

them : limestone becomes crystallised ; shale is indurated ; anthracite, copper ore, iron pyrites, and bad serpentine, are generated at the contact. The large trap district of Llandegley, Llandrindod, and Builth, present a variety of such phenomena, and the mineral springs of Builth, Llandrindod, &c., are supposed to be residual effects of the same igneous agency. In Brecknockshire and Caermarthenshire, similar phenomena are repeated around several erupted masses of trap.

The Malvern and Abberley Hills consist chiefly of sienitic rocks, which have burst up among the Silurian strata, and partially thrown them into retroverted positions. The grauwacke rocks are much altered (so as to assume the aspect of chloritic and micaceous schists) by the trap which is protruded among them.

Mineral Veins.—In the Shelve district of Shropshire, and at Nanty Moen, seven miles north of Llandovery, the lead mines are so related to the axis of irruption of the igneous rocks, as to leave no doubt of the propriety of classing them as an effect of the same volcanic excitement, not perhaps contemporaneous with the irruption of trap, but certainly and strictly associated with it, and dependent upon it. Sulphate of barytes, sulphure of iron and carbonate of lime, accompany the ores of lead.*

Close of the Primary Period. — Ensuing Disturbances of the Crust of the Globe.

There is almost a total absence of proof, in the mineral composition and organic contents of the primary strata, of the contemporaneous existence of dry land: for all the early periods at least, the absence of land plants, and the non-occurrence of conglomerates, seem to justify a doubt whether the sea of that period was subject, in the regions now dried, to any thing of the nature of land flood, or littoral agitation. In the slate and Silurian systems the marks of agitation in the sea become

* Murchison, Proc. of Geol. Soc. 1834.