zone 12 S	8450
4R4E	469755.17 m E	4311248.87 m N	UTM, Zone 12 S	8620

3R4E Mitigation

OVERVIEW

The cracks in the 3R4E area needing mitigation range from 30 to 100 feet in length and 2 to 5 feet in width (See Figures 3 and 4). Equipment is needed to assist in filling the cracks and hauling in materials. An access path has been located north of the mitigation area that will be used to haul fill material and for equipment access (See Figure 2). An effort will be made to use the path as little as possible during the project in order to keep the disturbance to a minimum.

EQUIPMENT

A truck and trailer will be used to haul in laborers and fill material. A backhoe will be used to unload the fill material and assist in filling the cracks.

FILL MATERIAL

The primary fill material for this project will be Omega Block. Omega block is a building material often used in underground mining that is composed of non-toxic incombustible materials. There is some local downed timber nearby that will be used if necessary.

COMPLETION

At completion, an obstruction will be placed at the front of the access path to deter the public from continued use. In addition, an effort will be made to remove and cover up tire tracks along the first 300 feet of the path.

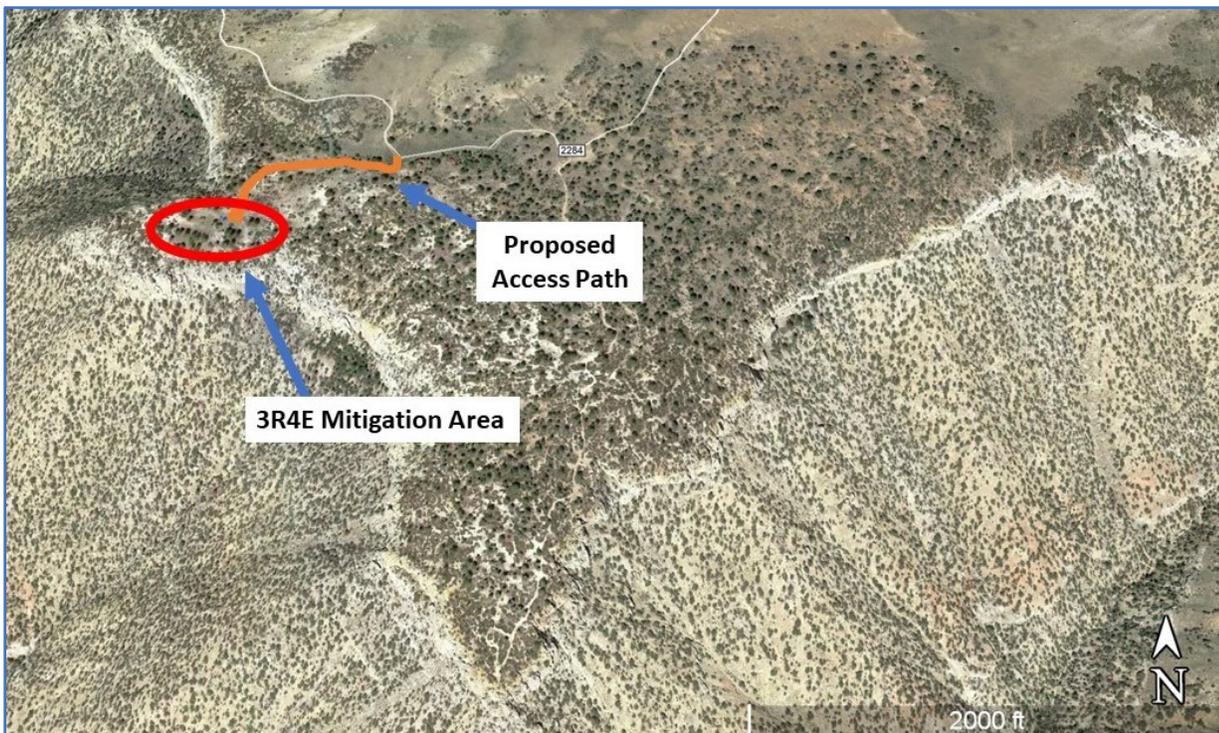


Figure 2. 3R4E Mitigation Area



Figure 3. 3R4E Subsidence Crack



Figure 4. 3R4E Subsidence Warning Sign

4R4E Mitigation

OVERVIEW

In the 4R4E area there are 2 to 3 cracks needing mitigation that range from 50 to 200 feet in length and 1 to 3 feet in width (See Figures 6 and 7). Getting equipment into this area is possible but difficult due to its remote location (See Figure 5). An access path will be made from the road to the mitigation area using UTVs and ATVs. An effort will be made to use the path as little as possible during the project in order to keep the disturbance to a minimum.

EQUIPMENT

A truck and trailer will haul omega block and laborers to the limit area pointed out in Figure 5. UTVs and ATVs, some with trailers, will travel a mile along the designated road and then another 0.7 miles off-road to the mitigation site. A backhoe will be used to unload the pallets of omega block and assist in filling the cracks if necessary.

FILL MATERIAL

The primary fill material for this project if necessary, will be Omega Block. Junipers will be used as fill material if they are nearby and available.

COMPLETION

At completion, an obstruction will be placed at the front of the access path to deter the public from continued use. In addition, an effort will be made to remove and cover up tire tracks along the first 300 feet of the path.

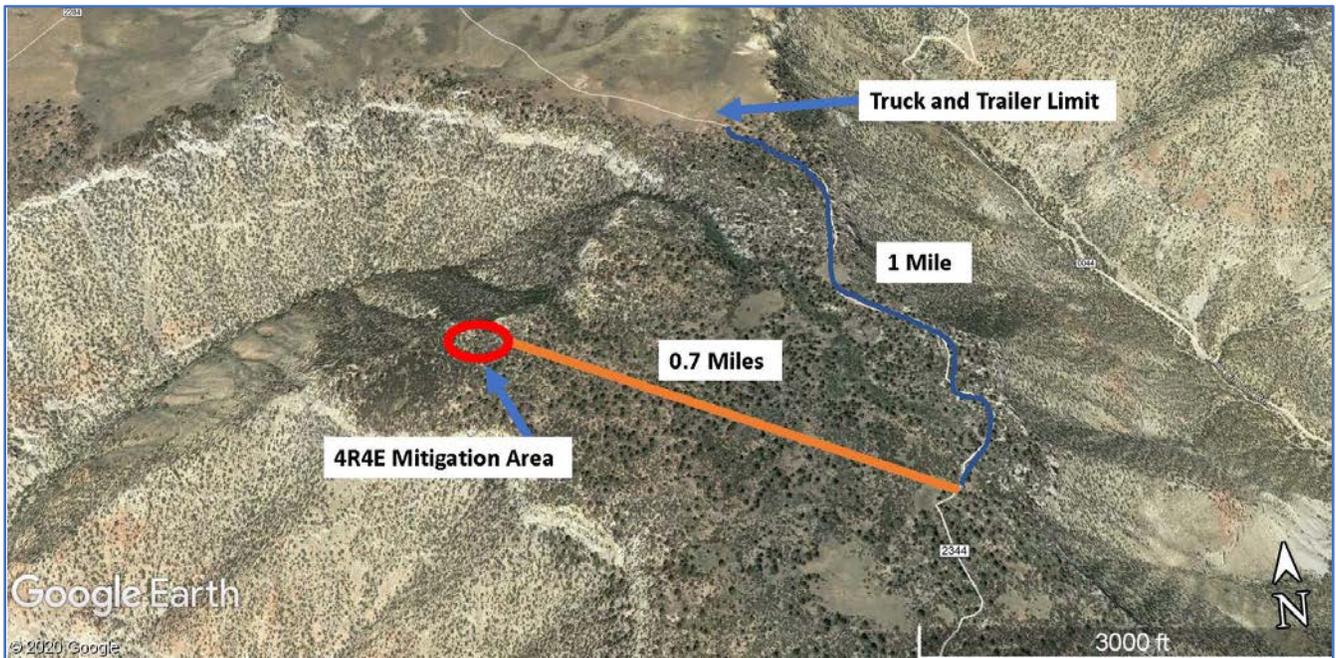


Figure 5. 4R4E Mitigation Area



Figure 6. 4R4E Subsidence Crack



Figure 7. 4R4E Subsidence Crack