

## INDUSTRY CASE STUDY

### Moman Residence—Scottsdale Grouting

#### Situation:

Existing subsurface soil conditions facilitated the foundation movement of the existing residence. Previous grouting and subsurface rocks made driving grout tubes impossible in some locations. Water infiltration was suspected under the house with high moisture contents observed. Stabilize the house and stop future movement in the floors and foundations was the ultimate goal.

#### Challenges:

Much of the required work was inside the house precluding the use of large equipment. Compaction grouting with high slump materials was tried in the past with poor results. Underpinning would have proven ineffective because of the rocky/grouted soils and chemical grouting proved too expensive.

#### Solution:

Used low slump permeation grout. We predrilled using unique hydraulic drill with power sources out side the home. This enabled the use of a compact drill that could drill through the rocky sub soils and prepare the way for grout tubes. A grout wall was established on the west end of the house where it was strongly suspected subsurface water was coming from

#### Conclusion:

The process took 80 days. During the grouting operations, larger takes of grout were encountered at one corner of the home, necessitating additional grout locations in areas that were not anticipated. The home has been stabilized and no further movement has been reported.



Crack in concrete slab



Grout being pumped under the house

