

ACT/041/002

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# United States Department of the Interior

GEOLOGICAL SURVEY

SL-062583

Office of the Area Mining Supervisor  
Conservation Division  
8426 Federal Building  
125 South State Street  
Salt Lake City, Utah 84138

#2 Par

October 3, 1977

State Division of Oil, Gas, and Mining  
Attention: Brian Buck  
1588 West North Temple  
Salt Lake City, Utah 84116

file BOB mes

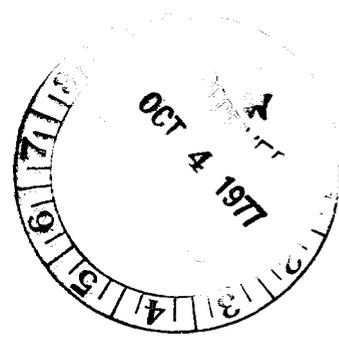
Dear Brian:

Attached for your files is Addendum No. 2 for the Convulsion Canyon mining and reclamation plan submitted by Coastal States Energy Company.

Sincerely yours,

*Ralph J. Blumer*  
Ralph J. Blumer  
Mining Engineer

Attachment



SOUTHERN UTAH FUEL COMPANY

Mine Plan

Addendum No. 2

September 26, 1977



The following amendments to the Sufco Mine Plan are in response to the points raised by the U. S. Forest Service as stated in its letter dated July 5, 1977 to the U. S. Geological Survey.

Page 8 - Wildlife

Delete - The only rare and endangered specie that occurs is the bald eagle.

Substitute - There are no rare and endangered species present. One unique species, the bald eagle, frequently winters on escarpments along the lease area. Impacts on this bird are minimal.

Page 8 - Section 211.10C(3)i

Delete - second paragraph.

Substitute - Recreation activities include primarily big game hunting and some snowmobiling. Big game hunting occurs in September and October. Snowmobiling occurs December through February.

Page 10 - Section 211.10C(4,5) item 2

In the previously filed Mining Plan, it was assumed that subsidence over the lease would be "even." As a qualification of the statement in the Mining Plan, the subsidence is envisioned to be even and uniform once the total area has been mined. There probably will be an uneven arching effect on the surface over the full-extraction mining areas during actual mining operations which will stabilize in uniform subsidence once the entire area has been mined. The total subsidence effect should be minor so as to not affect general land use.

Page 12 - Section 211.10C(6)ii

In the previously filed Mining Plan, it was stated that development entries will be kept at a maximum of 9' where possible. This statement should be

modified to say mining height in development entries will be kept at a maximum of 9' or 10' where possible to provide a stable and safe roof during mining operations.

Page 13 - Section 211.10C(6)iii

Delete - paragraph A.

Substitute - At the conclusion of mining the mine facilities area will be phased back to a natural and stable condition. The first stage expected to be complete in twenty-four months, consists of removal of steel and wood structures. Concurrent with this major disassembly, portals will be sealed as described below (B). Any unnatural unsalvageable material will be buried or hauled away for disposal. Concrete foundations will be buried intact with the graded material.

The second phase of reclamation concerns sloping the berms and constructing an open rock-lined channel to control surface water runoff from East Spring Canyon and Spring Hollow. These channels will generally overlay the existing underground drainage culverts. The existing drainage structures will be plugged or removed. Site will be scarified and sloped using a ripper bulldozer or similar equipment to a contour profile as generalized in cross-section D-D'.

After drainage control is accomplished, the third phase objective will be to provide vegetation for wildlife and livestock that inhabit the area. Topsoil will be salvaged to the extent that it is available. After the area is graded to the desired contour, the stockpiled topsoil will be dispersed and surface roughened. This roughing operation will reduce wind erosion and will allow water to accumulate and infiltrate the fill material. Moisture retained by

this treatment will contribute to establishment and maintenance of seedlings from native seed which is in the topsoil. It is expected that the available topsoil in the immediate area will fall short of the quantity required even without having to supply the channel area. Consequently, the lean topsoil will be fortified with phosphate and nitrogen at a rate of 40 pounds per acre per year. Since the surrounding landform is steep slopes with sparse ground vegetation, it is expected that this site will fare at least comparatively well. The site should also be attractive to pine seedlings which require a well drained and fairly sterile environment. Vegetation will be maintained by fertilization or reseeding as long as is required by federal reclamation regulations.

Page 14 & 15 - Section 211.10C(6)iv

Substitute entire section:

About 1,000 feet of improved road exists on the lease at the mine. In addition to being the truck haul route, it also provides access to Little Duncan Mountain through East Spring Canyon. This access may be desired for livestock driving or emergencies such as a forest fire. The company does not intend to revegetate the surface of the road, however, after reclamation of the mine site, the road will be closed if required by the Forest Service.

The mine site is isolated from the drainage of East Spring Canyon by a 72-inch culvert. In addition there is a 42-inch culvert which runs from a small drainage on the west into the 72-inch culvert. After mining, this drainage system will be replaced as described in Section 211.10C(6)iii A (revised). Precipitation runoff from the ten-acre site is channelled through a sediment tank to remove oil, grease and coal fines before discharge into the canyon. The walls of this concrete structure will be demolished and caved inwards with subsequent burial upon completion of the mining operation.

Page 17 - Item 8

In the previously filed Mining Plan, it is stated the Company will provide alternate water supplies if surface springs are dried up. The alternate supplies of water would encompass such methods as drilling wells and equipping them with windmills, constructing surface water retainage facilities such as ponds or cisterns, or piping water to the affected areas either by gravity or pumping.

Since the affect on individual spring areas is unknown at this time, it is difficult to say which method would be used in any individual area. A hydrology study will be conducted to determine the base availability of surface waters before the mining effect and the company will work with the U. S. Forest Service in determing acceptable future water placement if and where needed.

Page 19 - Section 211.401, item 1

The practice of dumping mine rubbish over the face of the dirt fill at the mine site has been discontinued. In the near future, exposed mine rubbish will be removed. At the present time, mine rubbish is being hauled away from the mine site and disposed of in a county dump. This practice or approved incineration, or other approved disposal methods will be used in the future.

Page 78 Insert of Addendum #1

The statement in Addendum #1 to the Mining Plan that addresses perched water tables moving as a unit during subsidence should be amended to state that it is envisioned that the integrity of perched water table units will probably be re-established after subsidence over the total mining area has taken place because the aquicludes which are the cause of the discrete perched water tables will probably not be permanently breached by subsidence. Breaching and partial

drainage of individual perched water basins may take place during initial subsidence but should be re-established once the subsided area has stabilized.

The original Mining Plan references on page 41 a 20' stratum of bentonitic shale which directly overlies the coal bed as being a particularly effective seal of ground water. This shale will be broken in the full-extraction mining areas by caving into the mined-out area and probably will not function as an aquiclude in those areas. However, there are many shale and impervious silt-stones strata overlying the coal bed at various elevations which will not be broken during caving operations and which should act as effective barriers to the downward percolation of ground water.