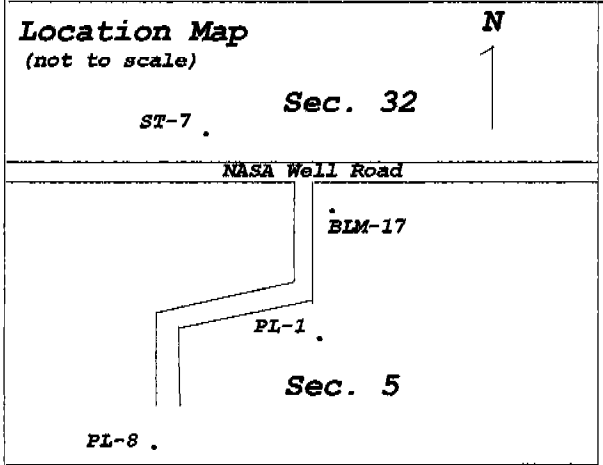
WSTF We.. Borehole Lithologic/Geop..ysical log

Location Map
(not to scale)



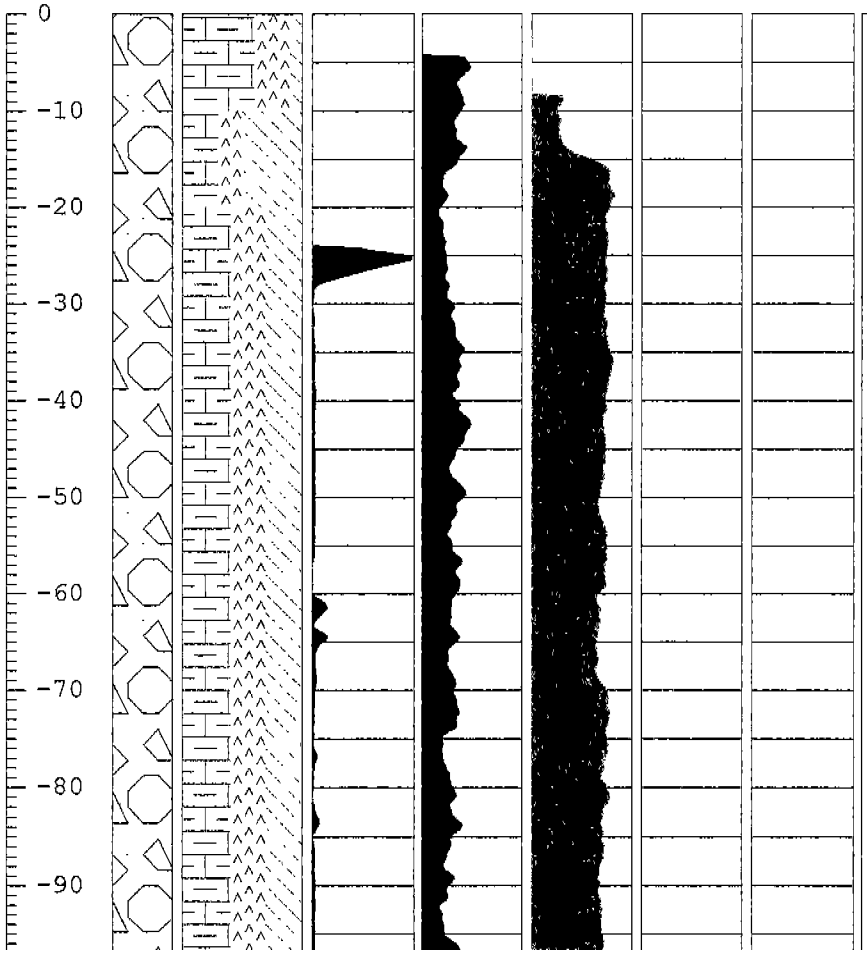
Location Description

Quarter 1: NE 1/4 Section: 5
Quarter 2: SW 1/4 Township: 21 S
Quarter 3: SW 1/4 Range: 3 E

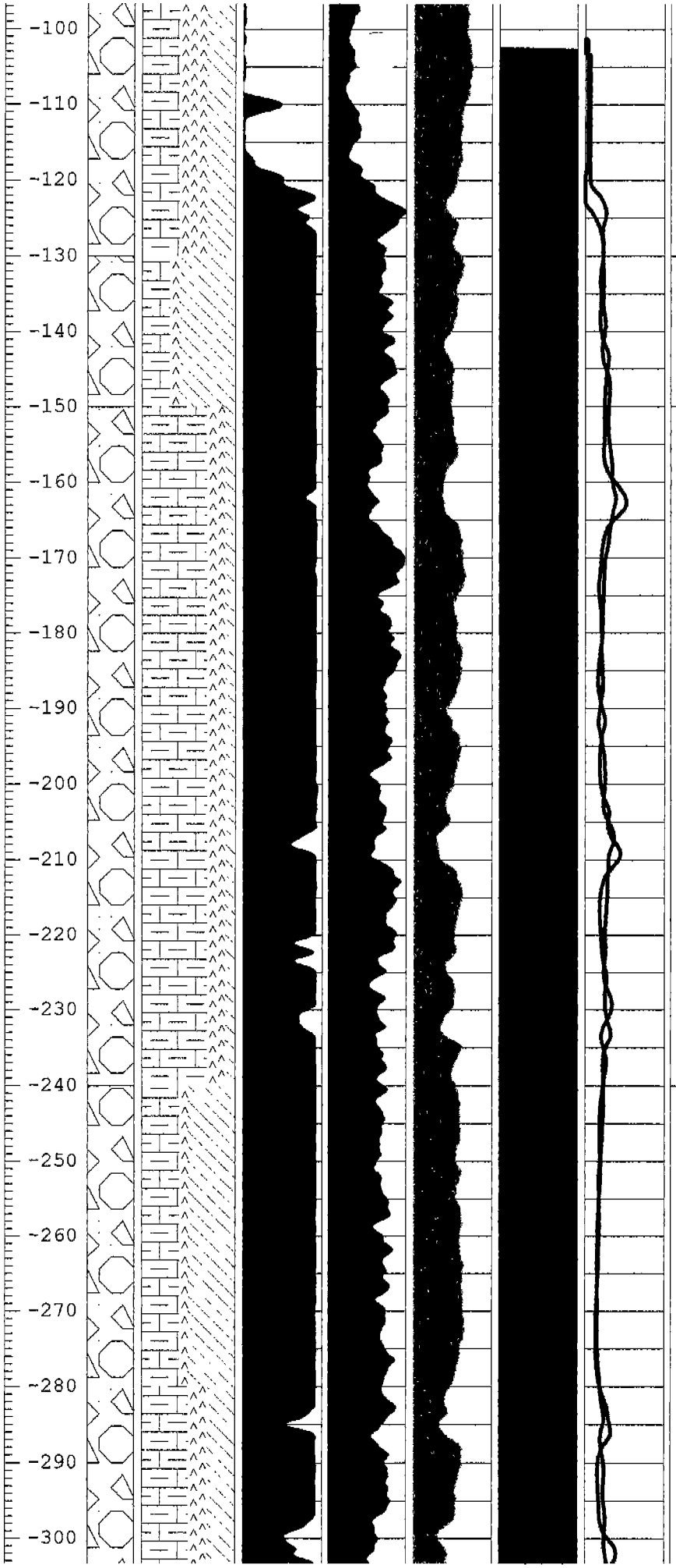
Site I.D: NASA-WSTF Location I.D: PL-8
County and State: Dona Ana County, New Mexico
Site Coordinates: N-224063.61 E-399235.94
Ground Elevation: 4469.63'
Total Depth of Borehole: 1,020'
Depth to Bedrock and Type: Not intercepted.
Depth to Groundwater from Geophysics: 375'
Drilling Method(s): Mud Rotary, reamed 17.5" to 122'; set 14" OD surface casing to 122'. Drilled 12.25" to 1,020'
Drilling Contractor: Stewart Brothers Drilling Co.
Geophysical Survey Contractor: Southwest Geophysical, Inc.
ATSC Field Representative(s): G. Giles, L. Hunnicutt-Mack, M. McClure, J. Pearson, and M. Rivera
Dates Drilling Started and Completed: 3/22/99 to 4/6/99
Comments: Retrofit Westbay well inside 4.5" OD stainless steel casing with four sampling zones. Lithologic samples collected every 10'.

Location Description: PL-8 is located approximately 2.5 miles west of the WSTF 100 Area and 1 mile south of the NASA well road.

Depth (Feet)	Lith-ology	Visual Percent 0 100	Sonic Porosity (Msec./ ft.) 0 120	Gamma API 50 200	Neutron API 0 75	SP (Mili-volts) -15 30	Resis-tivity (OHM-M) 64"-green 16"-red 0 100	Lithologic Description



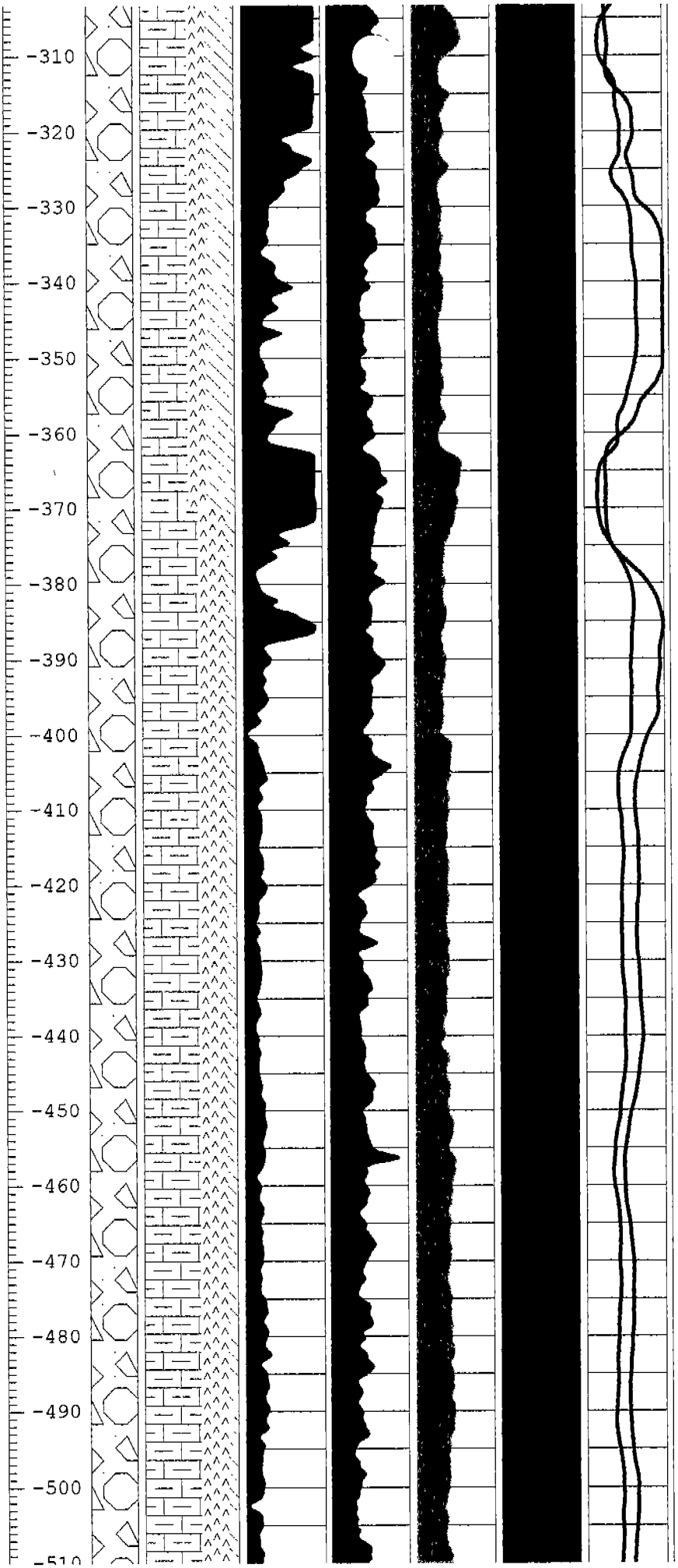
ALLUVIUM: Santa Fe Group (0-1,020 feet): The Santa Fe Group Alluvium is a poorly to moderately sorted polygenetic pebble conglomerate that consists predominantly of limestone and igneous clasts eroded from the nearby San Andres Mountains. Clasts generally comprise 30-60% of the lithologic samples. The following clast types were observed within the Santa Fe Alluvium: 1) 10-60% limestone clasts that are light gray (N6) to dark gray (N3), micritic, rounded to subangular, and display abundant hairline calcite-filled fractures, 2) 10-70% igneous clasts (both intrusive and extrusive) including moderate reddish brown (10R 4/6) to grayish red (5R 4/2) rhyolite, very light gray (N8) andesite to andesite porphyry, grayish orange (10YR 7/4) to very pale orange (10YR 8/2) rhyolite porphyry, moderate pink (5R 7/4) to grayish orange pink (10R 8/2) granite, grayish red (10R 4/2) to dark reddish brown (10R 3/4) quartzite and very light gray (N8) to medium light gray (N6) vitric lithic tuff, and 3) 10-60% dark reddish brown siltstone and clay. Siltstone and clay layers may be the result of in situ breakdown of volcanic clasts or may represent the muddy distal fan portion of alluvial fans. Note: the percent of volcanic clasts increases with depth.



ALLUVIUM: (130-150 feet): Nodular clay-bearing interval.

ALLUVIUM: (150-240 feet): Limestone-rich alluvium. Limestone clasts comprise 60% of the lithologic samples. Clay is reduced to 10%.

ALLUVIUM: (240-650 feet): Clasts comprise 50-80% of the sample. Limestone clasts are predominant.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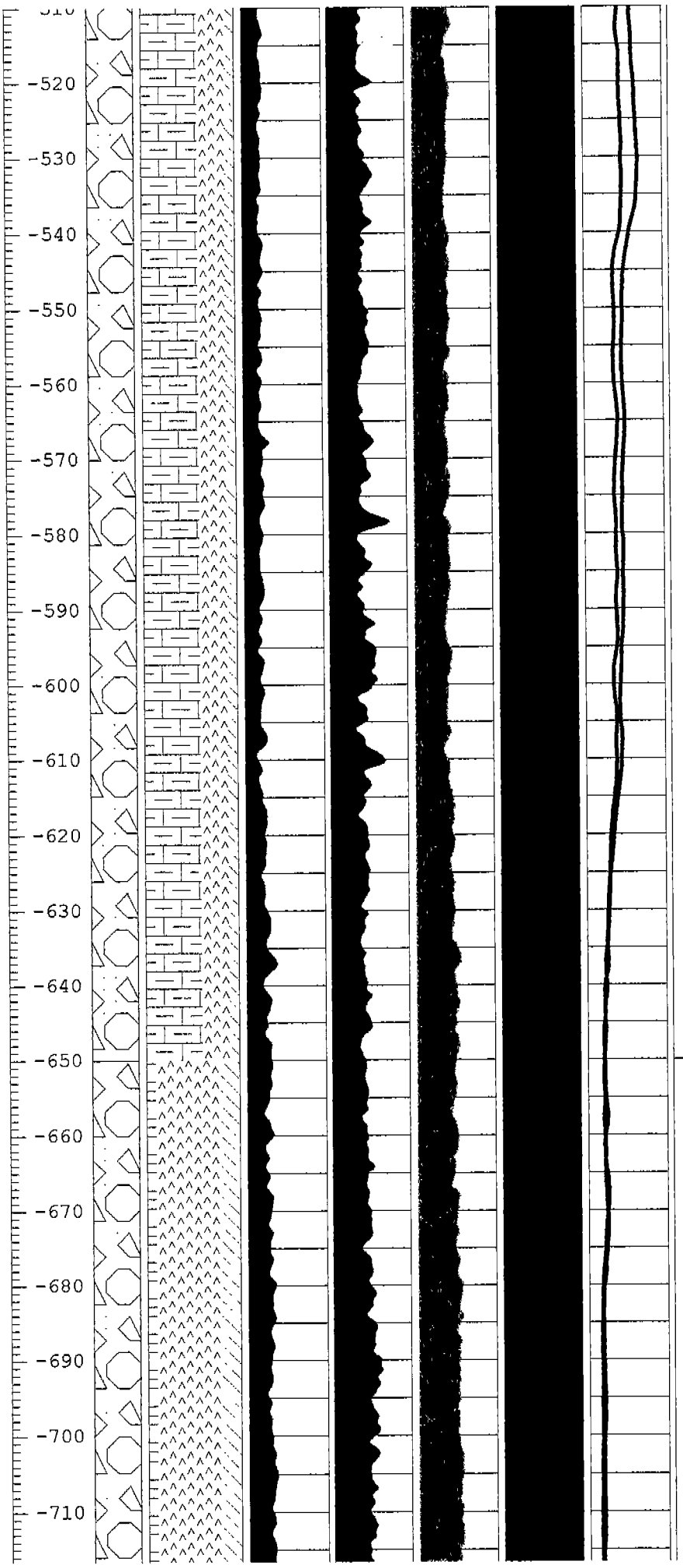
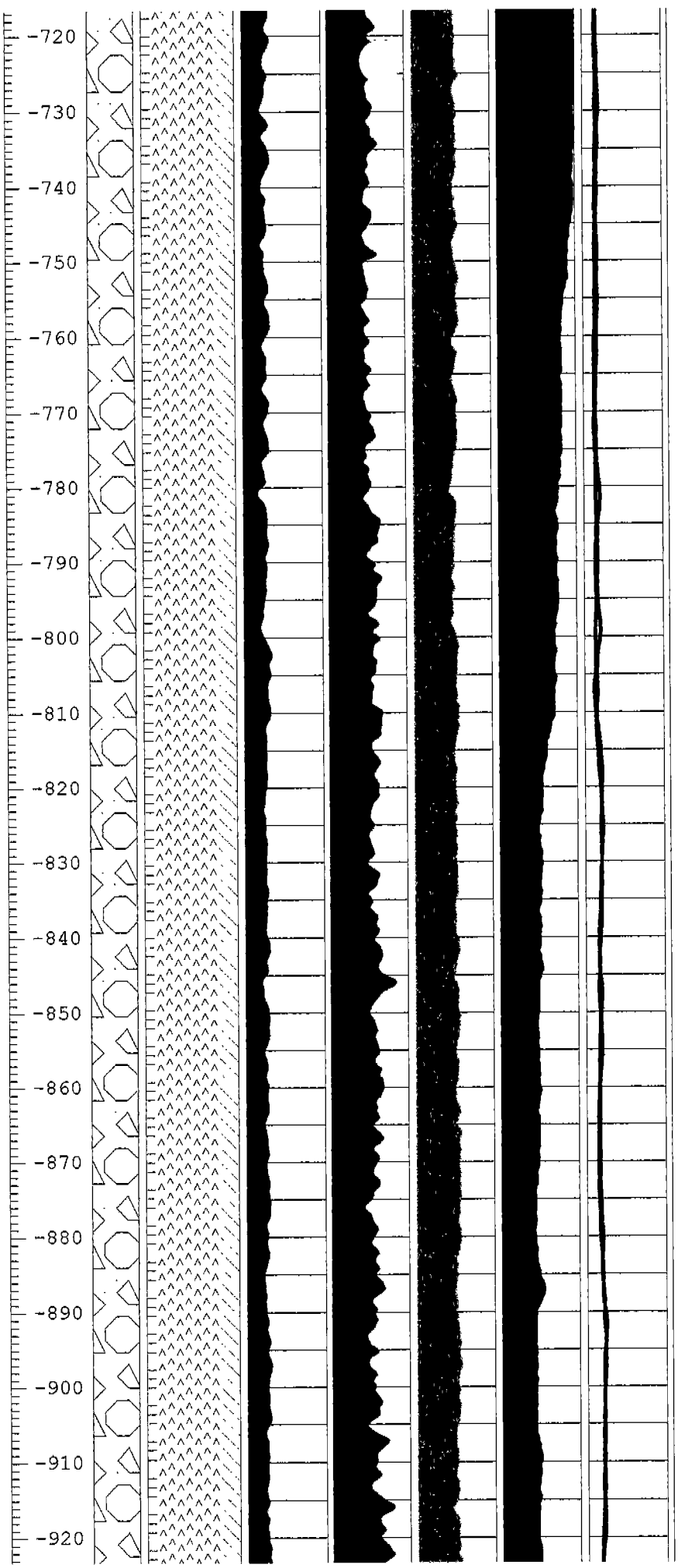


ALLUVIUM: (650-1,020 feet): Volcanic-Rich Alluvium. Clasts comprise 70% of the lithologic sample. Volcanic clasts comprise >80% of the clast fraction. The unit consists of 20% porphyritic rhyolite, 20% andesite, 20% altered volcanics, 10% volcanic tuff, 10% micritic limestone, and 20% clay.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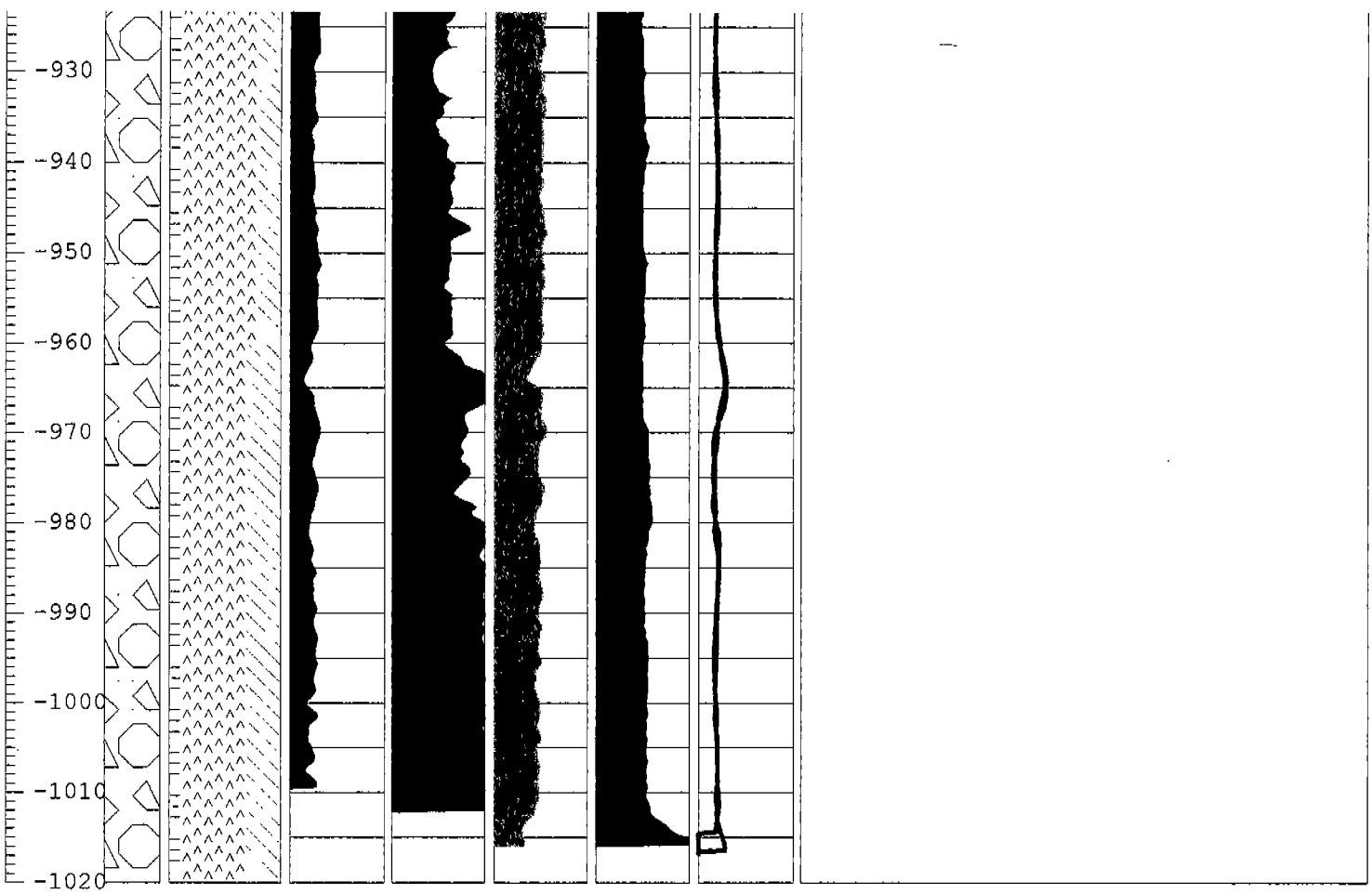
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