

Cave Resources in Jeju Island

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I. Preface

Jeju Island is formed by lava flow streams with the Mt. Halla in the center. The Mt. Halla's crater or other parasitic volcano produced lava flows creating lava plateau in this area.

There are one thousand volcano caves in the world, and 50% of them are located in the west coast of United States. There are 186 volcano caves in Italy, 100 in Mt. Fuji, Japan, and 70 in Jeju Island. Jeju Island's east-west axis four sides are world-renown volcano zones with basalt strata that feature low viscosity and fluidity.

II. Cave formation and cave resources

The cave features are determined by lava flow and its cooling and crystallization processes. There are caves that are filled

with gas, post-lava flow formation caves, or the combination of these two. Also, there are caves that are created upon burned down forests by lava flow.

There are notably 100 caves in Jeju Island, but 60 of them are important. 39 of them are located in Pyoseon-ri basalt areas, 7 are in Jeju lava plateau, 4 in Siheung-ri lava plateau, 7 in Halla lava plateau and 3 in Hahyo-ri lava plateau. The Pyoseon-ri basalt stratum has 200m of width at maximum and has 90-70m width at minimum. The lava features high temperature and low fluidity, and 80% of Jeju Island's volcanoes are located in this geological stratum.

Likewise, the geological features of cave interiors are determined after the cave was formed. Major cave resources are shown in below.

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1. Billemot Cave

- Designated as the Natural treasure #342 in 1984 with total length of 11,749m. The cave features rather tangled shape of peripheral caves. There are stalactite, siliceous sinter, lava hills, stone pillars (which are made of silicone, oxygen, and hydrogen) and lava tree moulds.

2. Manjang Cave

- This cave has total length of 8,928m, being the second longest cave in Jeju Island. The inside of cave is famous for a lava stone pillar with its length of 7.6m.

3. Susan Cave

- It has length of 4,675m, and there is stalagmite and a lava bridge with 140m length.

4. Socheon Cave

- This cave belongs to Hyeopjae Cave type. It is Natural Treasure #236 with its length of 2,980m. There is mini tube formed inside the Socheon cave.

5. Waheul Cave

- It has length of 2,066m, and there are lava stone stalagmite, lava columns, lava stalactite and siliceous sinter.

6. Micheon Cave

- It has length of 1,695m and the entrance is gas fumarole.

7. Handeul Cave

- This cave has a circle shape with length of 1,400m, and there are lava ledge, siliceous sinter and silicone stalactite.

8. Chogiwa Cave

- This cave belongs to Hyeopjae Cave type and is divided by a main cave and a supplementary cave..

9. Hyeop Jae Cave

- It is designated as the Natural Treasure #265 in 1971 and has length of 99m. Calcareous stalactite and stone pillars are growing within the cave.

10. Ssangyong Cave

- It has the length of 393m and is a type of Hyeopjae Cave. Calcareous stalactite and stone pillars are found within the cave.

11. Gold Cave

- It has the length of 140m, and there are Calcareous stalactite, stone pillars and lava stalactite.