WELSH SLATE COMPANY
TURBINE DRIVEN PUMP 1873

From the "Engineer"  Courtesy Graces Guide
Oakeley Slate

Fig. 50

WELSH SLATE COMPANY’S QUARRY

ROBERT OWEN’S THEORIES ABOUT FALLS

(i)  (Why there are many falls.)

Working and removing the Back Vein Walls cuts the "chain" of rock causing the underlie to fall forward crushing the W.S.Co. walls below.

Rebuttal:
If this was the case then the most severe "crushing" action would be nearest the surface. However, the walls first began to give way in the lower regions, as the lowest floors were worked forward.

(ii)  (Why the Back Vein should be stopped.)

Removing the Back Vein walls will remove the support of the overlie, which will fall in, smashing through the Clay Slant roof into the W.S.Co. chambers.

Rebuttal:
This assumes that the Back Vein dips at the same angle as the North Spar and so the thickness between the two veins decreases with depth. In fact, the bottom of the Back Vein is denoted by the Ifthen Coch, a hard parallel to the Clay Slant. Thus the two workings are a constant 98ft. apart.

Note:
This theory of Robert Owen's contradicts that above, in that he considered in (i) That the roof of the Old Vein was held up by cohesion, yet in (ii) That the roof of the Back Vein was held up by the walls.
Oakeley Slate Fig. 31
SKETCH TO SHOW INCLINATION OF PILLARING & EFFECT OF DEPTH

Oakeley Slate Fig. 32
SKETCH TO SHOW EFFECT OF PILLARING ON LAYING OUT OF WORKINGS

1) TRADITIONAL MEASUREMENTS
2) EFFECT OF PILLARING
3) EFFECT OF OWEN'S KEEPING TO SOFT CHAMBERS AT RIGHT ANGLES TO PILLARING
"PLAN OF A NEW LIFTING POWER"

Original Drawing dated 4th March 1874

Presumed to be the A5 Incline - but virtually identical to the later "K Trvnc" - maker unknown

Based on Z/DAF/2317

From original lettering syle - possibly deWinton of Caernarfon
OAKELEY SLATE QUARRIES
LOWER QUARRY CROSS-SECTION
1880's
TO GET THE HEART
OUT OF THE MOUNTAIN
- AND LEAVE THE REST
TO THE DEVIL!

HOLLAND &
RHIBRYFDIR Co.
LEASE EXPIRY
1877-78

ILLUSTRATIVE ONLY -
NOT MEANT TO REPRESENT
ANY SPECIFIC WORKINGS

AS IT SHOULD NOT HAVE BEEN LEFT - ALL DEVELOPMENT WORK TO DO!

AS IT SHOULD HAVE BEEN LEFT - READY FOR THE LESSOR TO WORK ON.