0034

Beaver Creek Coal Company
P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050

LE
ACT/007/016, #3

cc to Steve C.
Rick Sm.
Pam
Wayne

RECEIVED
FEB 27
DIVISION OF OIL
GAS & MINING

February 25, 1985

Mr. Leon E. Berggren
Bureau of Land Mangement
P.O. Drawer AB
Price, UT 84501

Dear Mr. Berggren:

This letter is in regard to Special Condition #8 of the Gordon Creek #2/7 Mine permit:

Special Condition No. 8

Before further secondary mining takes place inside of a 20 degree angle of draw measured from vertical on each bank of the Beaver Creek, the permittee must demonstrate through submittal of sufficient technical information and analysis, subject to regulatory authority approval, that Beaver Creek is not likely to be affected by subsidence.

Even though the areas on each side of the current section underlying Beaver Creek have already been extracted, no signs of subsidence have been detected. However, in order to prevent possible subsidence due to the current section, pillars will be left unmined approximatley 200' on each side of Beaver Creek. Pillar size is derived from calculation and practical experience of Valley Camp (closest mine in the area). Valley Camp is currently using 20' x 60' pillars to successfully support 500' to 900' of cover while extracting the 16' seam height. The included calculations and practical experience indicate the 40' x 70' pillar centers will be more than adequate to support the 550' of cover underlying Beaver Creek.

For the above reasons, Beaver Creek Coal Company is requesting the minor modification of our mine plan for 22 Section as included. Economically recoverable coal within the buffer zone on each side of the main development will be extracted similarly to protect Beaver Creek. If you have any questions, please call. Time is of the essence.

Sincerely,

Michael P Watson

Michael P. Watson
Engineering Supervisor

MPW/sb

Enclosures

cc: J.A. Herickhoff (BCCC)
D.W. Guy (BCCC)
Mary Boucek (DOGM)
Walt Swain (OSM)
File
IBM-W1

Calculations

Cp = Pillar Strength

C = Compressive Strength of 1 to 1 Width to Height Coal Sample

W = Width of Pillar

H = Height of Pillar

R = Recovery Factor

A_1 = Area of Entry

A_2 = Total Area

S = Vertical Stress

F.S. = Factor of Safety

PILLAR STRENGTH

$$Cp = C \left[.778 + .222 \left(\frac{W}{H}\right)\right]$$

$$Cp = 3200 \left[.778 + .222 \left(20/8.5\right)\right]$$

$$Cp = 4161 \text{ psi}$$

RECOVERY FACTOR

$$R = \frac{A_1}{A_2}$$

$$R = 1800/2800 \qquad R = .64$$

VERTICAL STRESS

$$S = 1.11 \text{ (overburden)} \qquad S = 1.11(550) = 610 \text{ psi}$$

SAFETY FACTOR

$$F.S = C_p (1-R)/S$$

$$= 4161(1-.64)/610$$

$$= 2.4$$


BEAVER CREEK COAL COMPANY
GORDON CREEK #2 MINE
WEST 22 SECTION
SCALE 1"=200'
4-1-77 RETREAT
6-1-77 RETREAT
SANDSTONE
SOARS
FEDERAL LEASE U-8319-1
BEAVER CREEK
500'
600'
200'
700' COVER
N