

# WSTF Well Borehole Lithologic/Geophysical log

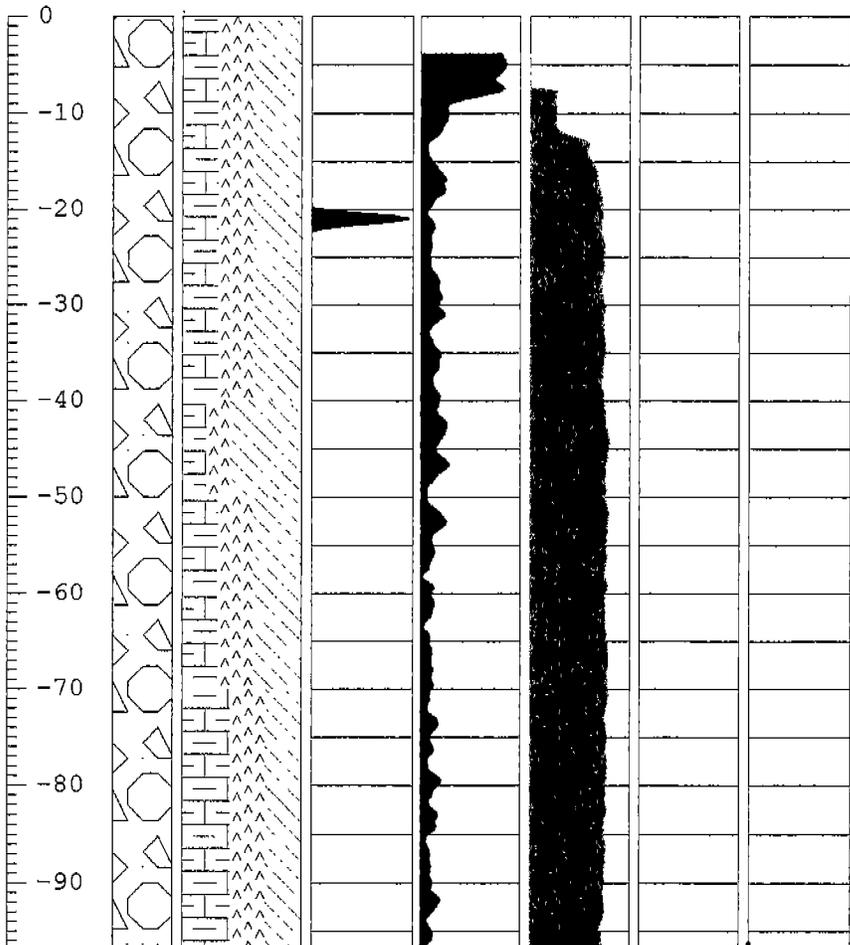
<p><b>Location Map</b> (not to scale)</p> <p style="text-align: center; font-size: 1.2em;"><b>Sec. 5</b></p>	<p>NASA well road N</p> <ul style="list-style-type: none"> <li>• BLM-17</li> <li>• BLM-2</li> <li>• BLM-7</li> <li>• BLM-10</li> </ul>	<p style="text-align: center; font-size: 1.2em;"><b>Sec. 4</b></p>	<p>Site I.D: NASA-WSTF <span style="float: right;">Location I.D: BLM-37</span></p> <p>County and State: Dona Ana County, New Mexico</p> <p>Site Coordinates: N-221630.18 E-403315.95</p> <p>Ground Elevation: 4546.08'</p> <p>Total Depth of Borehole: 1,020'.</p> <p>Depth to Bedrock and Type: Not intercepted.</p> <p>Depth to Groundwater from Geophysics: 405'</p> <p>Drilling Method(s): Mud Rotary, reamed 17.5" to 120'.</p> <p>Set 14" OD surface casing to 120' Drilled 12.25" to 1,020'.</p> <p>Drilling Contractor: Stewart Brothers Drilling Co.</p> <p>Geophysical Survey Contractor: Southwest Geophysical, Inc.</p> <p>ATSC Field Representative(s): L. Hunnicutt-Mack, M. McClure, J. Pearson, and M. Rivera.</p> <p>Dates Drilling Started and Completed: 4/27/99 to 5/11/99</p> <p>Comments: Retrofit Westbay well inside 4.5" OD stainless steel casing with four sampling zones. Lithologic samples collected every 10'.</p>
<p style="text-align: center; font-size: 1.2em;"><b>Sec. 8</b></p>	<p style="text-align: center; font-size: 1.2em;"><b>Sec. 9</b></p> <ul style="list-style-type: none"> <li>• BLM-37</li> </ul>		

**Location Description**

Quarter 1: SW 1/4 Section: 9  
 Quarter 2: NW 1/4 Township: 21 S  
 Quarter 3: NW 1/4 Range: 3 E

Location Description: BLM-37 is located approximately 2 miles west-southwest of the WSTF 100 Area and 1.25 miles south of the well road.

Depth (Feet)	Lithology	Visual Percent		Sonic Porosity (Msec./ft.)		Gamma API		Neutron API		SP (Milli-volts)		Resistivity (OHM-M) 64"-green 16"-red		Lithologic Description
		0	100	0	120	50	200	0	75	-15	50	0	100	



**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) 10-50% limestone clasts that are light gray (N6) to dark gray (N3), micritic, rounded to subangular, and display abundant hairline calcite-filled fractures, 2) 20-70% 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) 10-50% 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.

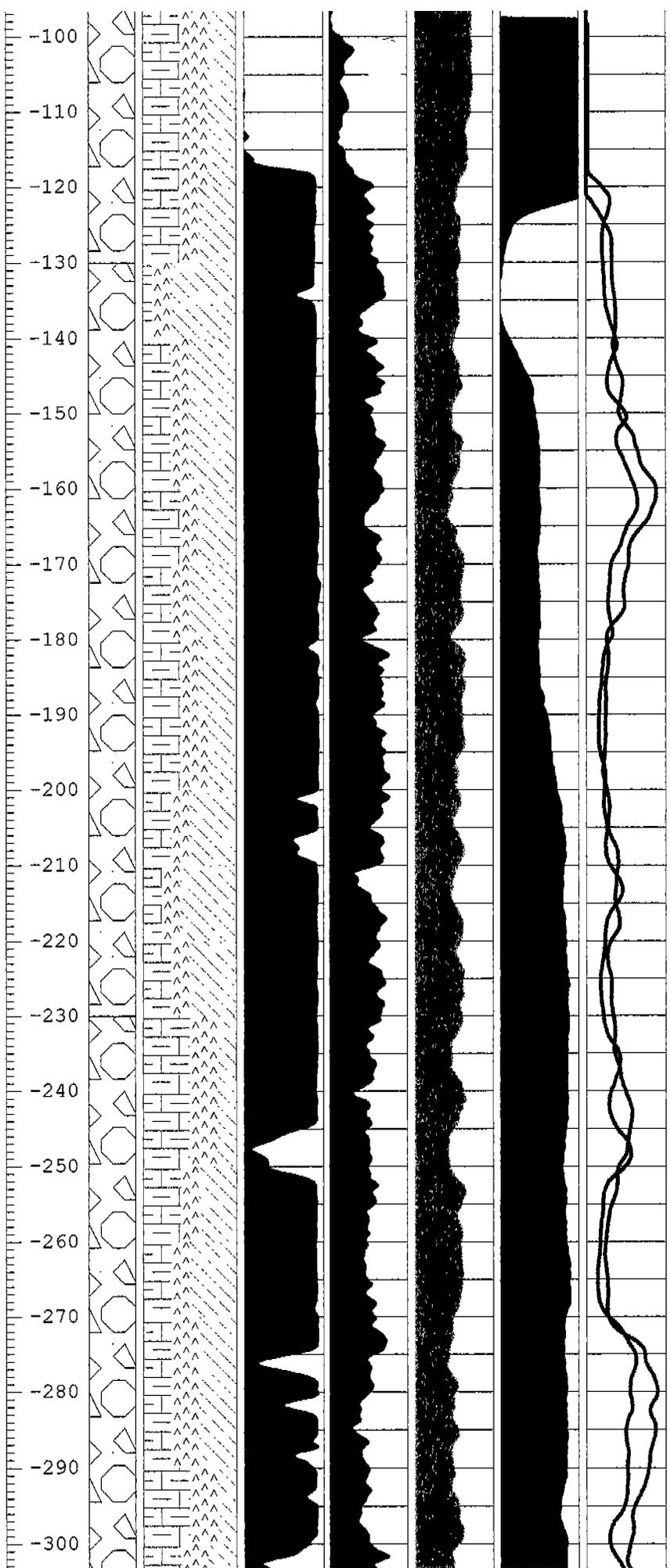
280 @ 37.5 } 10,500  
 170 @ 32.5 } 5,525  


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 6 month  
 200 @ 34.25 } 6,850  
 200 @ 36.5 } 7,300  

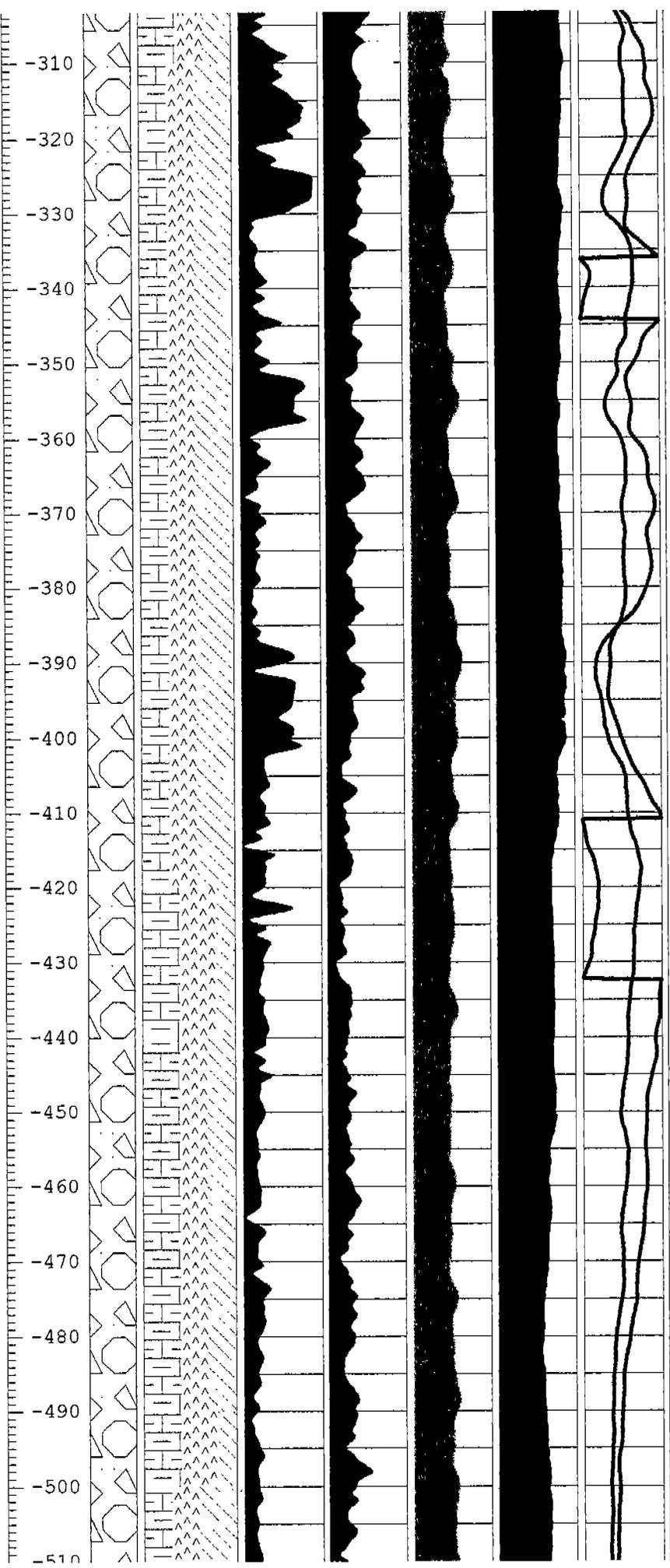

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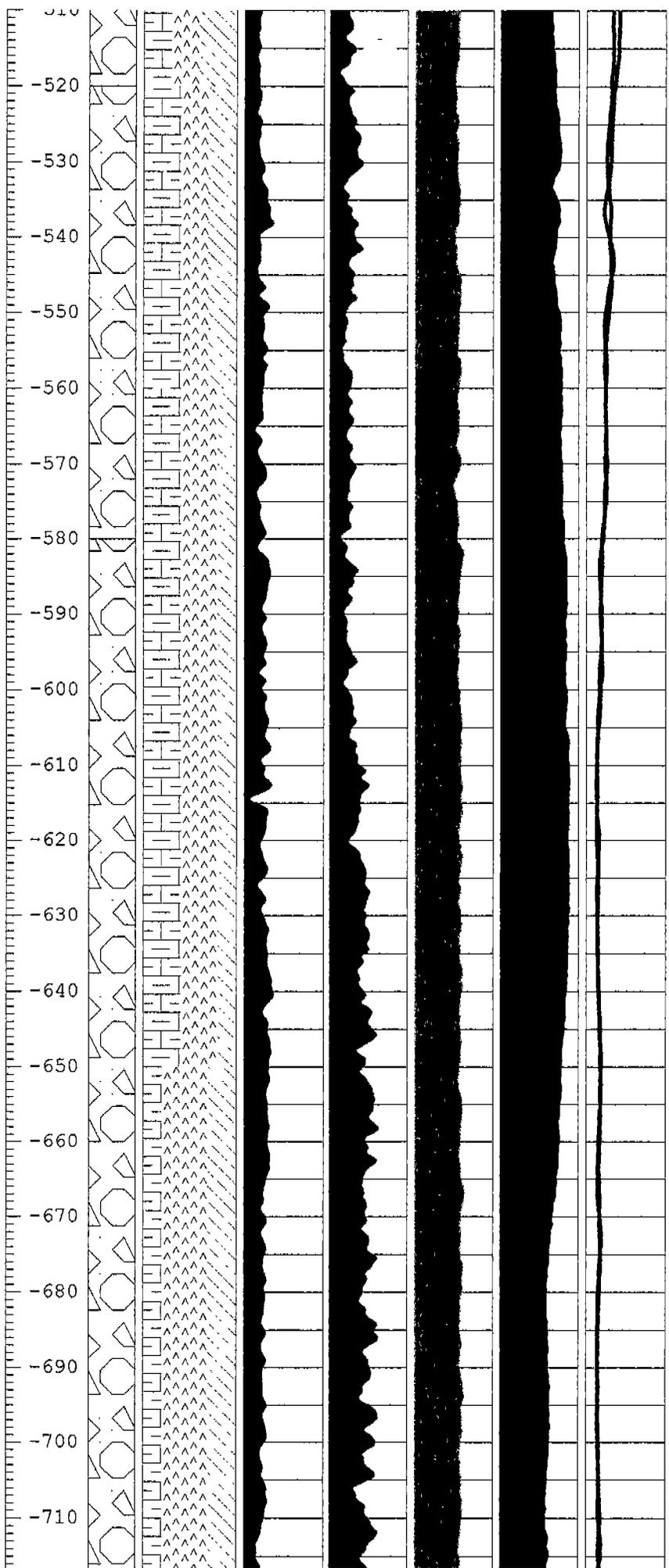
 15,825



ALLUVIUM: (130-230 feet): Clay-rich interval. Clay matrix comprises 40-70% of the lithologic samples.

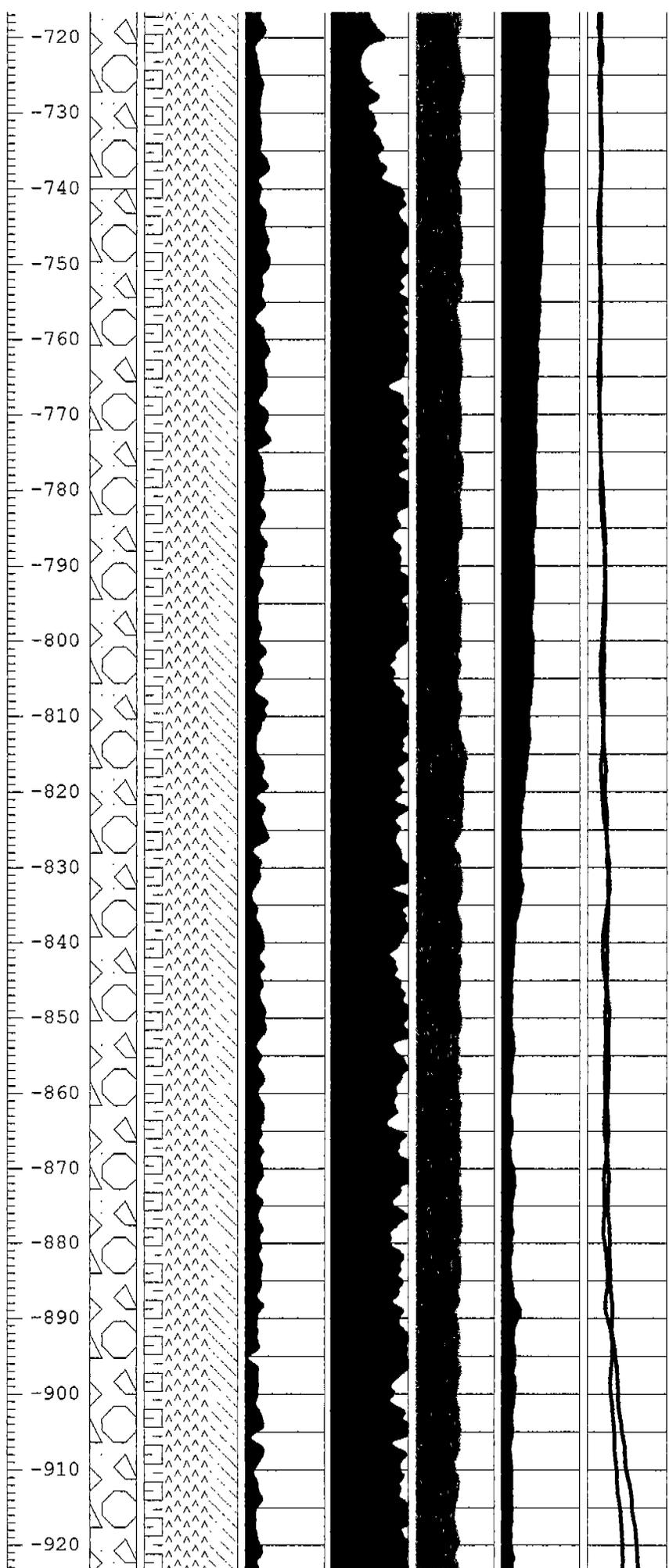
ALLUVIUM: (230-520 feet): Santa Fe Alluvium. See original description.





ALLUVIUM: (520-580 feet): Decrease in clay content with depth.

ALLUVIUM: (580-740 feet): Santa Fe Alluvium. See original description.



**ALLUVIUM: (740-1,020 feet): Volcanic-Rich Alluvium.**  
Contact based on information from the gamma log. Clasts  
comprise 70% of the sample. Volcanic clasts comprise  
40% of the sample. Volcanic clast composition  
percentages increase with depth.

