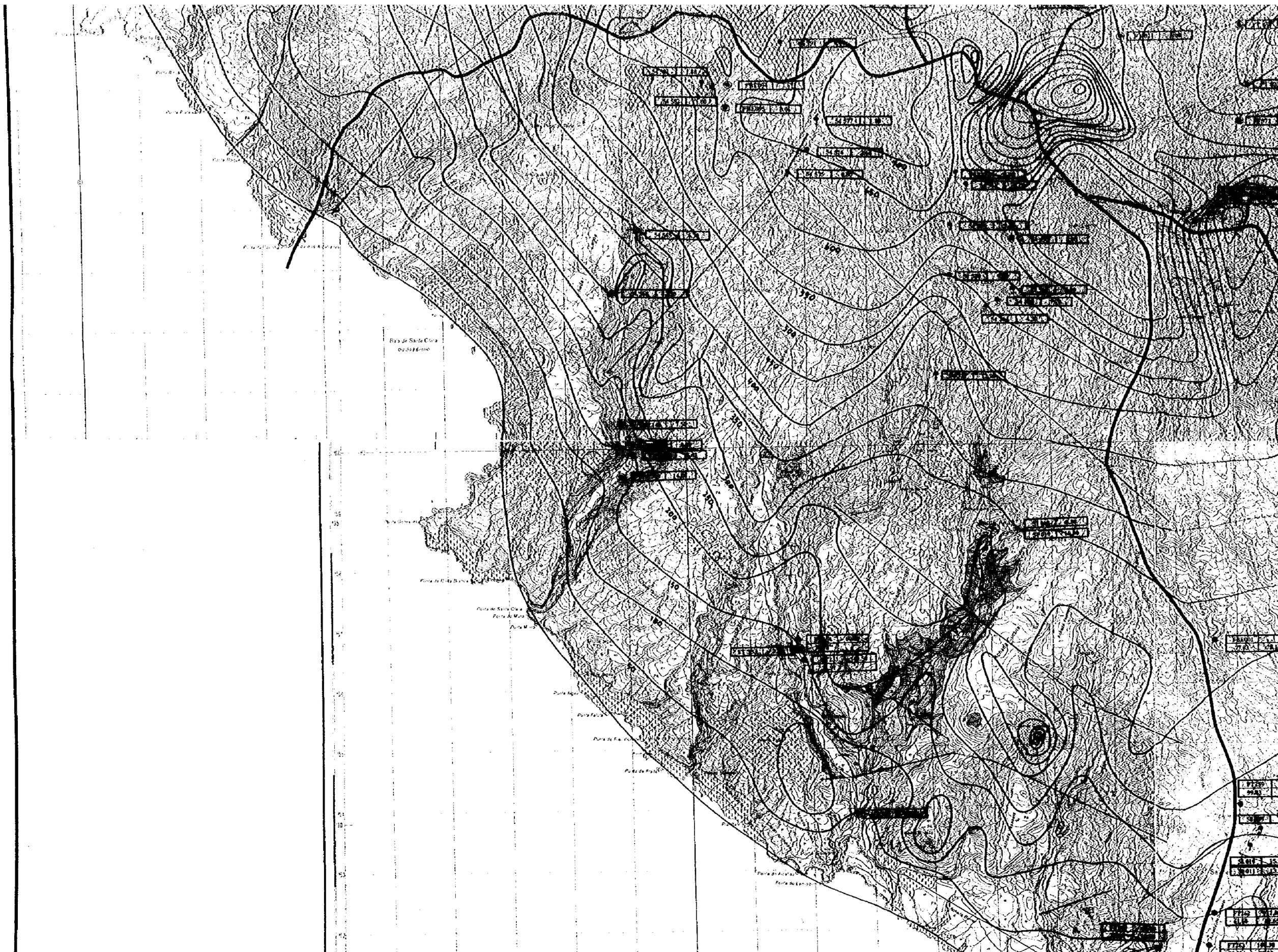
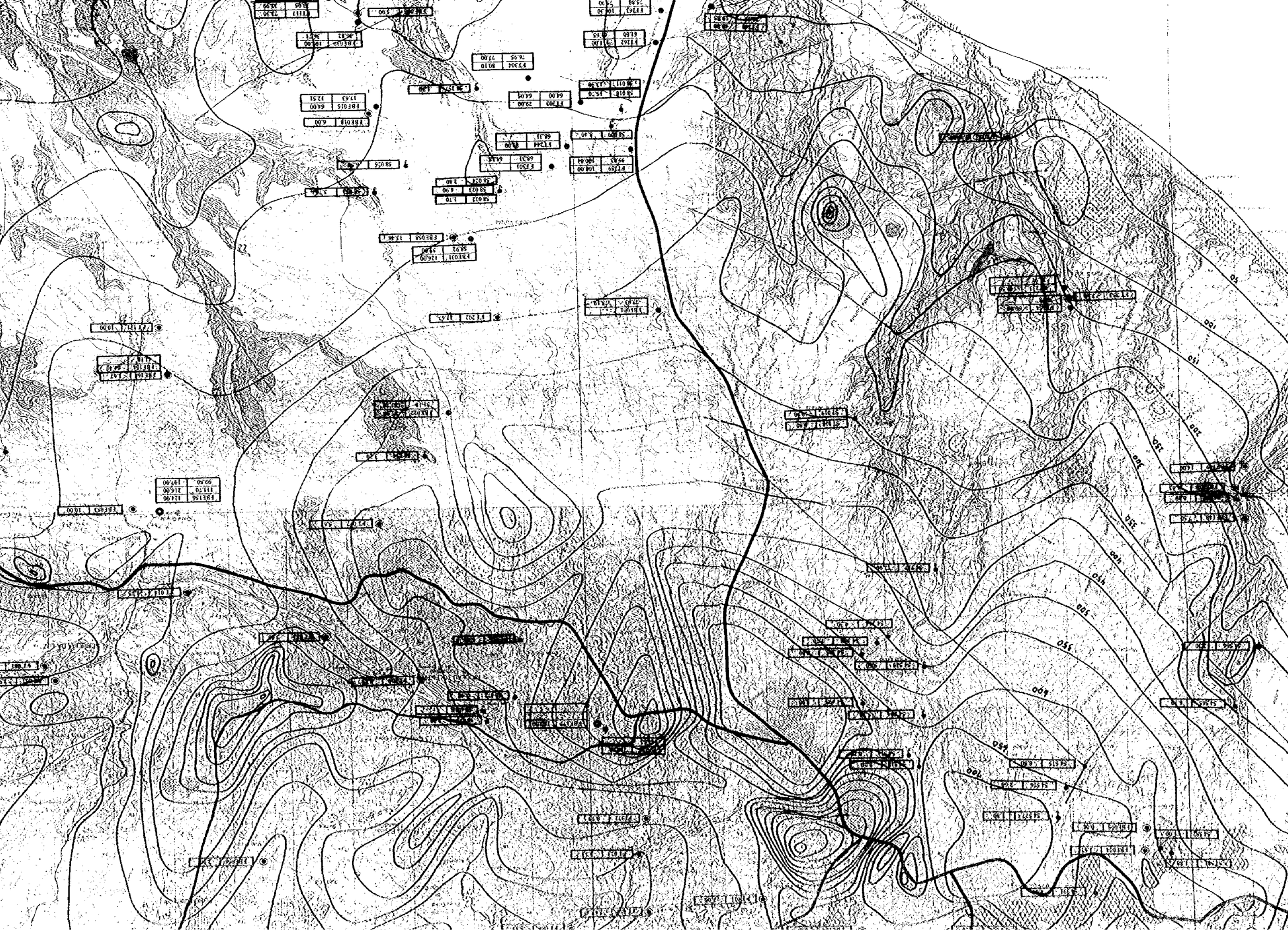
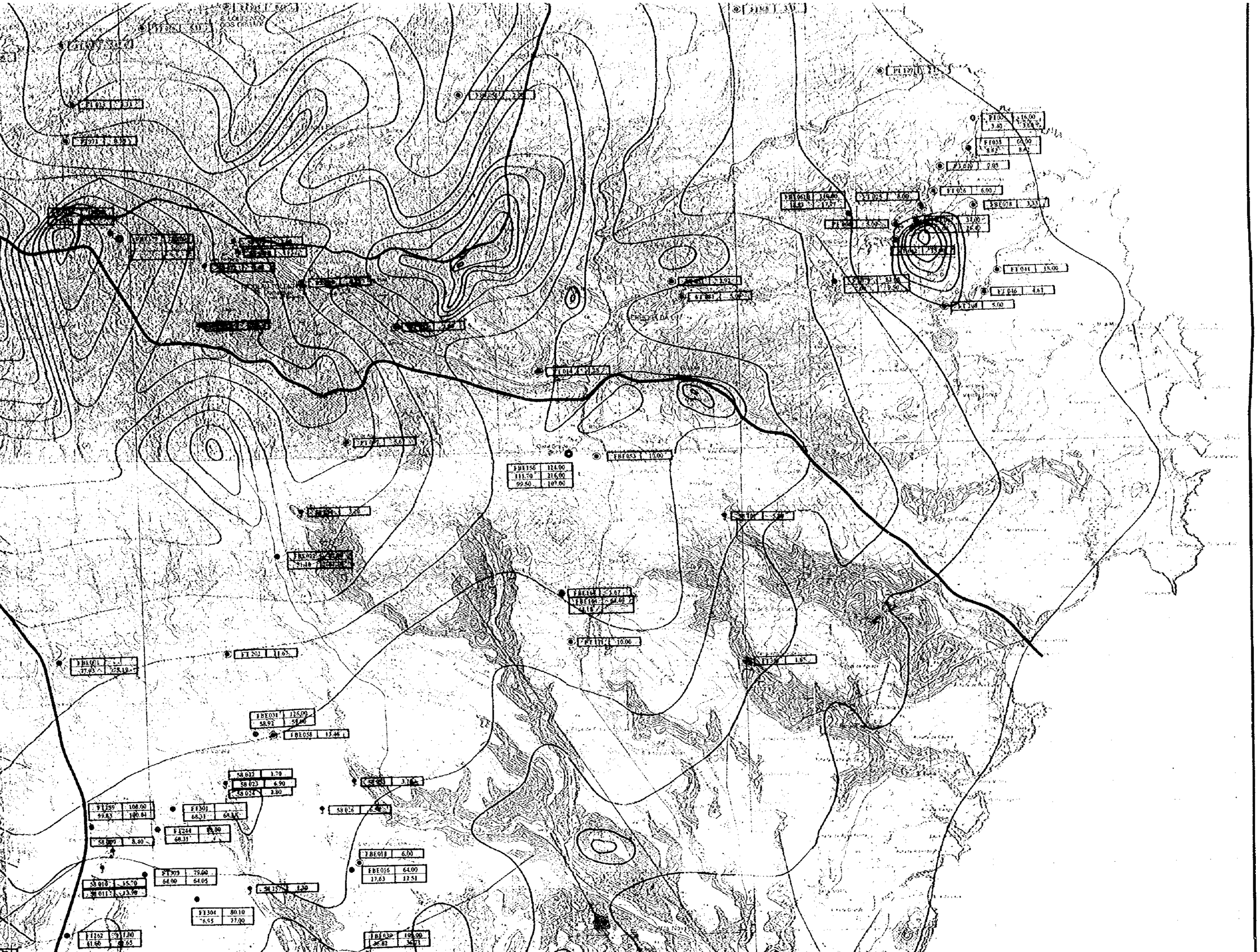
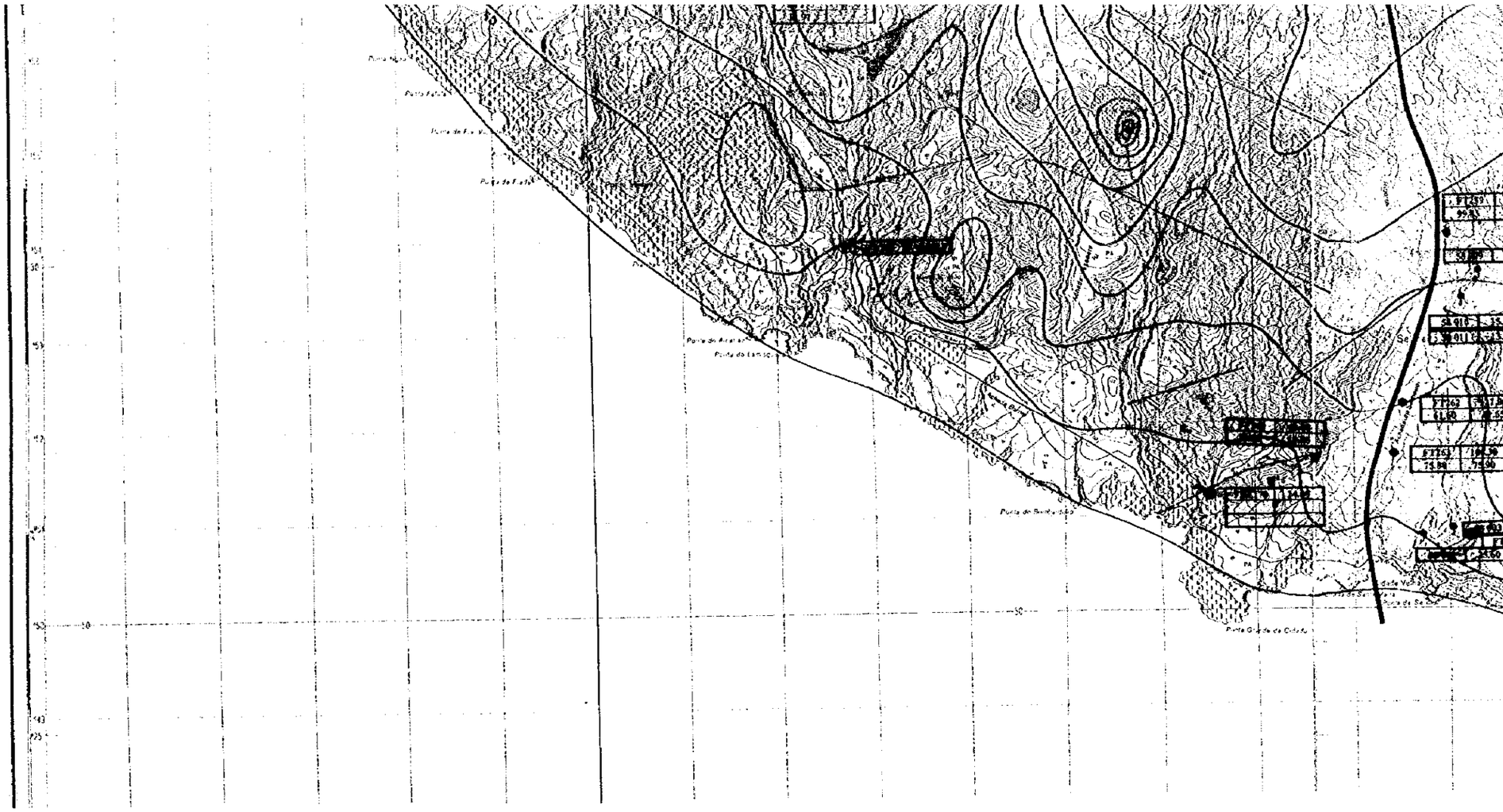


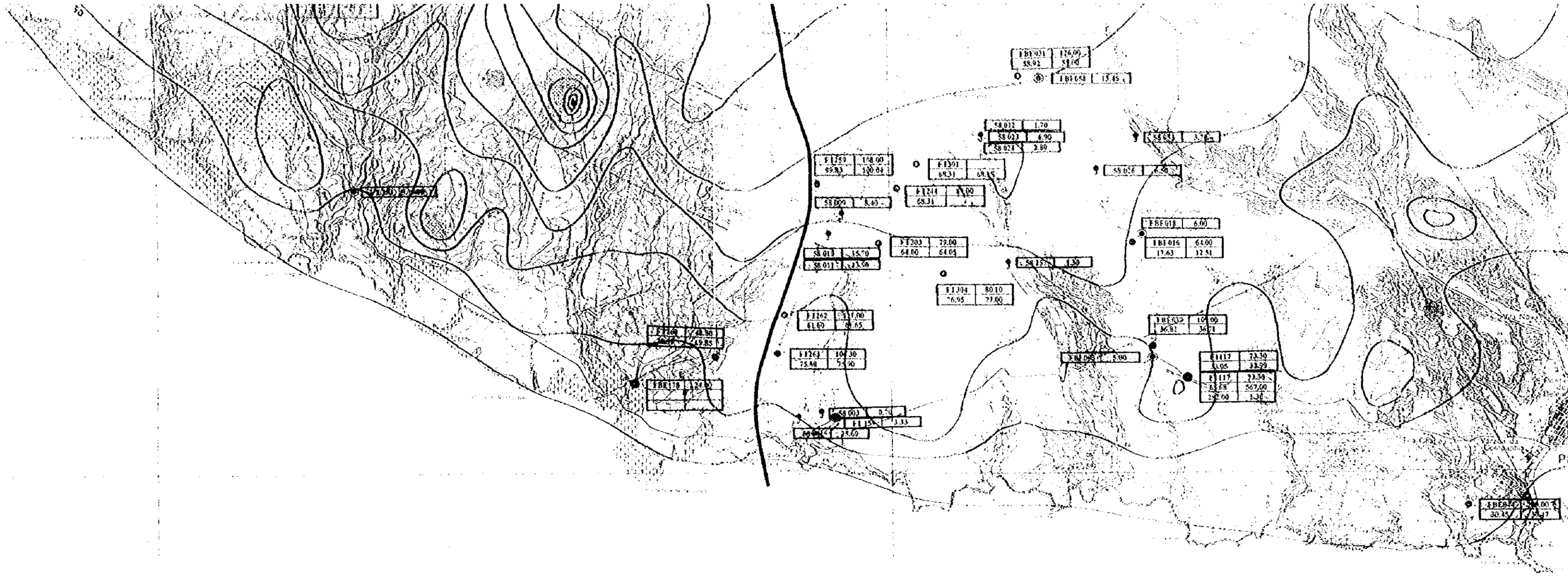






LEGEND OF HYDROGEOLOGICAL MAP

A Geologic Age			B. Geological Formations & Rock Facies	C. Hydrogeological Character (Discharge m3/h)
Quaternary	Pleistocene Holocene		Monte das Vacas (basalt lava, tuff, pyroclastics)	Non productive formation
		a, qp, dv	Allvium (sand, clay, gravel)	High productive intergranular aquifer (Class A. 10 -- 100)
			Diluvium Terrace (sand, clay, grave)	Non productive formation
Tertiary	Pliocene	cong	Conglomerate (conglomerate)	Non productive formation
		A	Assomada Formation (basalt lava, tuff breccia, pyrocrastics, aggromrate)	Medium productive aquifer (Class B, 3 - 20)
	Pleistocene- Miocene	PA	Pico da Antonia Formation	Medium-high productive aquifer (Class B, A. 5 -- 35)
			Pico da Antonia Volcanic Complex	Medium productive aquifer (Class B, 5-35) .
			tuff breccia	Medium productive aquifer (Class B, 5-35)
			pyrocrastics	Medium productive aquifer (Class B, 5-35)
			submarine lava deposits	High productive aquifer (Class A, more than 30)
	Miocene	λp	Flamengos Formation (basalt lava, tuff breccia, pyrocrastics, aggromrate)	Low productive formation (Class D, 0 -- 25)



Facies	C. Hydrogeological Character (Discharge m3/h)
roclastics)	Non productive formation
	High productive intergranular aquifer (Class A. 10 - 100)
	Non productive formation
	Non productive formation
ff breccia, pyrocrastics, aggromrate)	Medium productive aquifer (Class B, 3 - 20)
	Medium-high productive aquifer (Class B, A. 5 - 35)
omplex	Medium productive aquifer (Class B, 5-35)
	Medium productive aquifer (Class B, 5-35)
	Medium productive aquifer (Class B, 5-35)
	High productive aquifer (Class A, more than 30)
tuff breccia, pyrocrastics, aggromrate)	Low productive formation (Class D, 0 - 25)

D Geological Structure

Strike and dip

Lineament

Boundariy of Hydrogeological Basin
(Boundariy of Hydrogeological Sub-basin)

Crater

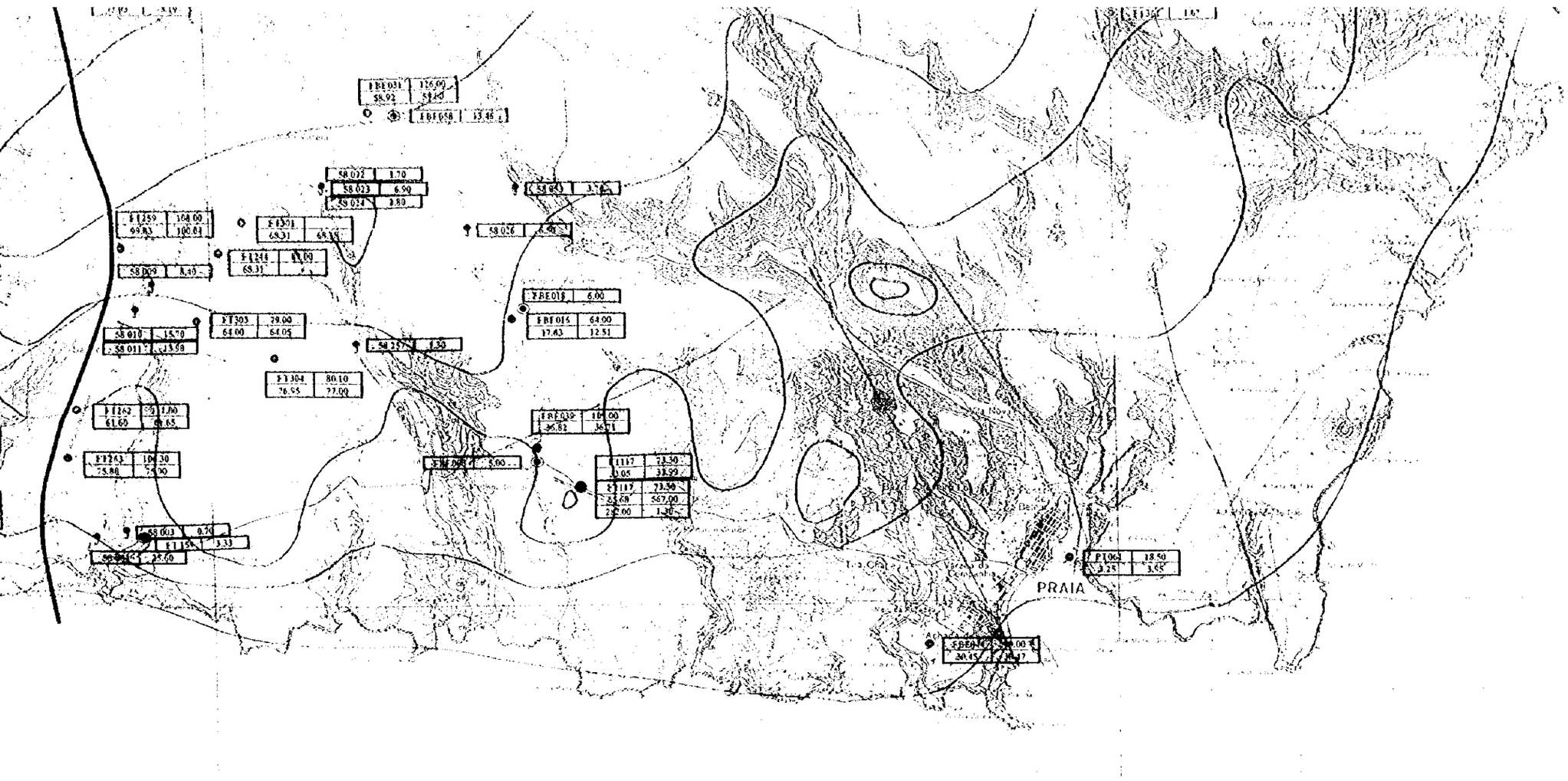
E. Electrical Survey Lines

Survey Lines

F. Groundwater and Well Information

Groundwater level contour

Spring (permanent)



D Geological Structure

Strike and dip

Lineament

Boundariy of Hydrogeological Basin
(Boundariy of Hydrogeological Sub-basin)

Crater

E. Electrical Survey Lines

Survey Lines

F. Groundwater and Well Information

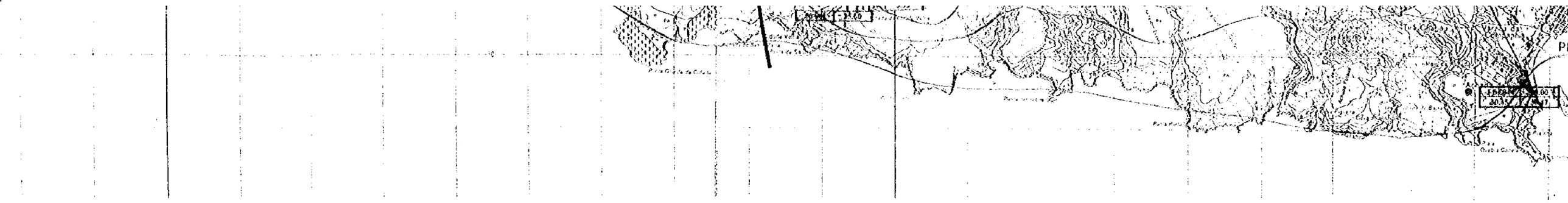
Groundwater level contour

LEGEND OF HYDROGEOLOGICAL MAP

A Geologic Age			B. Geological Formations & Rock Facies	C. Hydrogeological Character (Discharge m3/h)
Quartemary	Pleistocene Holocene		Monte das Vacas (basalt lava, tuff, pyroclastics)	Non productive formation
		a, cp, dv	Allvium (sand, clay, gravel)	High productive intergranular aquifer (Class A. 10 -- 100)
		csac	Diluvium Terrace (sand, clay, grave)	Non productive formation
Tertiary	Pliocenne	cong	Conglomerate (conglomerate)	Non productive formation
		A	Assomada Formation (basalt lava, tuff breccia, pyrocrastics, aggromrate)	Medium productive aquifer (Class B, 3 - 20)
	Pleistocene- Miocene	PA	Pico da Antonia Formation	Medium-high productive aquifer (Class B, A. 5 -- 35)
			Pico da Antonia Volcanic Complex	Medium productive aquifer (Class B, 5-35)
			tuff breccia	Medium productive aquifer (Class B, 5-35)
			pyrocrastics	Medium productive aquifer (Class B, 5-35)
			submarine lava deposits	High productive aquifer (Class A, more than 30)
	Miocene	λρ	Flamengos Formation (basalt lava, tuff breccia, pyrocrastics, aggromrate)	Low productive formation (Class D, 0 -- 25)
		CB	Orgas Formation (aggromerate, volcanic debris, calcarious sandstone)	Low productive formation (Class D, 0 -- 25)
	Pre-Miocene	φ	Basement Volcanic Units	Non productive formation
			Volcanic cone, pyrocrastics	Non productive formation
			Intrusive breccia, Carbonatite	Non productive formation
			Gabro	Non productive formation
		CA	Basalt lava , volcanic breccia, agglomerate	Low productive formation (Class D, 0-10)

HYDROGEOLOGICAL MAP OF SANTIAGO ISLAND

Prepared by JICA study Team(Kokusai Kogyo/Japan Techno) 1999



Facies	C. Hydrogeological Character (Discharge m3/h)
oclastics)	Non productive formation
	High productive intergranular aquifer (Class A. 10 – 100)
	Non productive formation
	Non productive formation
breccia, pyrocrastics, aggromrate)	Medium productive aquifer (Class B, 3 - 20)
	Medium-high productive aquifer (Class B, A. 5 – 35)
mplex	Medium productive aquifer (Class B, 5-35)
	Medium productive aquifer (Class B, 5-35)
	High productive aquifer (Class A, more than 30)
f breccia, pyrocrastics, aggromrate)	Low productive formation (Class D, 0 – 25)
nic debris, calcarious sandstone)	Low productive formation (Class D, 0 – 25)
	Non productive formation
	Non productive formation
e	Non productive formation
	Non productive formation
a, agglomerate	Low productive formation (Class D, 0-10)

D Geological Structure

- Strike and dip
- Lineament
- Boundariy of Hydrogeological Basin (Boundariy of Hydrogeological Sub-basin)
- Crater

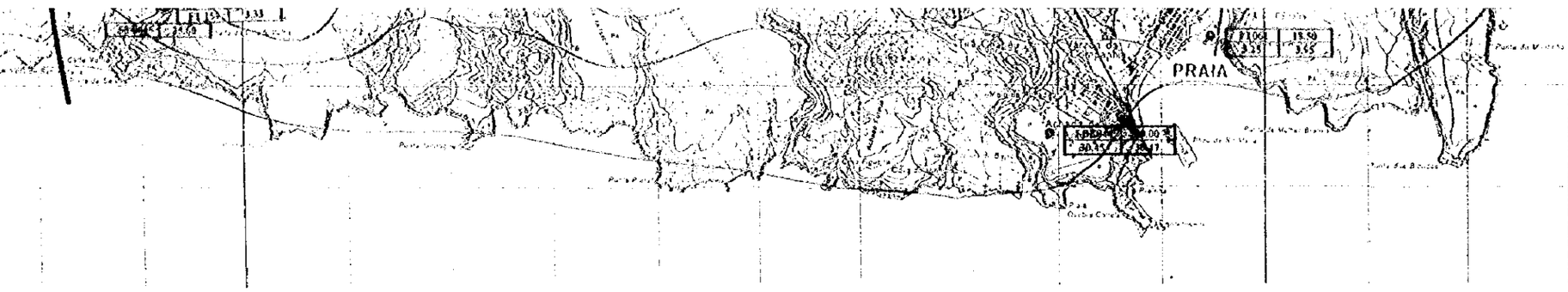
E. Electrical Survey Lines

- Survey Lines

F. Groundwater and Well Information

- Groundwater level contour
- Spring (permanent) — Spring Number, Discharge (m³/h)
- Pumping test well — Well Number, Depth (m); Discharge Rate (m³/h); Transmissivity (m²/h); Specific Capacity (m³/h/m); Static Water Level at test date
- Water Level Mounitoring Well — Well Number, Depth (m); dry, wet; Static Water Level (m) of dry and wet season
- Production Well — Well Number, Discharge (m³/h)

0



D Geological Structure

Strike and dip

Lineament

Boundariy of Hydrogeological Basin
(Boundariy of Hydrogeological Sub-basin)

Crater

E. Electrical Survey Lines

Survey Lines

F. Groundwater and Well Information

Groundwater level contour

Spring Number Discharge (m³/h)

Spring (permanent)

Well Number Depth (m)
Discharge Rate (m³/h)
Transmissivity (m²/h)
Specific Capacity (m³/h/m)
Static Water Level at test date

Pumping test well

Well Number Depth (m)
dry wet
Static Water Level (m) of dry and wet season

Water Level Mounitoring Well

Well Number Discharge (m³/h)

Production Well

SCALE : 1 / 50,000

0 10 20 30 km