

Canyon Fuel Company, LLC
Soldier/Dugout Canyon Mines
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R.W. "Rick" Olsen
General Manager

July 26, 2000

Daron Haddock
Division of Oil, Gas and Mining
1594 W. North Temple, Suite 1210
P.O. Box 145801
SLC, UT 84114-5801

(Start w/ Daron)
Copy stuff and write
Enclosure
ACT/007/018
FAX PFO

Dear Mr. ~~Haddock~~ *Daron*

The purpose of this letter is to advise you that repairs have been completed on the four (4) earthen portal seals and the concrete cap seal for the shaft at the Soldier Canyon Mine that were damaged via a suspected lightning strike on July 1, 2000.

The seals were repaired in accordance with an approved MSHA plan, a copy of which is enclosed. Please note that additional earthen fill was placed in and above the portals where practical. Placing additional fill inside the portals eliminated the hollow-block stoppings that were built out by the earthen seal of the portals adjacent to the county road to prevent unauthorized access inside the portals. Also note that the earthen material at each portal site will be hydroseeded this fall.

Also enclosed is a copy of the report that I prepared related to the seal damage and subsequent repairs which was forwarded to my superiors at Canyon Fuel Company in Salt Lake City and Arch Coal in St. Louis.

With the seals repaired, I am advising you that the temporary cessation status of the Soldier Canyon Mine remains unchanged.

If you have any questions or require additional information as it relates to this matter, please feel free to contact me or Dave Spillman, Manager of Technical Services.

Sincerely,

ENCL
XC: C. File (DOGM - 2000 S. Cyn)
D. Spillman

SEARCHED
SERIALIZED
INDEXED
AUG 28 2000
DIVISION OF
OIL, GAS AND MINING



CANYON FUEL COMPANY, LLC
DUGOUT CANYON MINE

INTERNAL CORRESPONDANCE

DATE: July 14, 2000

TO: R.D. Pick & R.W. Shanks

FROM: R.W. Olsen *RWO*

SUBJECT: Earthen Seals Damaged at Soldier Canyon Mine - July 1, 2000

Initial sealing activities for the Soldier Canyon Mine were completed during the week of July 1, 1999. The original sealing plan, approved by MSHA, included sealing eight portal openings with earthen fill and sealing the 16' diameter shaft at #2 fan with a 10" concrete cap located at the top of the shaft collar. A 2" methane vent pipe and valve was included in the shaft cap. At four of the portal locations adjacent to the county road, a hollow core cement block wall (stopping) was constructed out by the earthen seal to prevent unauthorized access inside of the portals. Two of the four portal seals along the highway had capped, polyethylene sampling/vent pipes. Regular sampling of the seals was conducted following the completion of sealing.

Earthen seals had been selected for Soldier Canyon due to the following reasons:

1. With the R2P2 reflecting future mining at Soldier Canyon, the BLM viewed the earthen seals as more conducive to future planned mining.
2. Earthen seals could be installed at approximately 55% the cost of concrete seals.
3. Due to the fractured nature above some of the portals, an elongated earthen seal would most likely provide a more effective seal.

At approximately 3:10 pm on July 1, 2000 five of nine seals at the Soldier Canyon Mine were damaged or destroyed via a methane explosion that most likely occurred as a result of a lightning strike at or near one of the portals.

A severe lightning storm was on-going at the time of the mishap. Dustin Huntington, a Dugout Canyon employee, was tending his cattle on the Iriart property above the Soldier Canyon mine site that day. He was nearing completion of his work and left the Iriart property because of the ensuing storm. Huntington was approximately 0.3 mile from the Soldier Canyon mine site traveling south (down) Nine Mile Canyon on Soldier Creek road when the event occurred. Huntington stated that he observed a lightning flash and subsequently heard an explosion. After hearing the explosion he immediately stopped his vehicle and witnessed a substantial quantity of dust and debris in the air above the mine site. Waiting several minutes for the dust to clear, he drove past the mine site and observed the damage without stopping his vehicle. Visual observation at the fan

shaft indicated light smoke coming from the shaft and the county road was littered with concrete from the shaft cap and pieces of cement blocks from the portals adjacent to the road. He continued to drive south on Soldier Creek road until he could pick up a strong enough cellular signal and immediately started contacting management. It should be noted that another vehicle (non-employee) was in the vicinity of the mine site and this individual also made contacts related to the incident.

Ray Bridge, Safety Manager, was contacted first at his home. Bridge immediately left home for the mine. Bridge instructed his spouse to contact Rick Olsen, Lydell Oveson, Kirt Tatton, Ken Payne, Gene Ray (MSHA's Price sub-district supervisor), and/ or Jerry Lemmon, an MSHA inspector who resides in East Carbon and was assigned to Dugout Canyon Mine to conduct the next AAA inspection.

Traveling to the Soldier Canyon mine, Bridge met Huntington at the intersection of the Soldier Creek and Dugout roads. After conversing briefly, Bridge contacted the Carbon County Sheriff's Department and requested that the Soldier Canyon road be blocked from public traffic above and below the Soldier Canyon mine site until an action plan could be formulated and carried out to ensure public safety. Huntington proceeded to Soldier Canyon with Bridge to review the damage. After reviewing the damage, Bridge assigned Huntington to travel to Dugout Canyon and pick-up instruments capable of detecting methane, carbon monoxide and oxygen levels along with air current detection tubes, aspirators and foam packs.

The initial survey of damage (please see attached drawing indicating portal/shaft locations and corresponding letters) indicated the following:

Haulage Portals A & Intake Portal C

The hollow block stopping built out by the earthen seal in each portal had been blown out and blocks were scattered in and around the storage area in front of the three portals. Some dirt had been blown away from the top portion of the earthen seal and the portals were both intaking.

Conveyor Portal B

Portal B was undamaged.

#2 Fan Shaft D

The 10" thick, two section concrete cap measuring 20' x 20' had been blown off the top of the shaft. One piece was lying in the county road approximately 50 yards north of the shaft and the other was on the south side of the fan structure. Note that the fan structure was not damaged. A light amount of smoke was emitting from the shaft with high levels of carbon monoxide and methane. It should be further noted that portions of a Kennedy stopping had been blown up the shaft and twisted Kennedy panels were found approximately 175 yards from the shaft opening.

MSHA speculated that lightning had struck at or near this portal and the ensuing arc could have followed a guy wire from the overhead power poles or lightning struck a conduit nearby the shaft and entered the shaft. However, this did not appear logical.

Haulage Rock Slope E

The hollow block stopping had been blown out with blocks thrown across the storage yard into the county road a distance of approximately 60 yards. The blocks from this stopping knocked down portions of the 6' security fence in the storage yard and also knocked down power cable servicing the security lights in the yard. Dirt had been blown away from the top of the earthen seal. Soot was visible on the upper portions of the portal collar and visual examination of the inside of the portal indicated damage to the concrete and steel beam roof approximately 20' in by the portal collar. The mine roof also had been damaged in by the damaged portal roof. In addition, the dirt fill above the portal roof had subsided and air was intaking through the subsided openings and through the portal itself.

As aforementioned, substantial damage occurred at this portal. It is currently presumed by management that methane was seeping through fissures in the fill above this portal and lightning struck on or nearby this portal igniting the methane. This portal could have been leaking methane well prior to the ignition and ensuing explosion and the methane had not been detected.

Haulage Portal F

An approximate 5' x 10' portion of the hollow block stopping in front of the earthen seal had been blown out. The earthen seal was basically intact.

Conveyor Portal G

Portal G was undamaged.

Intake Rock Slope Portal H

Portal H was undamaged. This portal did not have a hollow block stopping out by the earthen seal.

#1 Fan Rock Slope Portal I

Portal I was undamaged. This portal also did not have a hollow block stopping out by the earthen seal.

MSHA's Gene Ray arrived at the site shortly after Bridge's initial assessment of damage and issued a K-Order. Plans were immediately written up and submitted to Gene Ray. The plan reflected resealing all damaged portals with earthen material. At the time the plan was assimilated, Portals A,C, and especially E were intaking, and the shaft was exhausting. The plan reflected sealing the intaking portals first and then dumping earthen material down the shaft until the dirt was above the top of the shaft bottom. Prior to commencement of sealing activities, the shaft was liberating over 500 ppm CO and approximately 40% methane. The plan reflected monitoring each of the portals as dirt was pushed inside of them. Gene Ray accepted the plan and at that time Commissioner Bill Krompel was contacted related to using the crusher reject located at the county's gravel pit located on the Dugout Canyon road. Krompel agreed to allow the reject to be used for the emergency resealing project. Shortly after, Gene Ray left and MSHA's Jerry Lemmon arrived to assist in monitoring activities as the resealing commenced.

The holiday weekend presented problems as far as making contact with employees and/or contractors for assistance. After contacting all of the local earth moving contractors that had previously worked for Dugout Canyon or Soldier Canyon, Ken Payne finally made contact with Scamp Construction of Wellington, an outfit that had not worked for Canyon Fuel previously. Scamp had access to sufficient equipment and had manpower available for the weekend. Payne authorized them to mobilize and start the dirt hauling portion of the project while they obtained and hauled a small dozer to the mine site. By 8:00 pm on July 1, dirt was being delivered and pushed into the portals according to the sequence in the approved plan.

As the intaking portals were being filled, air direction often changed and required constant monitoring to ensure that an explosive mixture or high levels of CO were not liberated from the portals over the non-permissible equipment operating in the portals. In order to eliminate air reversal between portals, openings above the earthen seals were sealed with foam, small pieces of brattice, or both. The dozer (D-5 sized) and the 966 loader with a stinger/compactor was used to push dirt into the portal openings. The stinger was used to push up and into the top of the earthen seal. Once sufficient dirt had been pushed into the portal openings, the light smoke liberating from the shaft nearly halted, although CO and CH₄ continued to be liberated in varying quantities.

Electrical Contractors, Inc. were contacted to come to the mine site and remove the de-energized overhead wires servicing the REI's lower methane drainage site and disconnect the 46Kv ground wire from the substation ground field, and remove as many guy wires as possible from the substation pad and shaft location.

Preparations were made to begin filling the shaft bottom with dirt. Sufficient room did not exist at the shaft to allow the trucks to back towards the shaft and discharge their loads into the opening. Instead the trucks discharged onto the county road and the dozer operator was instructed to push the stockpiled material 15 yards into the shaft. Due to varying levels of methane and the inability to sample methane concentrations lower in the shaft, the decision was made to utilize the Wellington City Fire Department to remotely spray a fine mist of water across and down the shaft as the fine grained crusher reject was being pushed into the shaft. The spray would minimize the chance of potential sparking from any rocks in the material that might strike the concrete lining as they cascaded down the shaft. The spray was regulated at 55 gallons per minute to ensure that the spray could be continued during the plugging process.

At 6:15 am on July 2, approximately 22 loads of dirt had been discharged into the shaft and allowed the dirt to rise in the shaft approximately 12'. At this time only minor amounts of CO and CH₄ could be detected at the top of the shaft and the decision was made to halt activities and begin the 72 hour monitoring period. MSHA revised the K-Order to allow minor "touch-up" to take place on the seals and a monitoring schedule was set-up for the holiday weekend.

On July 3 it was observed that water running down the shaft lining had eroded a portion of the seal at the shaft bottom and mine atmosphere was being liberated from the shaft. MSHA was contacted related to this matter and management elected to fill the shaft with earthen material to prevent the recurrence prior to pouring a new concrete shaft cap.

MSHA agreed with this solution. Other minor work was also conducted on the portal seals during the 72 hour monitoring period.

Management requested Art Bruno PE, of Bruno Electrical Engineering to visit the mine site and inspect the area around the fan shaft and Portal E. Bruno made the recommendation of connecting all of the loose grounds from the abandoned substation site together into a common ground feeding into the ground field. This was done. He also suggested the installation of an overhead static line above the shaft and substation pad that would serve as an overall lightning arrestor for the area. Bruno also recommended removing as much equipment and metal material from the area surrounding Portal E as possible. This will be done.

Discussions between mine management, and local, Denver and Arlington MSHA officials concluded that earthen material remained the best option for permanently resealing the portals. Another plan was submitted to MSHA that reflected completely filling the portal openings with dirt and completely covering, wherever practical, the entire portal. MSHA accepted the plan and activities as to the aforementioned began July 7.

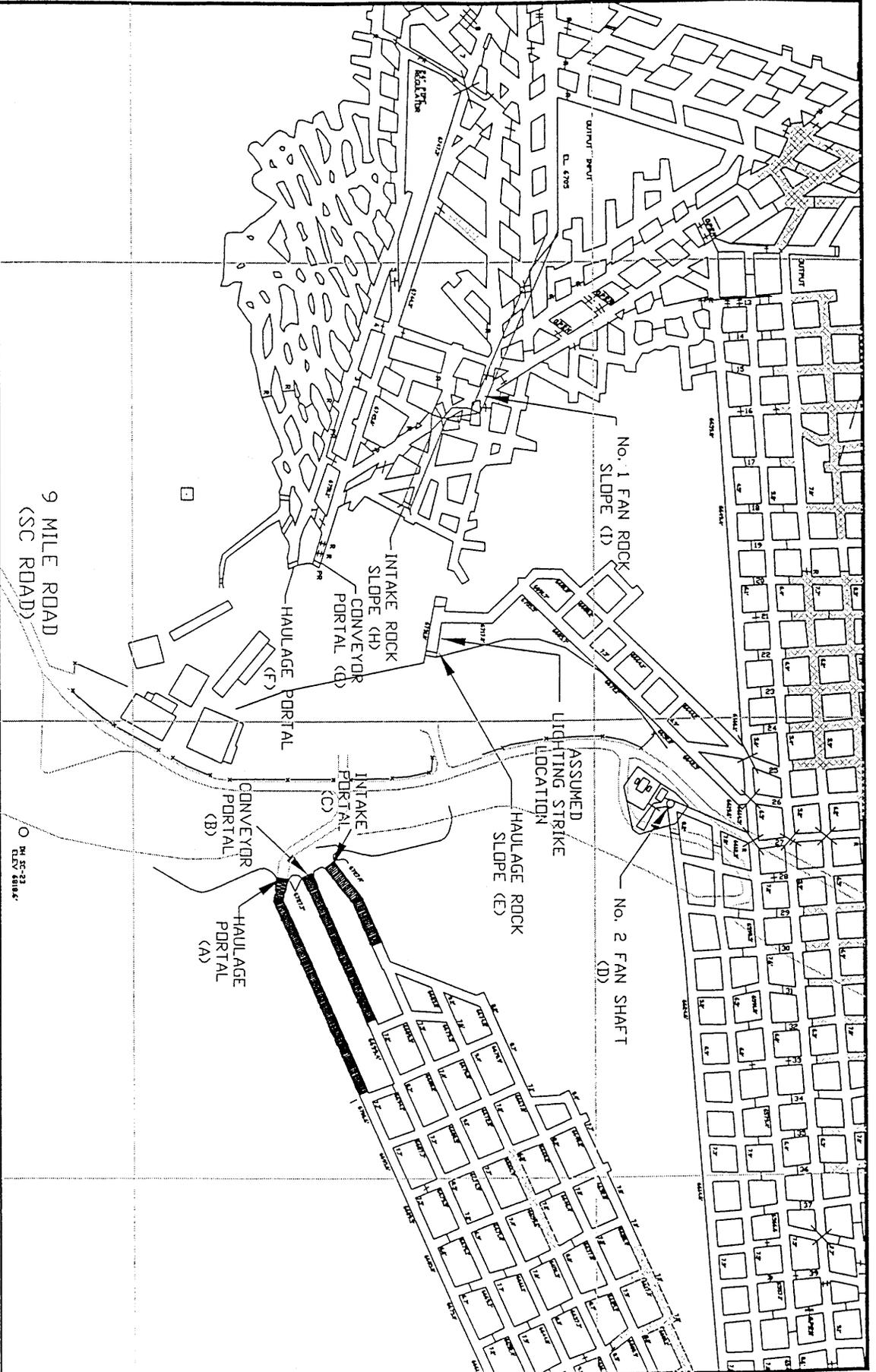
Knowing that it would take substantial fill to complete the sealing and with the crusher reject material exhausted at the county's gravel pit, management contacted DOGM and requested that the approximate 800 yards of extra construction fill at Dugout Canyon Mine be used for this sealing project. DOGM approved the request and the material was hauled to Soldier Canyon by Scamp Construction. In addition, fill material will also be taken from the gravel pit owned by Canyon Fuel Company and leased to Nielson Construction.

It is currently anticipated that resealing activities at Soldier Canyon will be completed by July 24. Costs associated with the resealing are projected not to exceed \$125,000.

Please note the attached photographs taken at approximately 5:00 pm on July 1, prior to conducting any work at Soldier Canyon.

If you have any questions or require additional information, please contact me or Ray Bridge.

ATCH:



SEALS ORIGINALLY INSTALLED 7-01-99

REVISIONS OR UP-DATES		DATE:	
NO.	DATE	BY	7/17/2000
		DESIGNED BY:	
		DRAWN BY:	BC
		CHECKED BY:	
SCALE:		1" = 300'	



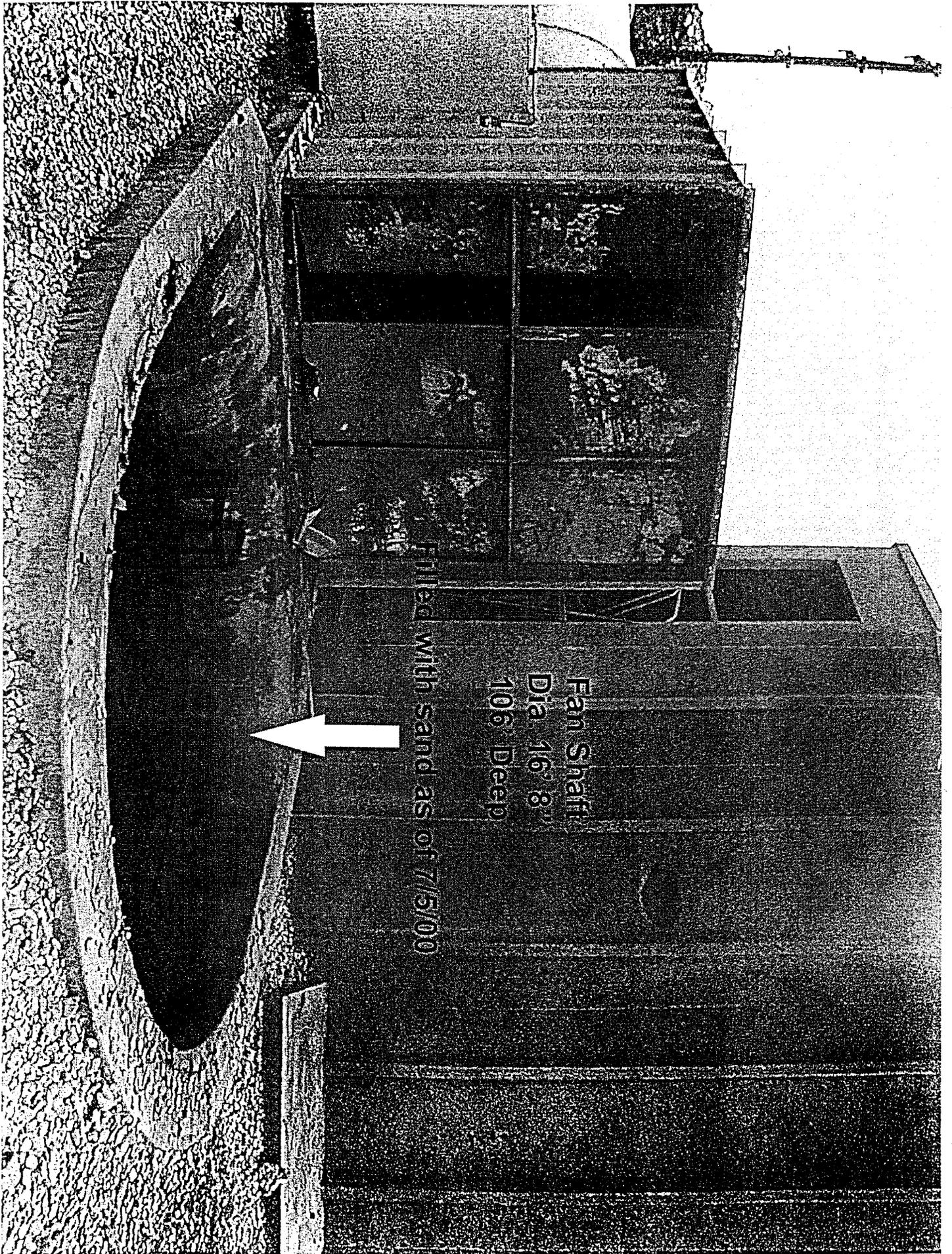
Canyon Fuel Company, LLC
Soldier Canyon Mine

**LIGHTING INCIDENT
and IGNITION**

P.O. BOX 1029
WELLINGTON, UTAH 84542

DRAWING OR
LOG NUMBER

FOLLOWING ARE PHOTOGRAPHS
THAT WERE TAKEN AFTER THE
EVENT AND DURING THE INITIAL
PHASES OF RESEALING ON JULY 1
AND JULY 2, 2000.



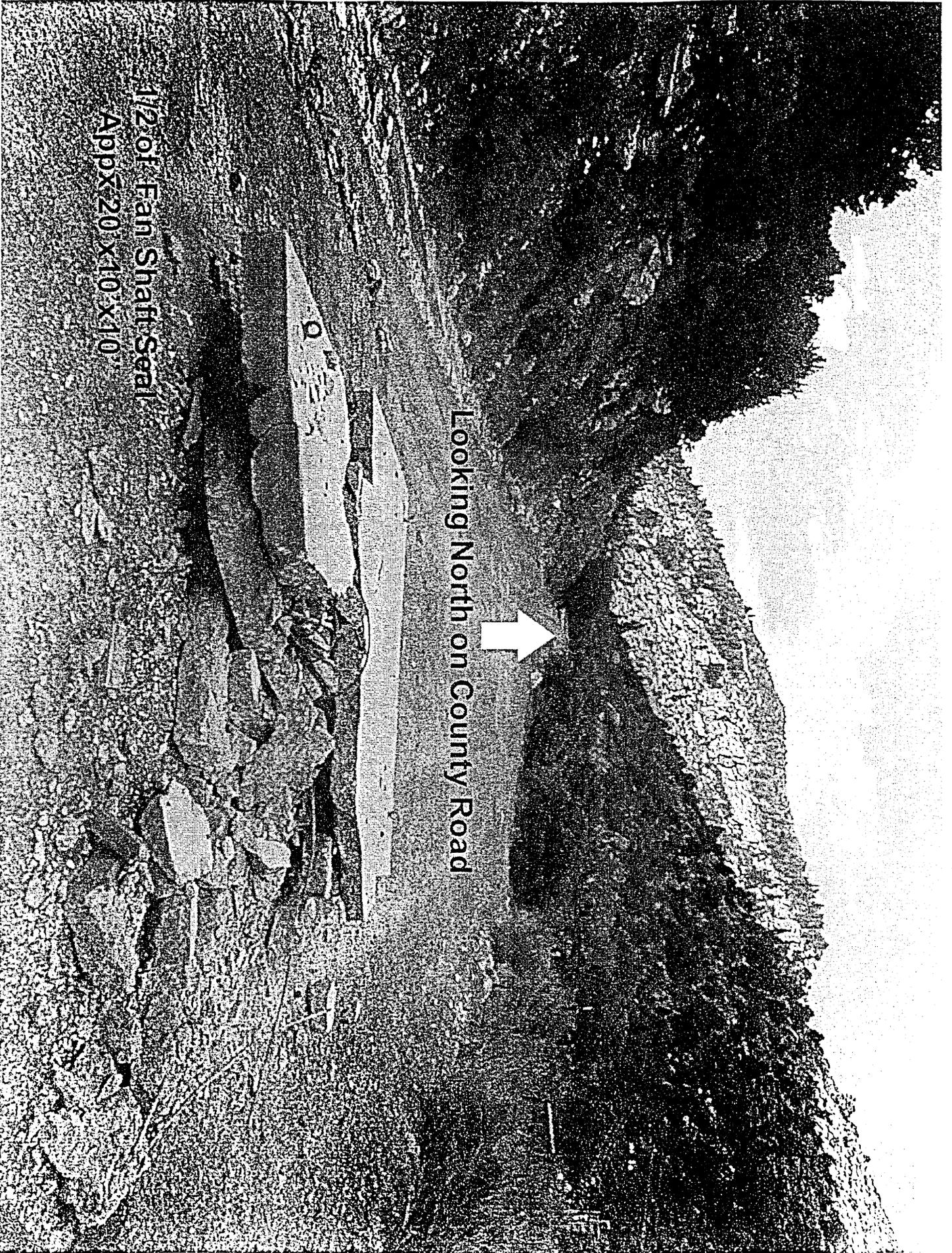
Fan Shaft
Dia 16' 8"
106' Deep

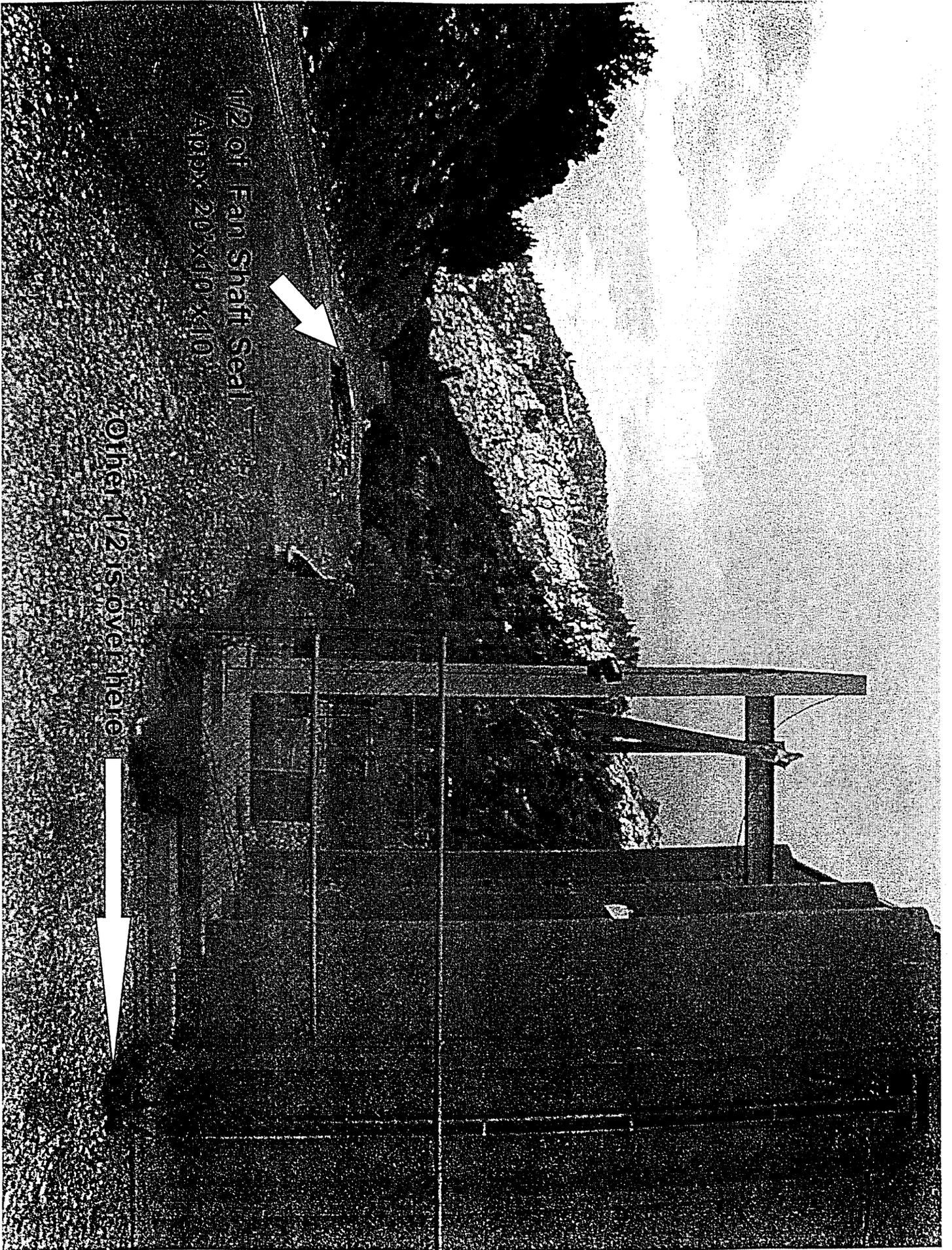
Filled with sand as of 7/5/00

Looking North on County Road



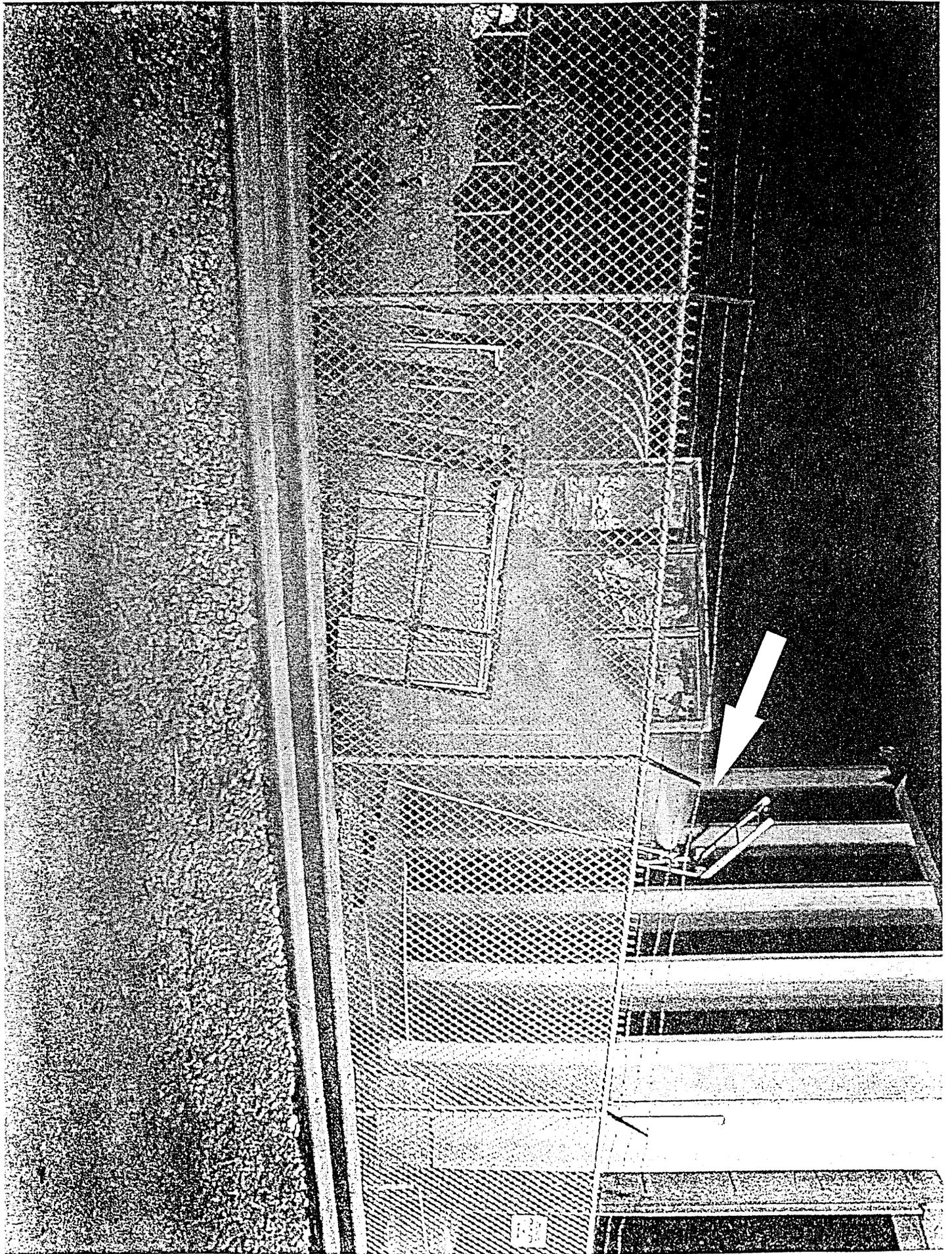
1/2 of Fan Shaft Seal
Approx 20' x 10' x 10'





1/2 of Fan Shaft Seal
Approx. 20" x 10" x 10"

Other 1/2 is over here

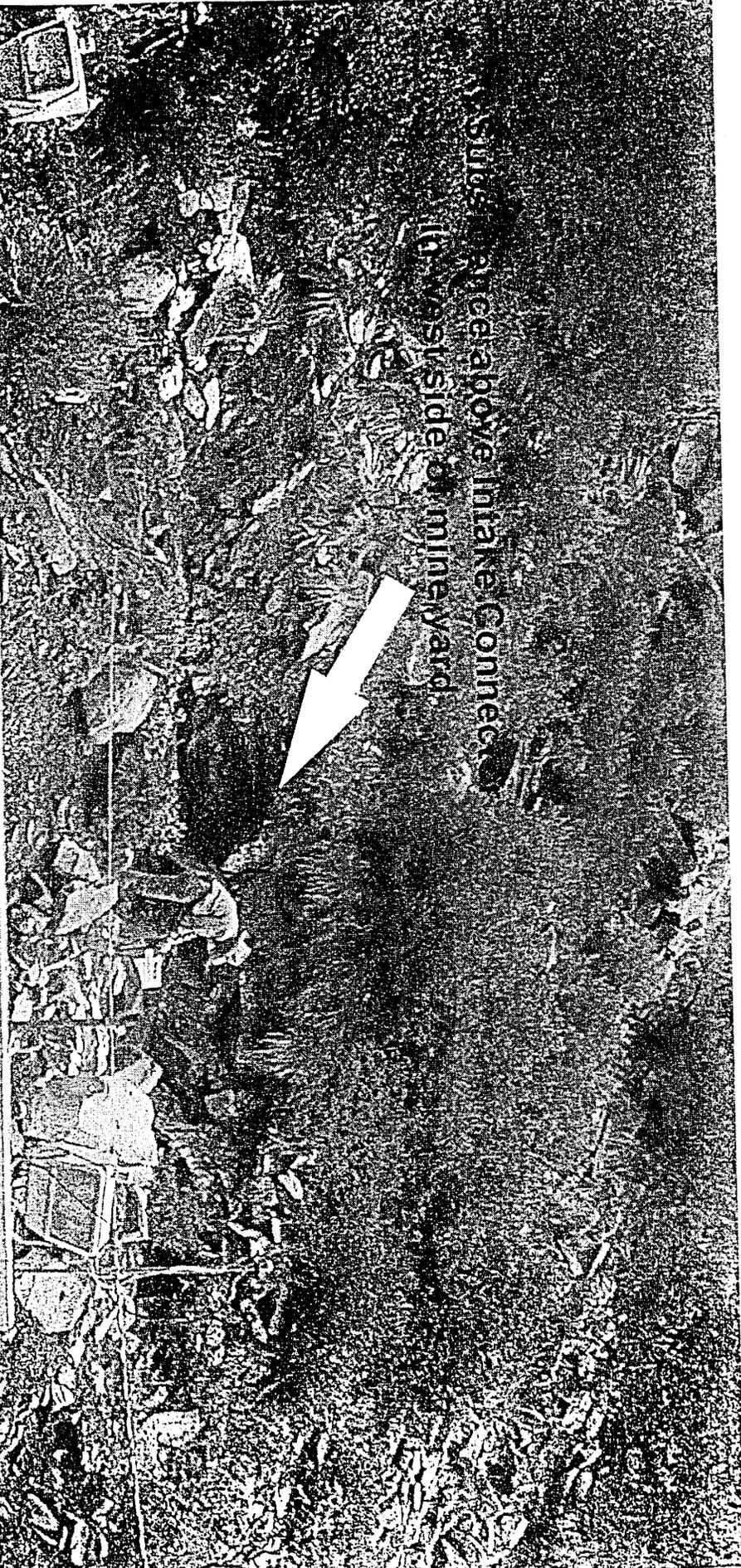


Slide area above intake concrete
(west side of mine yard)

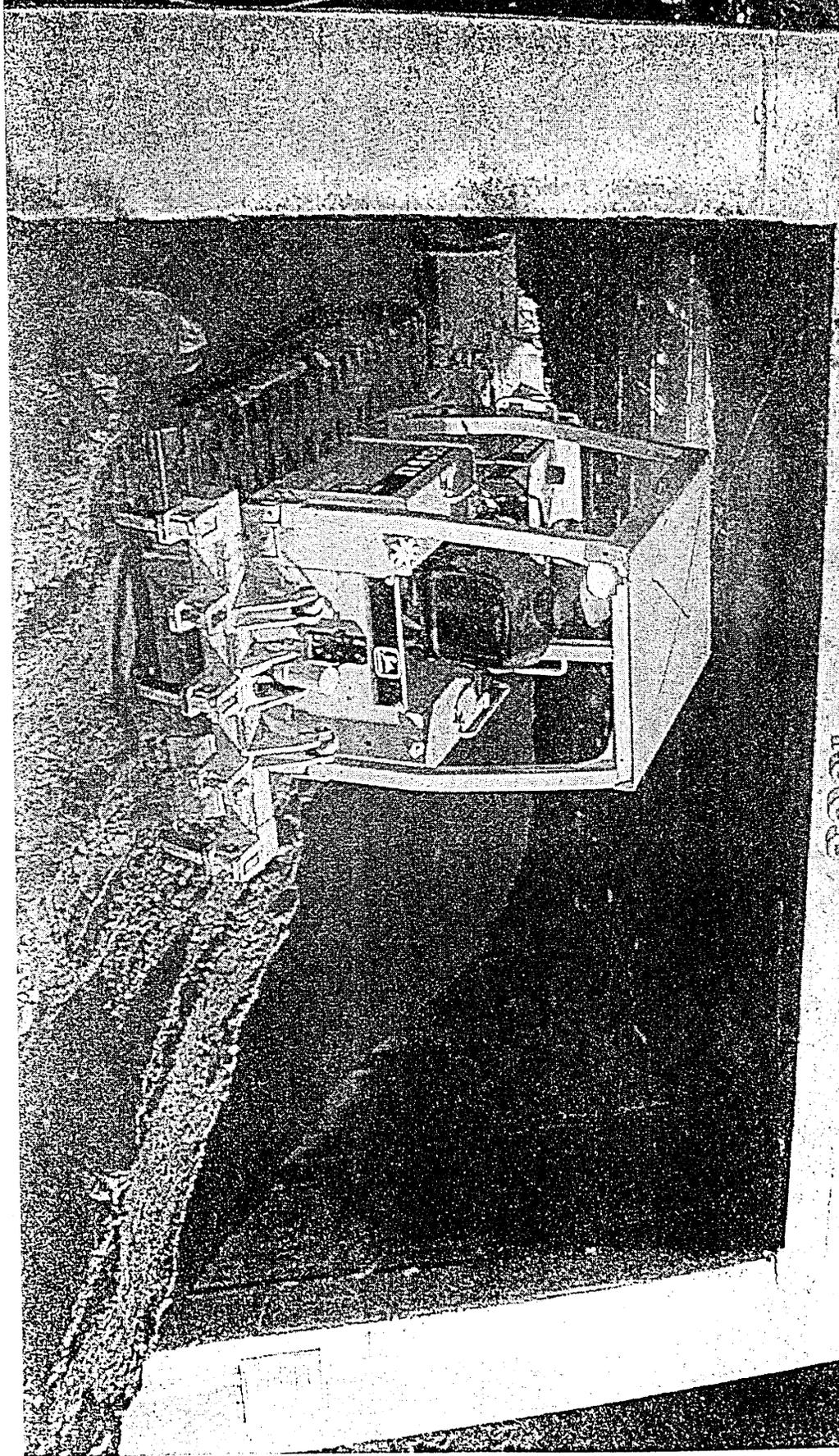


OLDER CREEK COAL COMPANY

1983



SOLDIER CREEK COAL COMPANY
1933

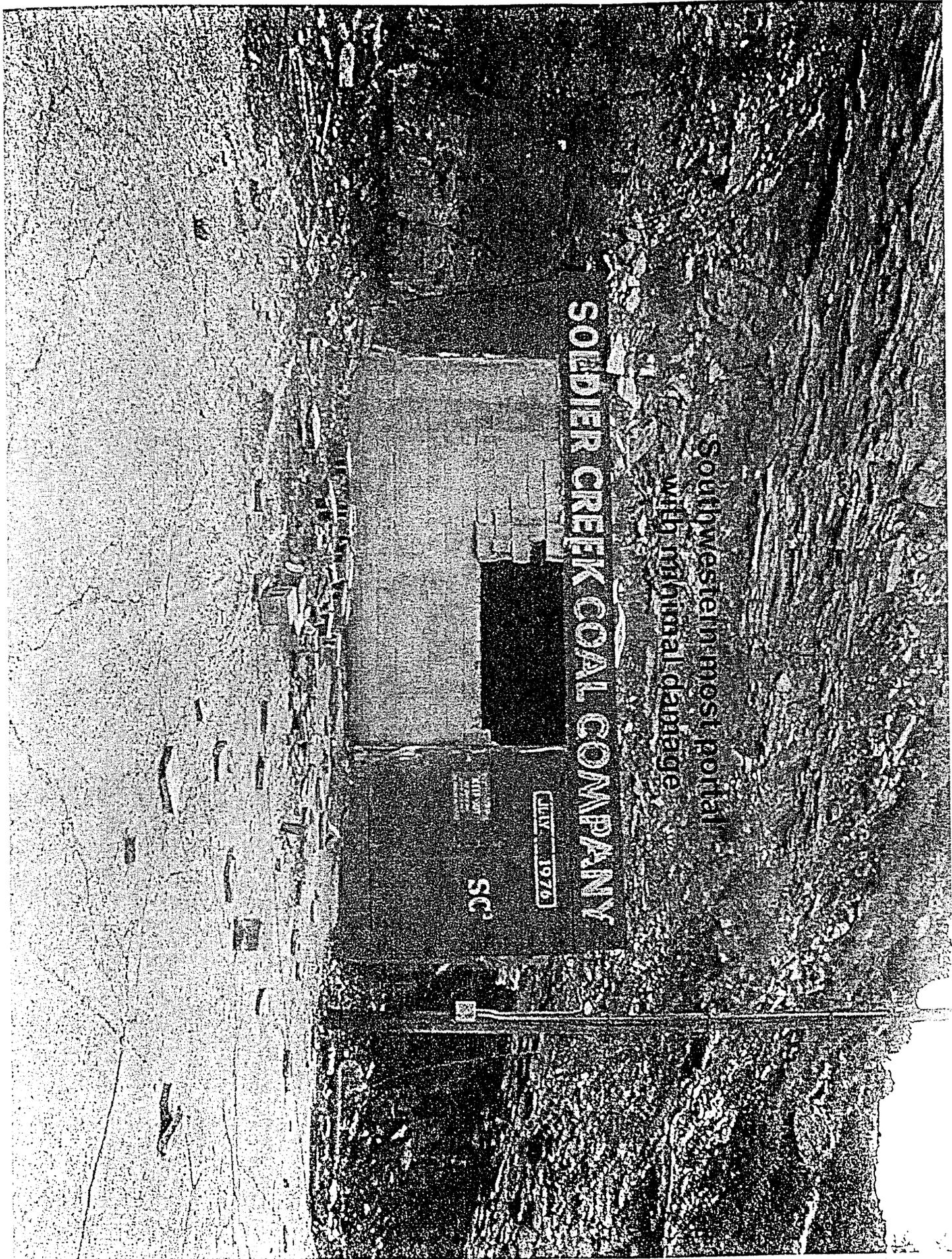


Southwestern most portal
with minimal damage

SOLDIER CREEK COAL COMPANY

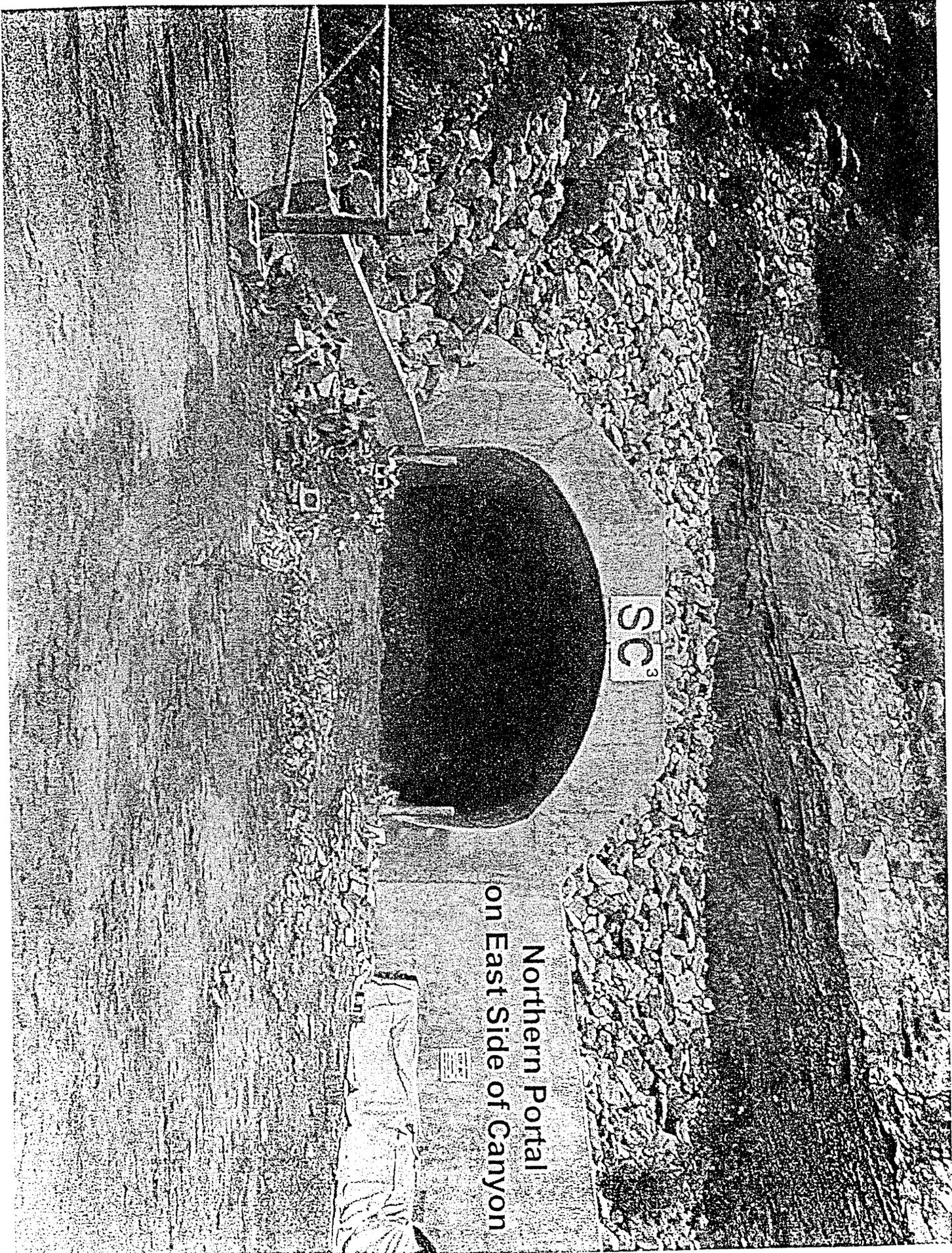
JULY 1976

SOLDIER CREEK COAL COMPANY
SC



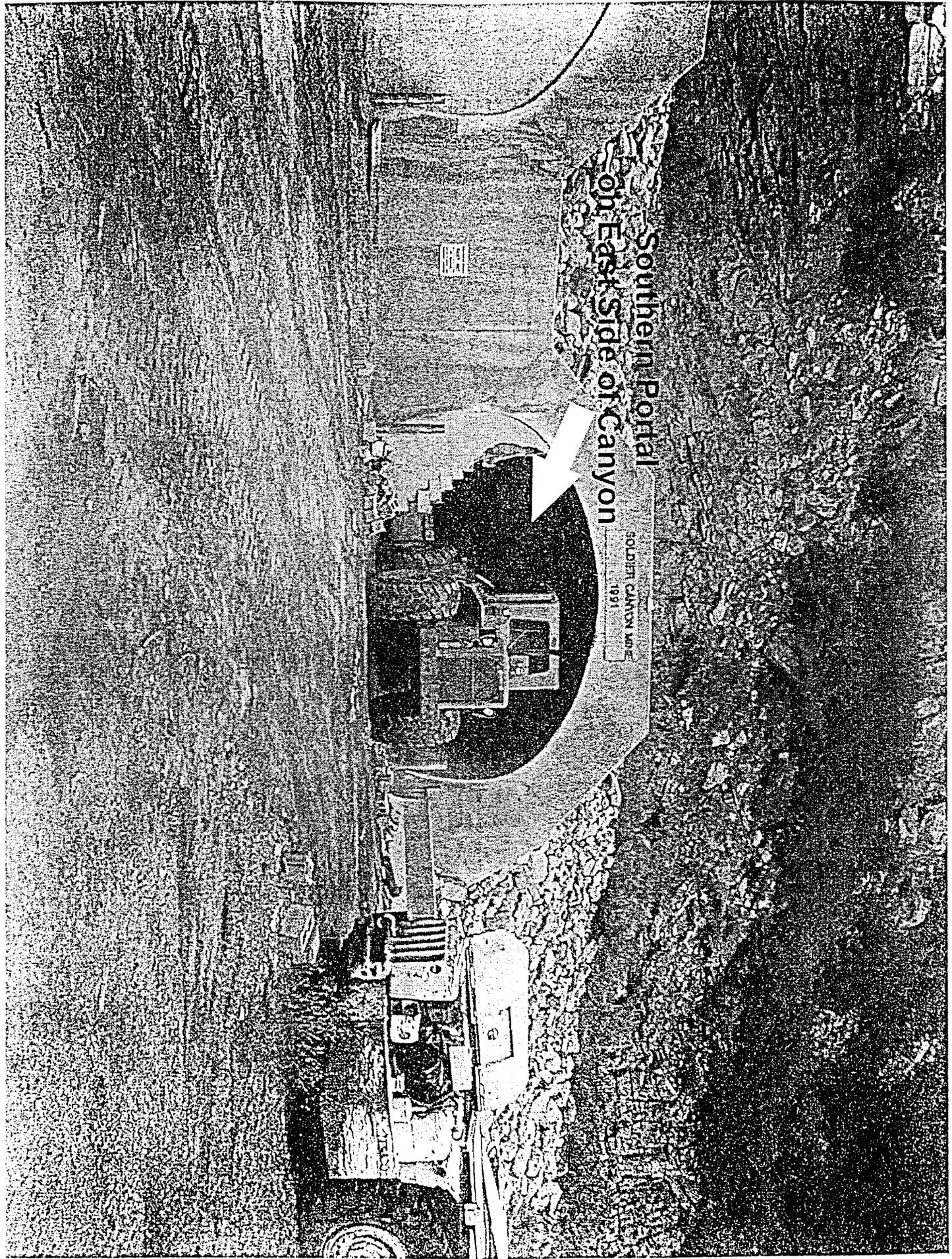
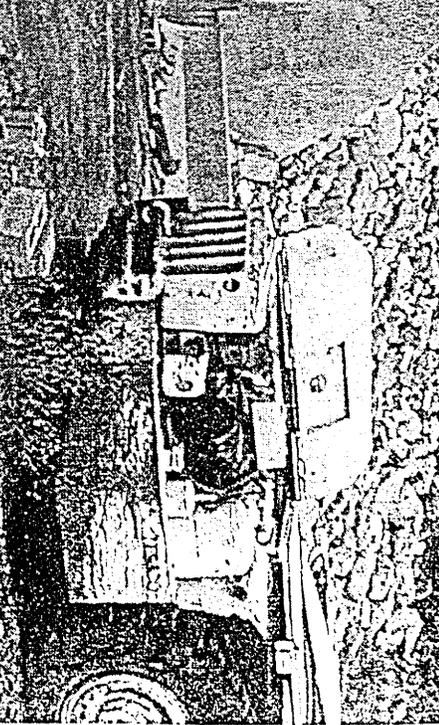
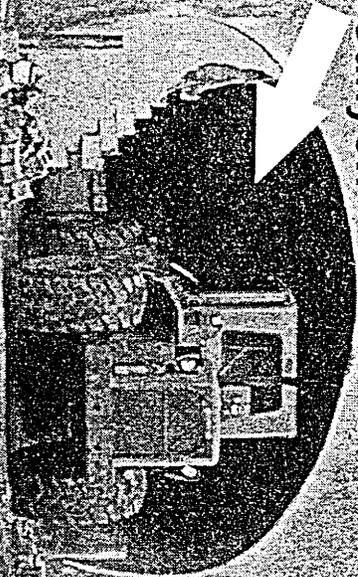
Northern Portal
on East Side of Canyon

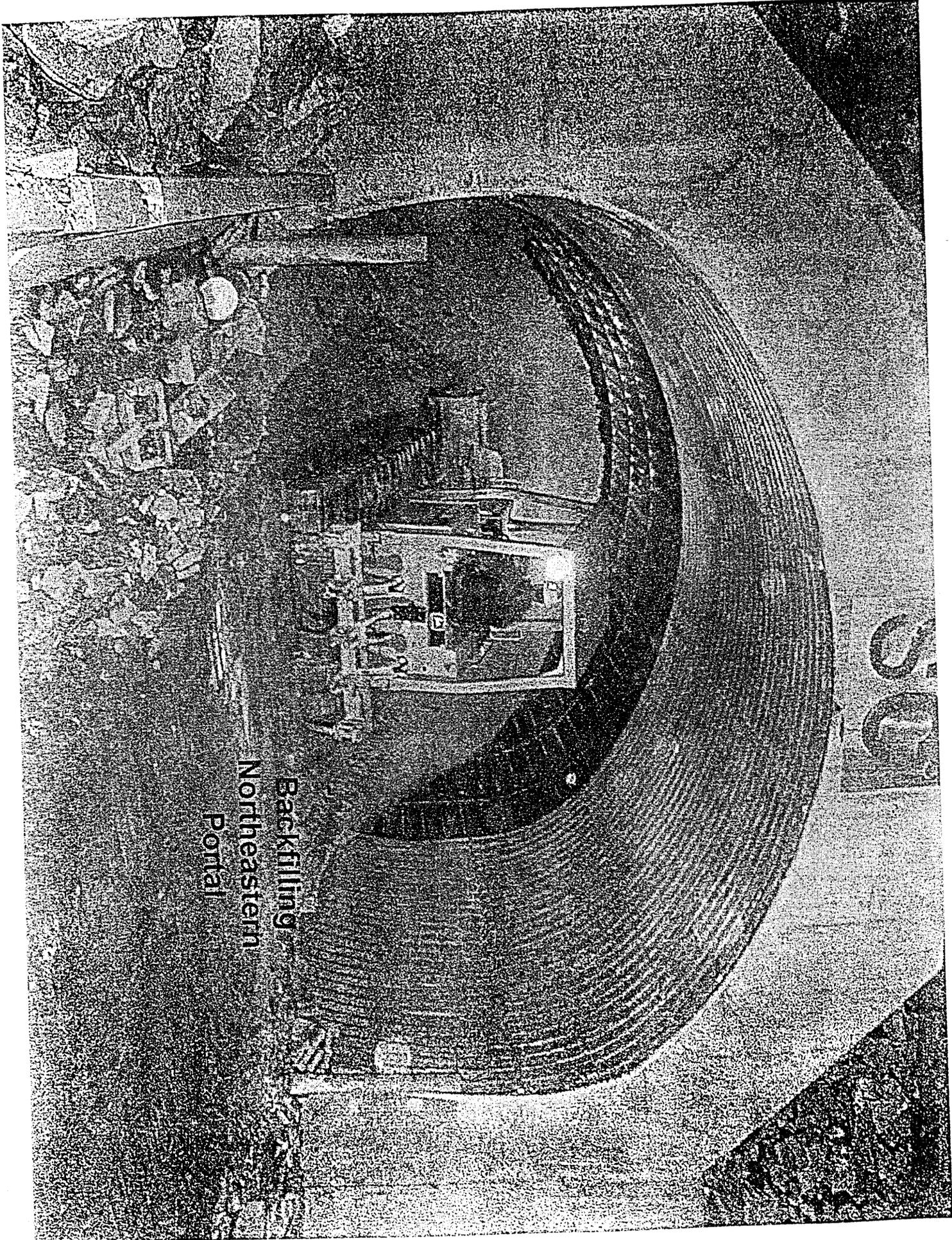
SC³



Southern Portal
on East Side of Canyon

SOLDIER CANYON
1991





Backfilling
Northeastern
Portal

PHOTOGRAPHS TAKEN DURING
RESEALING OF THE PORTALS
FOLLOWING THE 72 HOUR
MONITORING PERIOD

