

BULLETIN

News from SubTerra, Inc.®

Evaluation of Abandoned Mine Impacts on Surface Development Cle Elum, Washington

SubTerra, Inc was retained by Sapphire Skies to evaluate the potential impacts from abandoned underground coal mines on the development of a 300-acre site above the City of Cle Elum, WA.

SubTerra's scope of work included:

1. Obtaining and digitizing abandoned coal mine plans, geo-referencing plans and developing a plan showing the relative position of mine workings and proposed surface developments.
2. Field investigation to identify near surface, abandoned mine features including shafts and declines.
3. Proof drilling and borehole videography to confirm the accuracy of mine plans and determine the height of remnant void space.
4. Complete an analysis of sinkhole and subsidence potential; define the risks affecting development; and recommend additional site investigation work that would need to be completed.

Below: AML decline access



Surface reconnaissance mapped out and characterized existing sinkholes.



Boreholes were drilled and logged to characterize shallow mine areas. Borehole videography was essential to characterizing remnant mine conditions that could not be adequately defined solely by drilling.

