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**Southern Utah  
Fuel Company**

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(File ACT/041/002)  
Route Copy to Sue, Cy  
Tammy, Ken,  
Dave D. Subsidiary of Coastal States Energy Company  
w/m a p

August 31, 1982

Mr. James W. Smith  
Coordinator of Mined Land Development  
State of Utah Natural Resources and Energy  
Division of Oil, Gas and Mining  
4241 State Office Building  
Salt Lake City, Utah 84114

RECEIVED  
SEP 07 1982

DIVISION OF  
OIL, GAS & MINING

Dear Mr. Smith:

Southern Utah Fuel Company's North Mains mining section is scheduled to cross beneath Quitchupah Creek within the next two months. In your August 4th letter, you had concerns about the depth of mining activity below the creek, the amount and type of overburden and the pillar strength. Attached to this letter are a map, typical cross sections, and pillar strength calculations illustrating the future mining beneath the creek.

The actual creek crossing will be located in Section 29, Township 21S, Range 5E. The attached map shows projected entry locations, pillar sizes, and overburden contours in the creek channel. As shown on the map, the 4E Mains will cross the creek where the overburden varies from 50 to 100 feet thick. Full roof support is planned for this entire area.

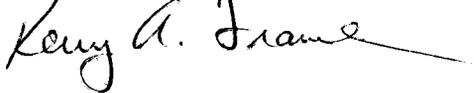
The typical cross sections illustrate the overburden above the coal seam and mining activity below the creek. A 100 foot buffer zone, where no second mining will occur, will be maintained on each side of the creek. Where second mining occurs adjacent to the buffer zone, full recovery will be halted so that a 12° caving angle will intercept the outside of the buffer zone (cross section B-B'). The 12° caving angle, or angle of draw, has been determined from subsidence measurements and has been included in previous subsidence report submittals. Where the overburden depth is less than 50 feet, no mining will occur within the buffer zone (cross section A-A').

The attached sheet showing pillar strength calculations uses 300 feet of overburden and a pillar size of 66 x 100 feet. The maximum overburden depth which will be encountered within the buffer zone will be about 300 feet and the smallest pillar developed for at least the next three years will be 66 x 100 feet.

Mr. James W. Smith  
August 31, 1982  
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If you require further information on this subject, please call.

Yours very truly,

A handwritten signature in cursive script that reads "Kerry A. Frame". The signature is written in dark ink and extends to the right with a long horizontal stroke.

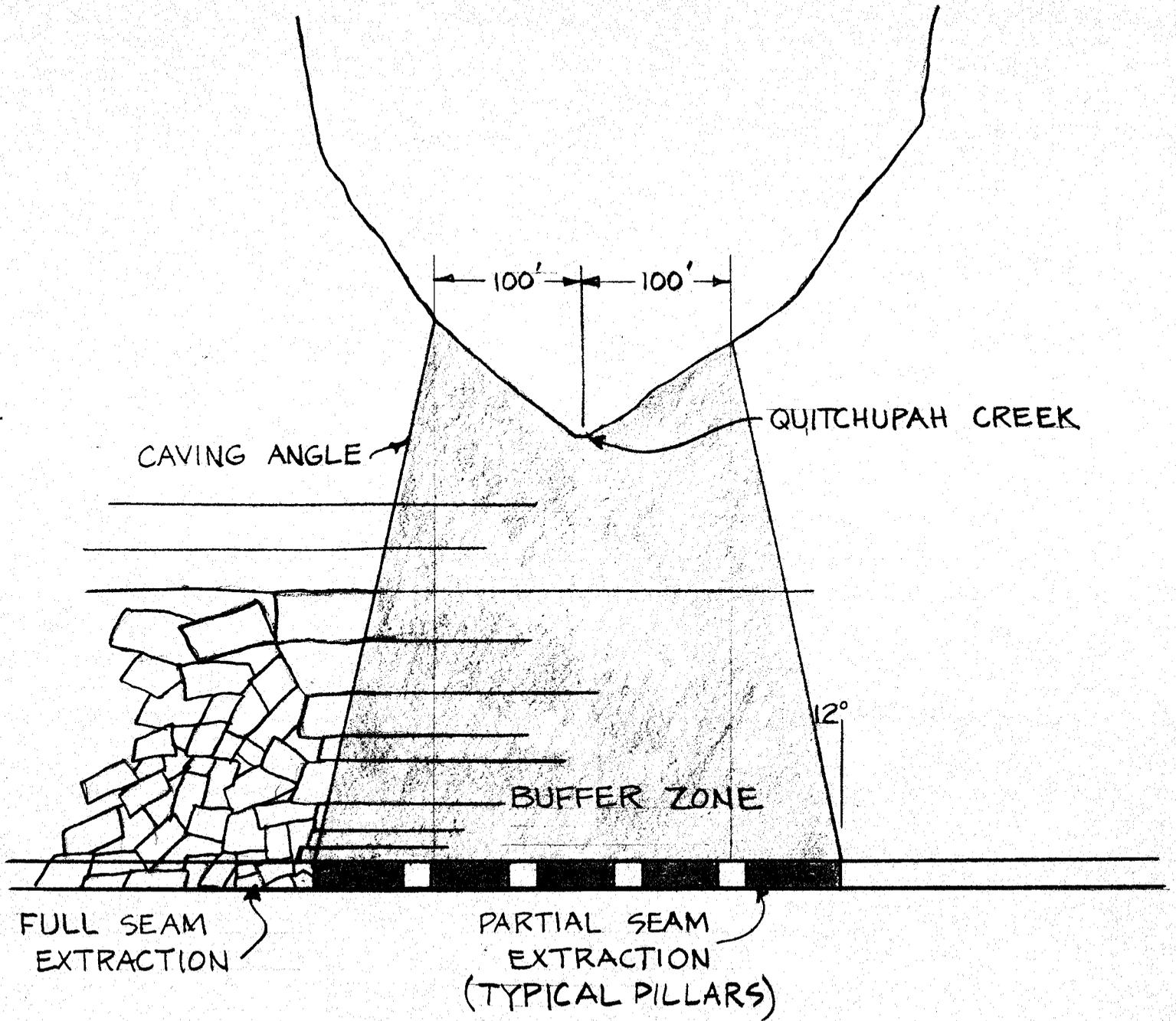
Kerry A. Frame  
Chief Engineer

ADD:dlj

Enclosures



# CROSS SECTION ● B-B'



SCALE:

1" = 100' HORIZ.

1" = 50' VERT.

## PILLAR STRENGTH

Overburden Weight - 160 lbs./cu. ft.

Overburden Depth - 300 feet

Pillar Size -

Center to Center - 66' x 100'

Actual - 48' x 82'

Compressive Strength of Coal - 3,090 psi (avg. of laboratory test)

$$\text{Load on Pillar} - \frac{66' \times 100' \times 300' \times 160 \text{ lbs./cu. ft.}}{48' \times 82' \times 144 \text{ sq. in./sq.ft.}} = 559 \text{ psi}$$

$$\text{Safety Factor} - \frac{3,090 \text{ psi}}{559 \text{ psi}} = 5.5$$