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will soon be  
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# WESTERN MINERALS, INC.

580-A NO INDIAN ROCKS ROAD  
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## VOLCANIC AND PLUTONIC ROCKS OF PUERTO RICO

1. Amygdaloidal basalt, Eocene. On 416 about 1 Km W of 403, SSE of Aguada.
  2. Dacite, Point Cadena. Outcrop on 429 above the point.
  3. Spilite (L. Cretaceous ?) quarry on highway 105 SE of Mayaguez
  4. Bemeja amphibolite (U. Jurassic-L. Cretaceous?) Occurs as huge blocks in serpentinite. Las Palmas, Rt. 303, SW cor. of P.R. See Tobisch, 1968.
  5. Serpentine, same locality as 4.
- NOTE: Rain prevented collecting basic dike at locality 4. See Tobisch for data.
6. Andesite, big cut S of Sabana Grande on Highway 2, just E of pedestrian overpass, SE side of highway.
  7. Quartz diorite at dam, Precas de Loco Lake (Presada Loco on map) SE of Sabana Grande.
  8. Coarse grained diorite of Utada Pluton, riverbank outcrop on Rio Grande at bridge Highway 603, 1 1/4 mi. SW Utado.
  9. Older pluton, Utado plutons. Dark quartz diorite. Outcrop on E side of highway 10 NE of Hacienda Santa Elena and 4-500 m N of Municipio de Utada N N of Adjuntas Quad. line.
  10. Fine grained diorite, Tkd, on highway 10, small pluton. Outcrops on curve just W of P of Portugues, S.Gen. rectangly, Adjuntas Quad.
  11. Basalt in Robles fm. Albian ?, BM 809.4 just N of Escuela Segunda Unidad de Banta in E.Gen. Rec. Orocovis Quad.
  12. Pillow Lava, Km 34.3 on Rt. 155. Rpv, Pozas fm. Orocovisic quad.
  13. Welded Tuff, 18.8 KM on Rt. 157 near cen. N part NGen Rectangle
  14. Andesite, 14.5 on Rt. 157 NW Orocovis Quad.
  15. Hornblende diorite, older pluton, on rt. 144, 2 Mi E of 149.
  16. Facies of Utada pluton on Rt. 144, at 1.6Km. Utada Q.
  17. Lapa fm., Tetas Lava (High  $K_2O$ ) Km 70.2 Highway 1.
  18. Lapa Lava, on highway 723 1.1 Km S of 143, SW of Barranquitas *Presumably High K<sub>2</sub>O*
  19. Quartz keratophyre Rt. 3, Quarry W side of rd. UCret.-Tertiary.
  20. Rhyolite on Rt. 982, 2 Km W of highway 3. See Briggs, USGS Bull. 1372G.
  21. Basalt Breccia, quarry W side highway 3 N of El Motillo
  22. Porphyritic basalt, approx. 1 Km S of 925 on Highway 3, outcrop in parking lot of a night club.
  23. Diorite, San Lorenzo batholith, older than Utada pluton. Pta. Guayanes.

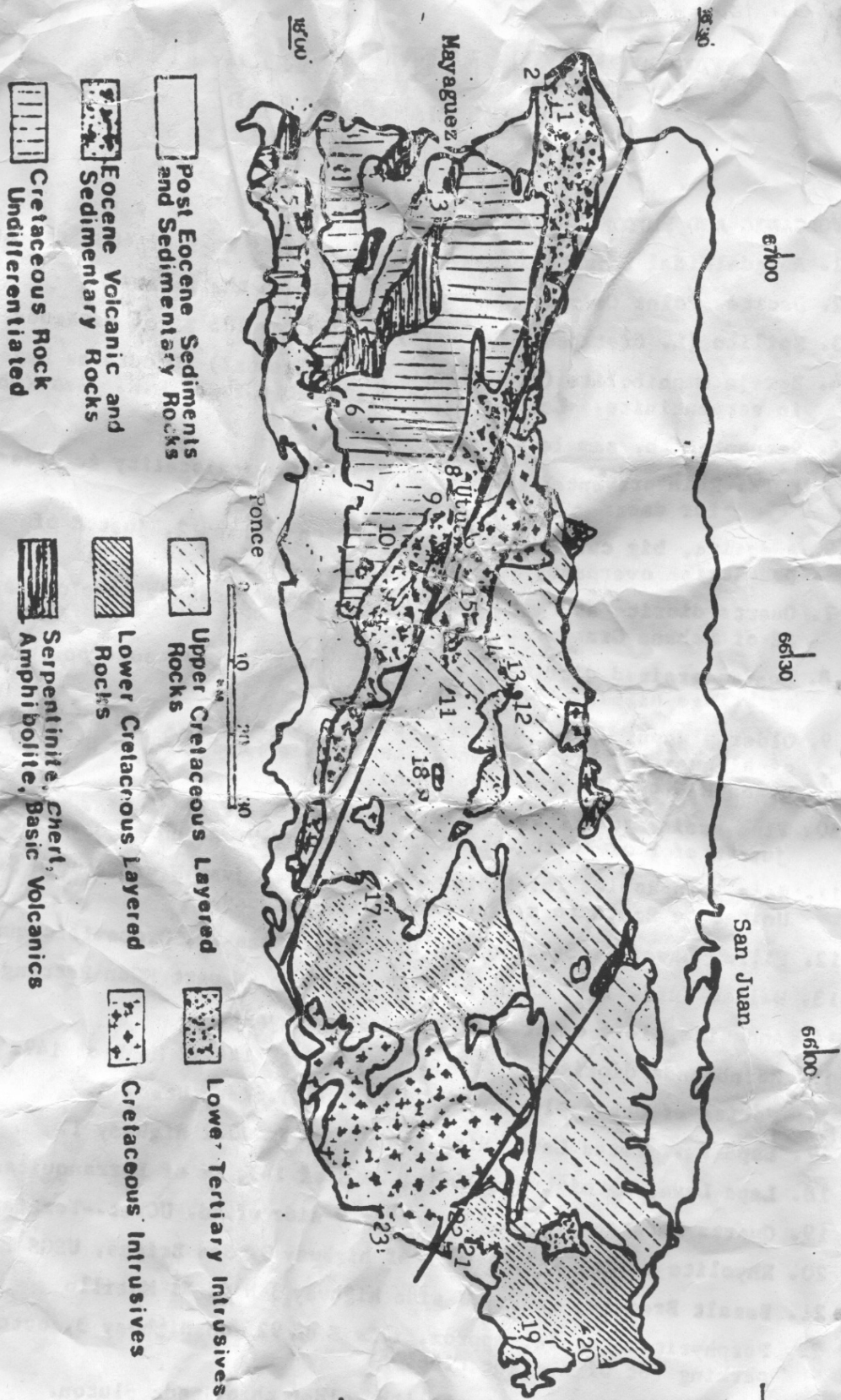


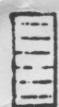







Fig. 1 Geology of Puerto Rico, Puerto Rico Volcanic Suite numbers

 Post Eocene Sediments and Sedimentary Rocks  
 Eocene Volcanic and Sedimentary Rocks  
 Cretaceous Rock Undifferentiated

 Upper Cretaceous Layered Rocks  
 Lower Cretaceous Layered Rocks  
 Serpentine, Chert, Amphibolite, Basic Volcanics

 Lower Tertiary Intrusives  
 Cretaceous Intrusives