

30'

18°

30'

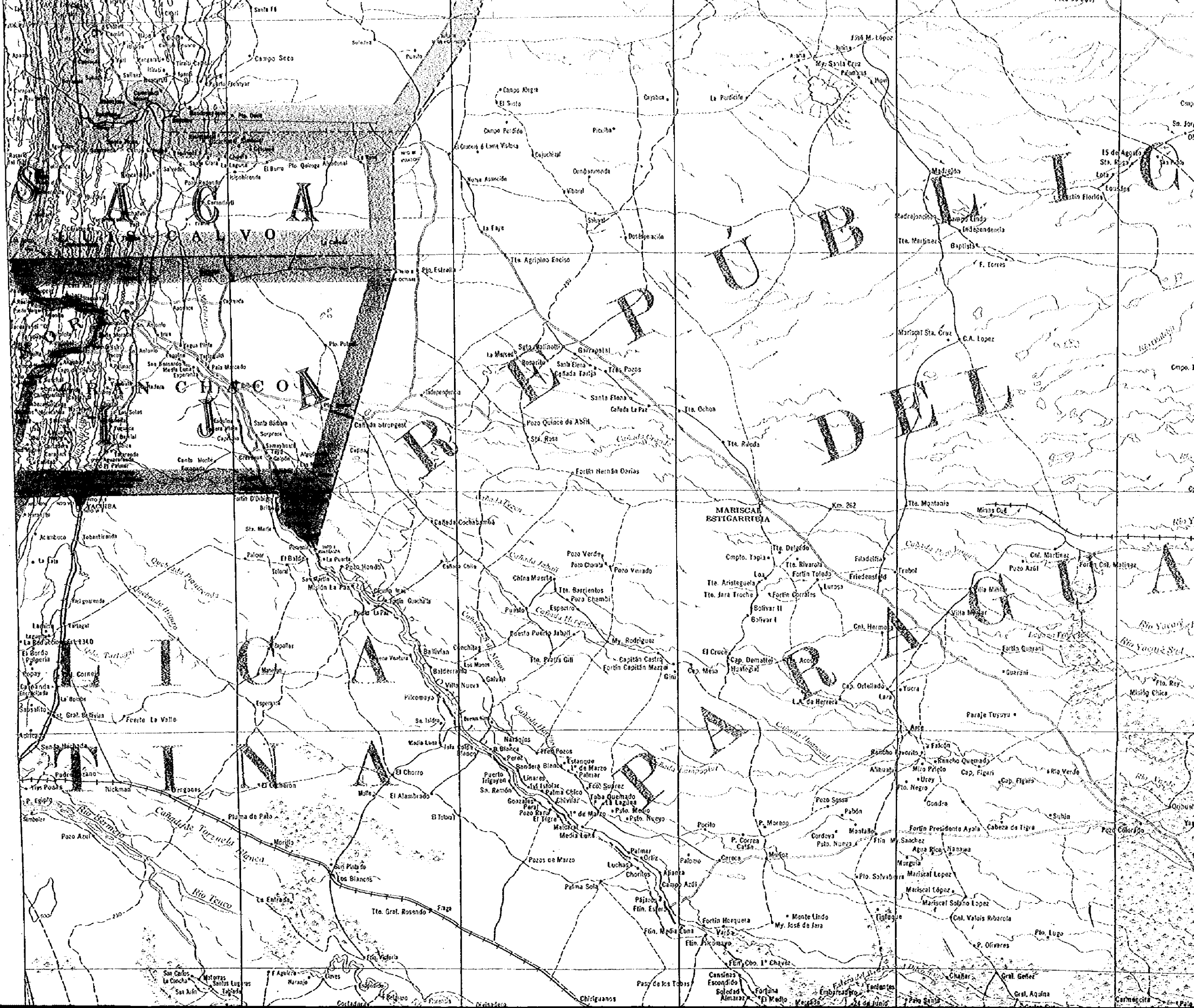
19°

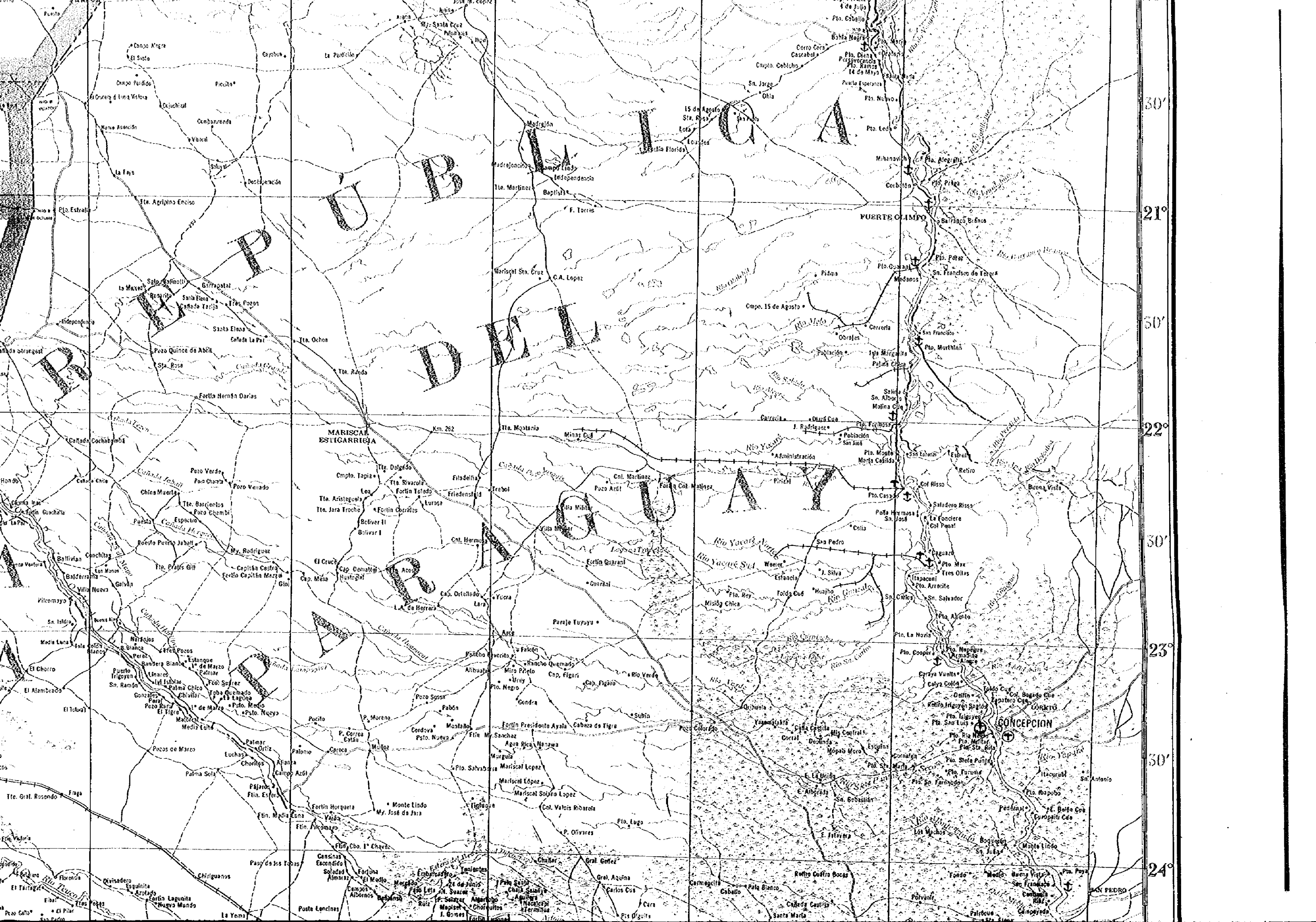
30'

20°

30'

21°





P
U
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M
P
O

MARISCAL
ESTIGARRITIA

PUERTO OLIMPO

CONCEPCION

30'

21°

30'

22°

30'

23°

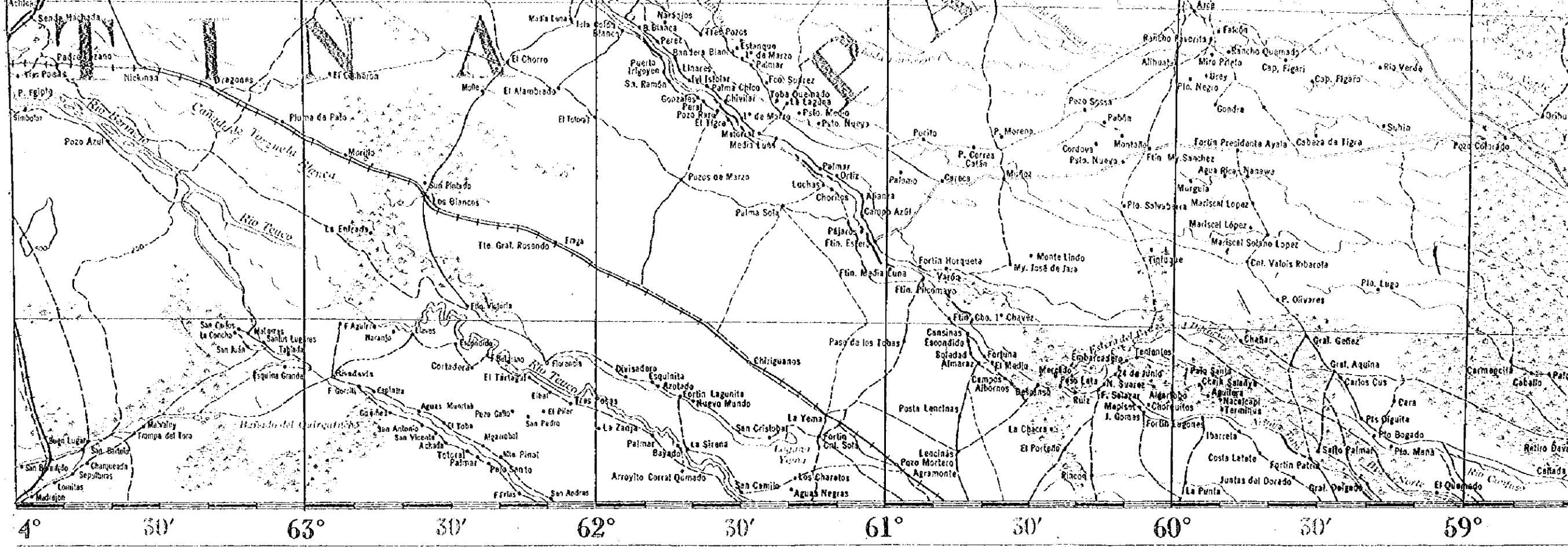
30'

24°

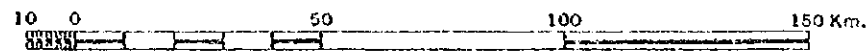
Km. 262

CONCEPCION

SAN PEDRO



ESCALA 1:1.500.000



PROYECCIÓN CONICA CONFORME DE LAMBERT
 MEDIANO CENTRAL: 64° AL OESTE DE GREENWICH
 PARALELOS ESTANDAR: 12° y 20°

CURVAS DE NIVEL CON INTERVALO DE: 500 METROS
 DATO VERTICAL: NIVEL MEDIO DEL MAR

DERECHOS RESERVADOS POR LEY DEL 21 DE DICIEMBRE DE 1948
 DECRETO SUPREMO No. 10902, DEL 8 DE JUNIO DE 1973

SE RECOMIENDA A LOS LECTORES QUE ENCUENTREN ERRORES O OMISIONES EN ESTE MAPA, MARCAR LAS CORRECCIONES EN EL MISMO Y ENVIARLO AL COMANDANTE DEL INSTITUTO GEOGRAFICO MILITAR. LA PAZ - BOLIVIA ESTOS MAPAS SERÁN DEVUELTOS O SUBSTITUIDO, SI ASI SE DESEA.

PROHIBIDA LA REPRODUCCIÓN PARCIAL O TOTAL

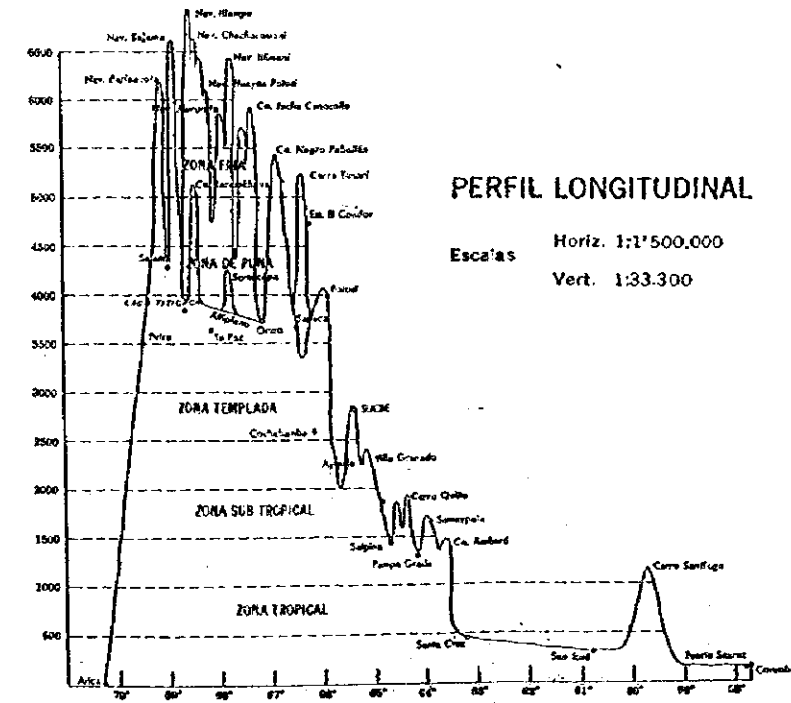
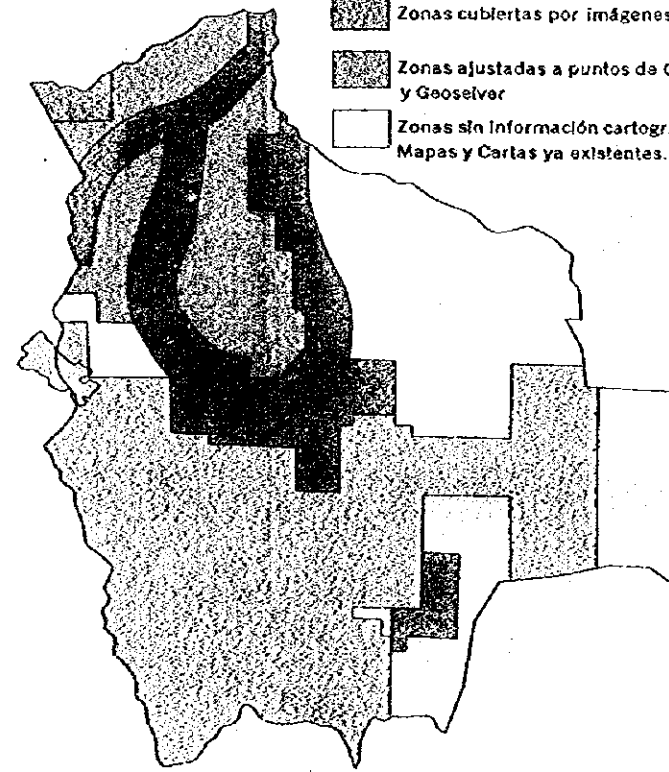


DIAGRAMA DE COMPILACIÓN

- Zonas cartografiadas por el INS
- Zonas cubiertas por imágenes
- Zonas ajustadas a puntos de O y Geoselver
- Zonas sin información cartográfica de Mapas y Cartas ya existentes.



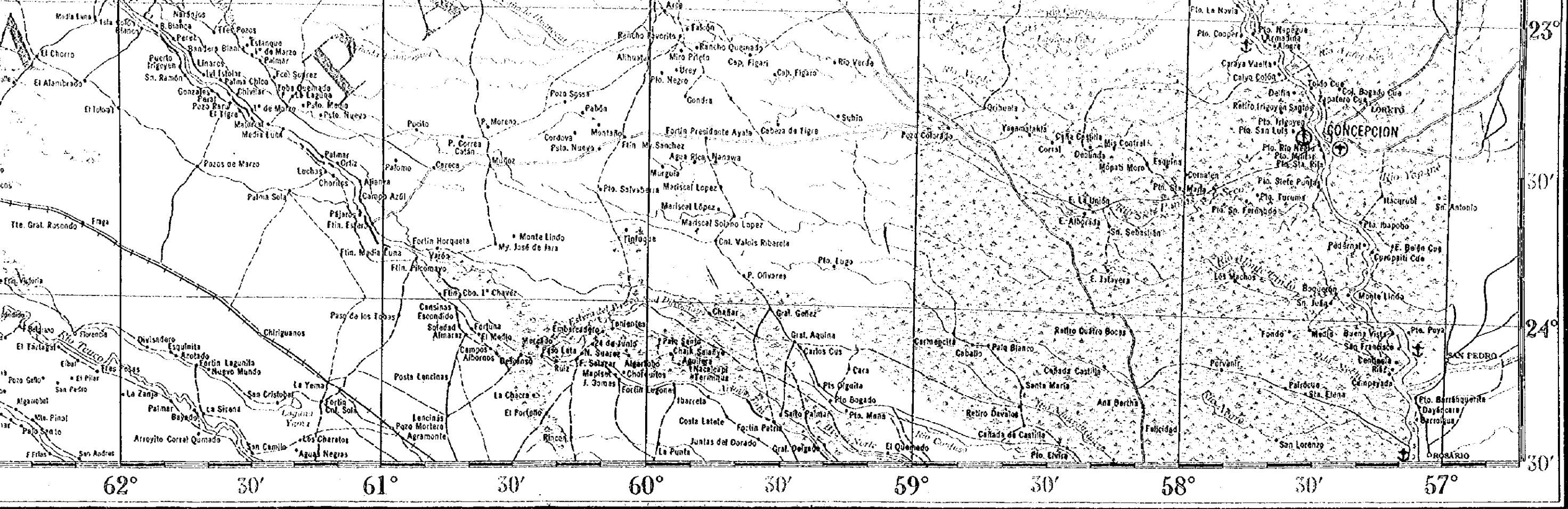
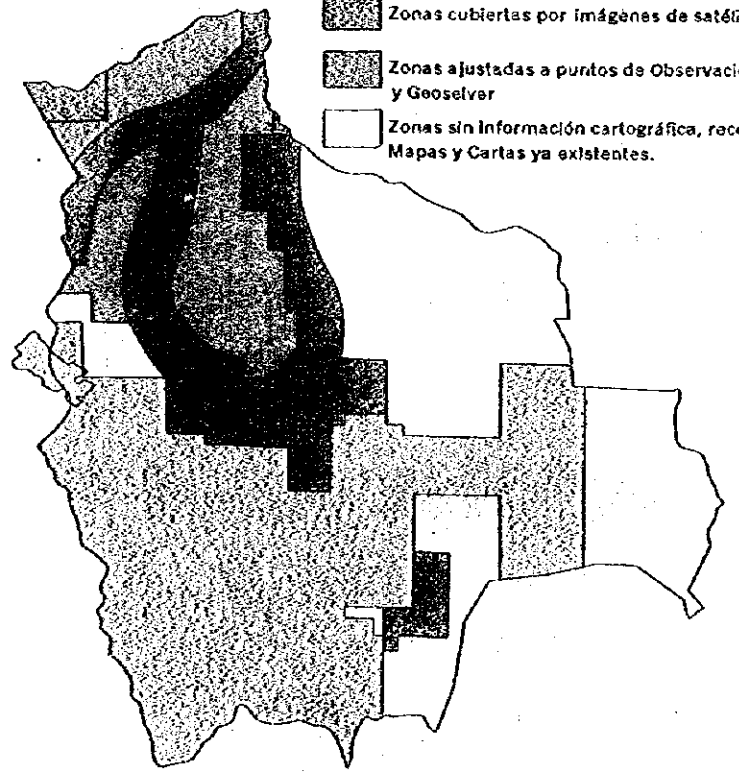
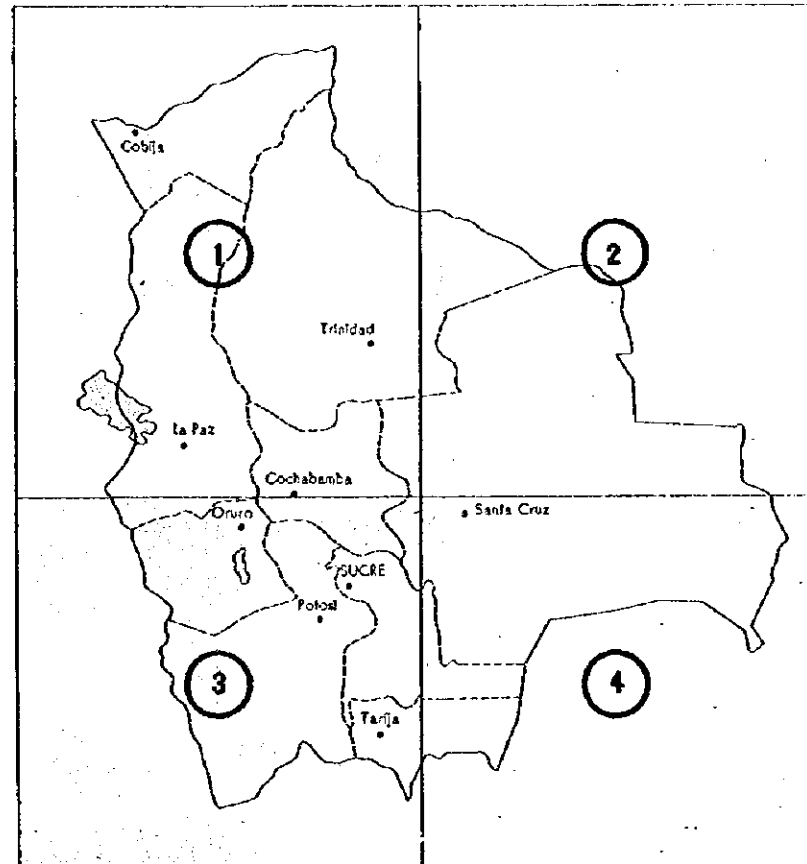


DIAGRAMA DE COMPILACIÓN

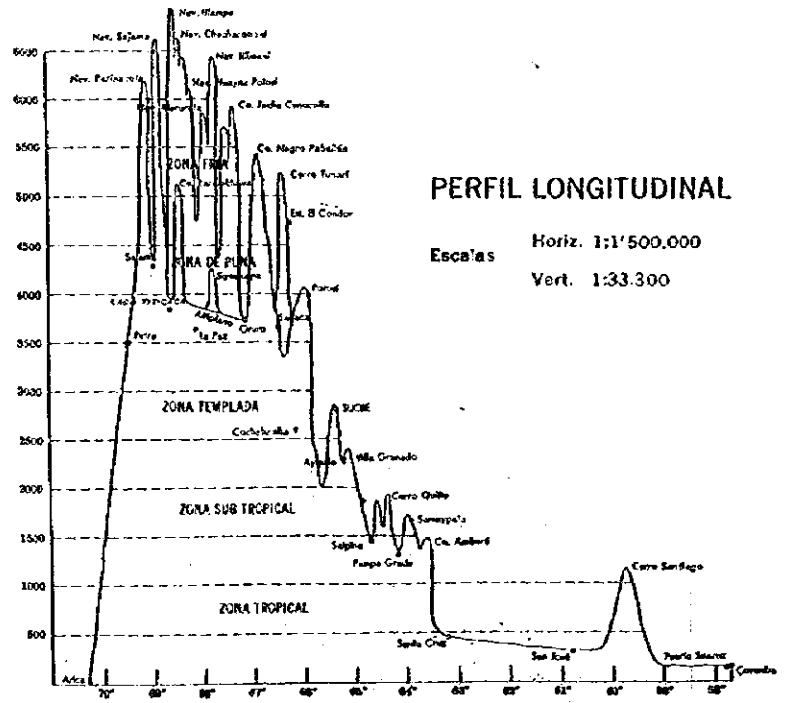
- Zonas cartografiadas por el Instituto Geográfico Militar
- Zonas cubiertas por imágenes de satélites, SKY LAB
- Zonas ajustadas a puntos de Observación Astronómica y Geoselver
- Zonas sin información cartográfica, recopiladas de Mapas y Cartas ya existentes.



DISTRIBUCION DE HOJAS



150 Km.

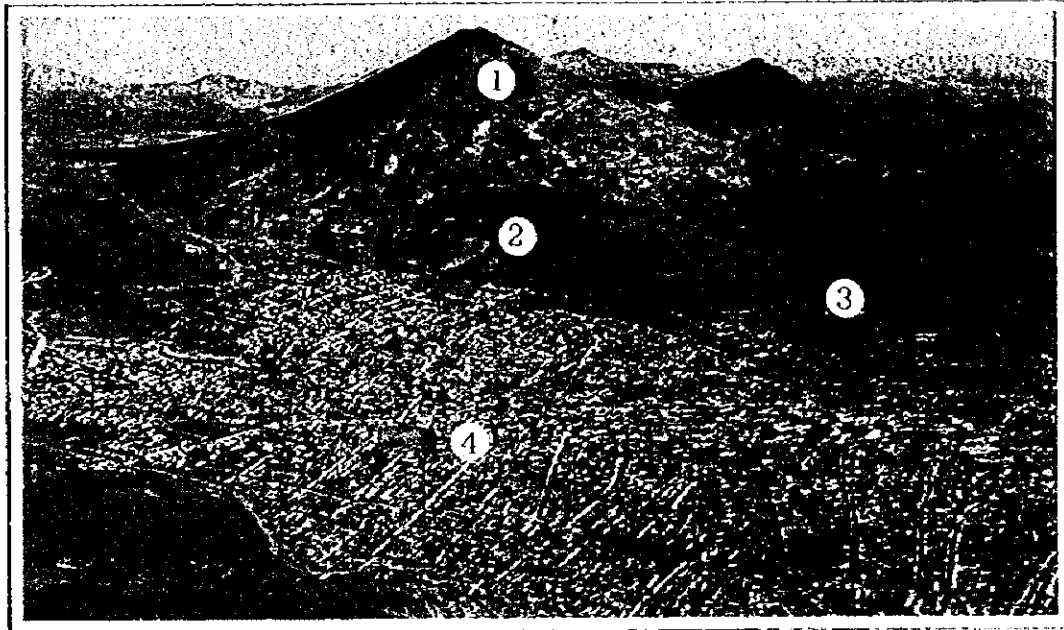


EN ESTE MAPA, MAR-
INSTITUTO GEOGRÁFICO
DO, SI ASI SE DESEA.

ANNEX 2

Photographs (Cerro Rico Mountain, Rivers and Ingenios)





P O T O S I

Photograph "Cerro Rico"

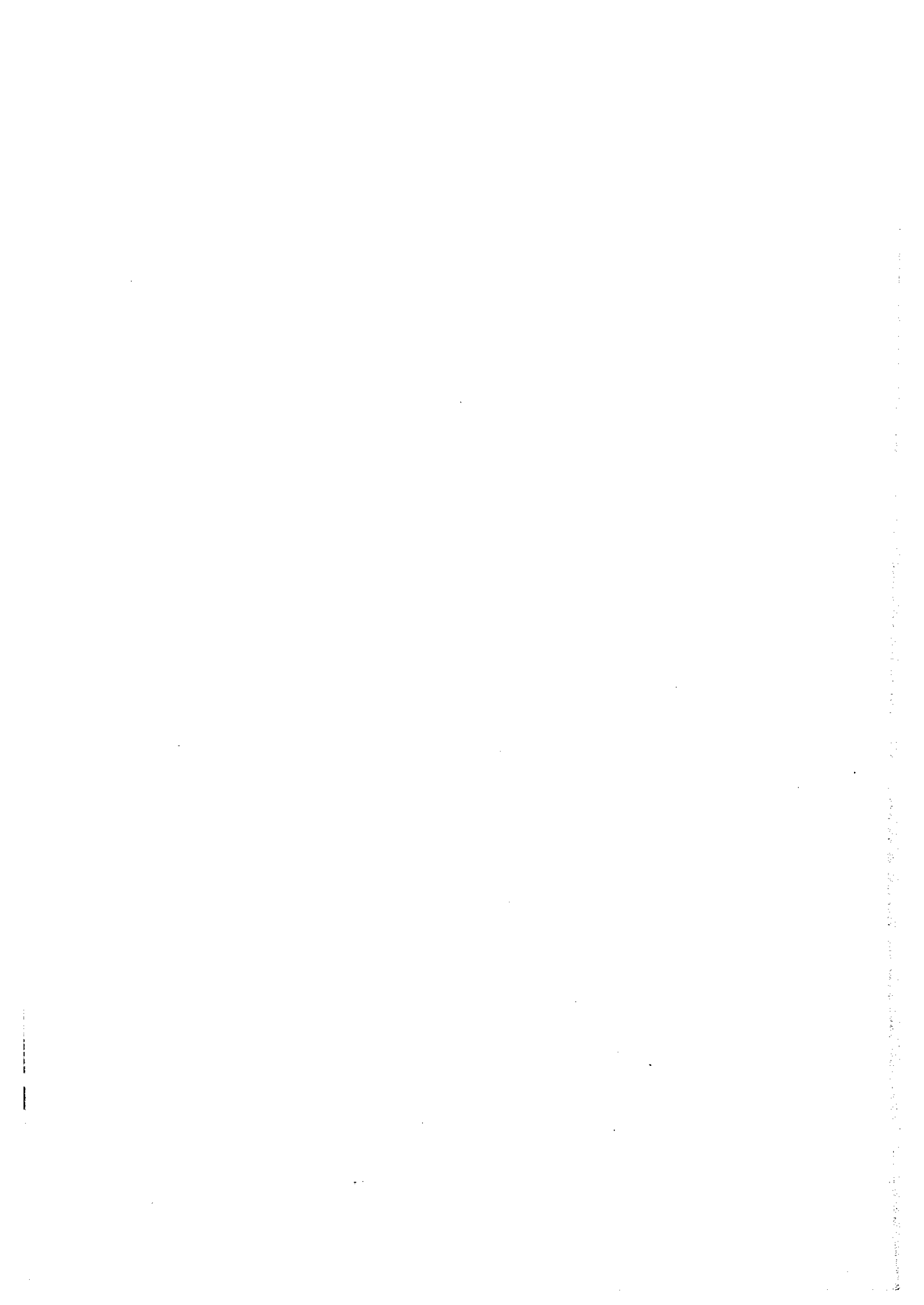
1. "Cerro Rico(*1)" mountain, "Pailaviri and Cooperative" mines and "Cerro Rico, etc." Desmonte(*2)
*1: rich mountain, *2: rejected ores
2. Abandoned "Pailaviri" Ingenio(*3) and its tailing pile
*3: concentrator (mineral processing plant)
3. "Diablo" Sucu(*4)
*4: primitive Sn gravity concentration tailing pile
4. The city of Potosi



D

D

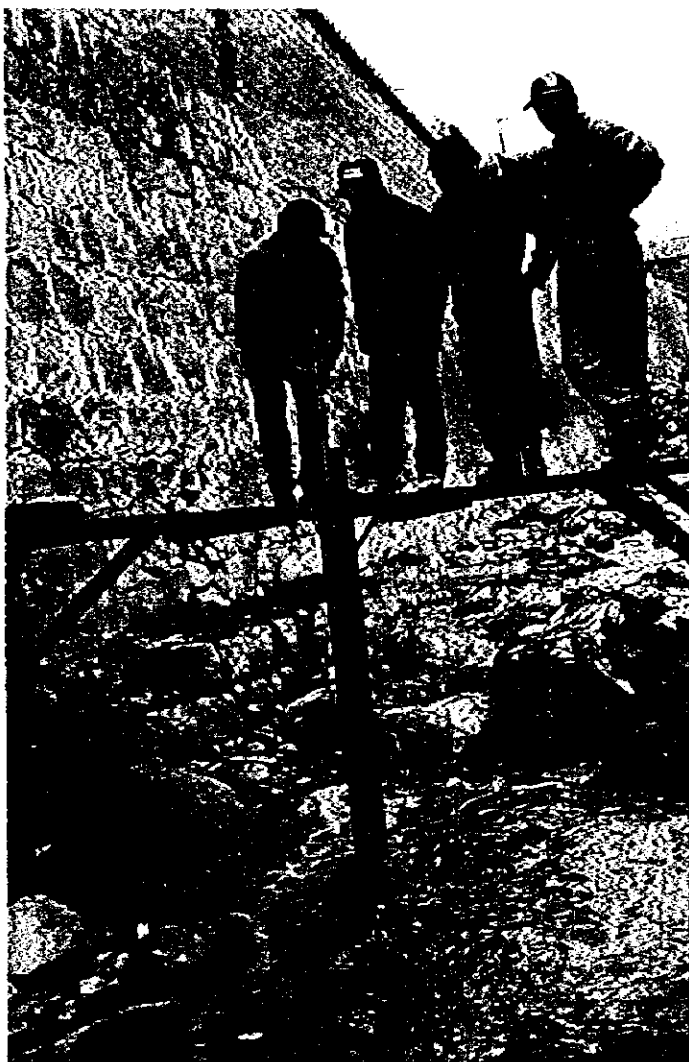
D





Photograph "Sampling at Contaminated Rivers" 1

Sampling point No. 2. This point shows pH between 2.5 and 2.8.



Photograph "Sampling at Contaminated Rivers" 2

Sampling point No. 6. Work bench for data monitoring.

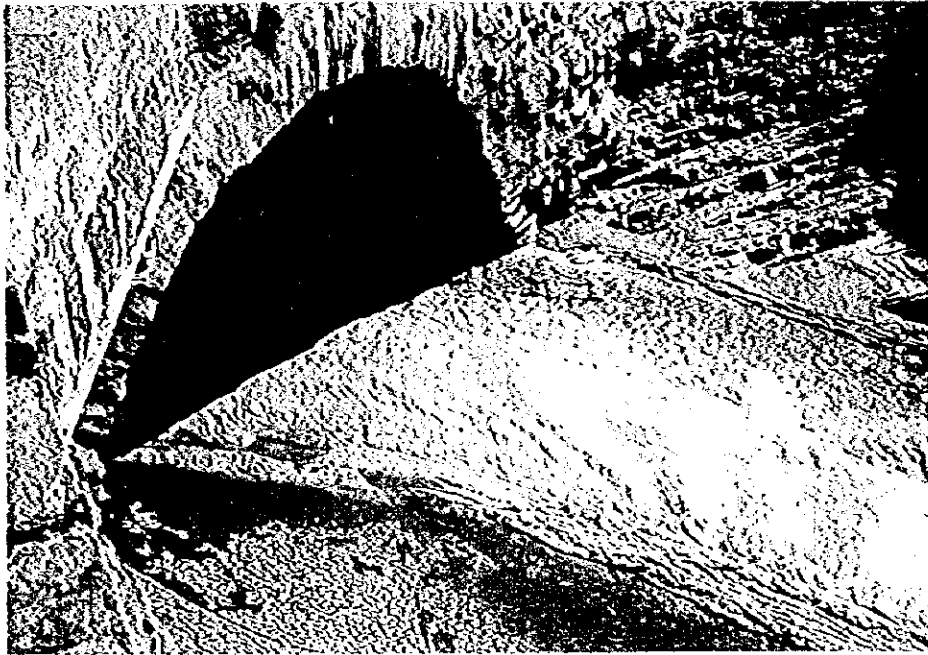
The river water is heavily contaminated by tailings from many small Ingenios.



Photograph "Sampling at Contaminated Rivers" 3
Sampling point No. 11



Photograph "Sampling at Contaminated Rivers" 4
Rio Alja maya river between sampling point No. 11 and No. 12.
Dry season. Sediment is accumulated along the river.



Photograph "Sampling at Contaminated Rivers" 5

Rio Alja mayu river. Sampling point between No. 12 and No. 15.
Work bench is located on the bridge.



Photograph "Sampling at Contaminated Rivers" 6

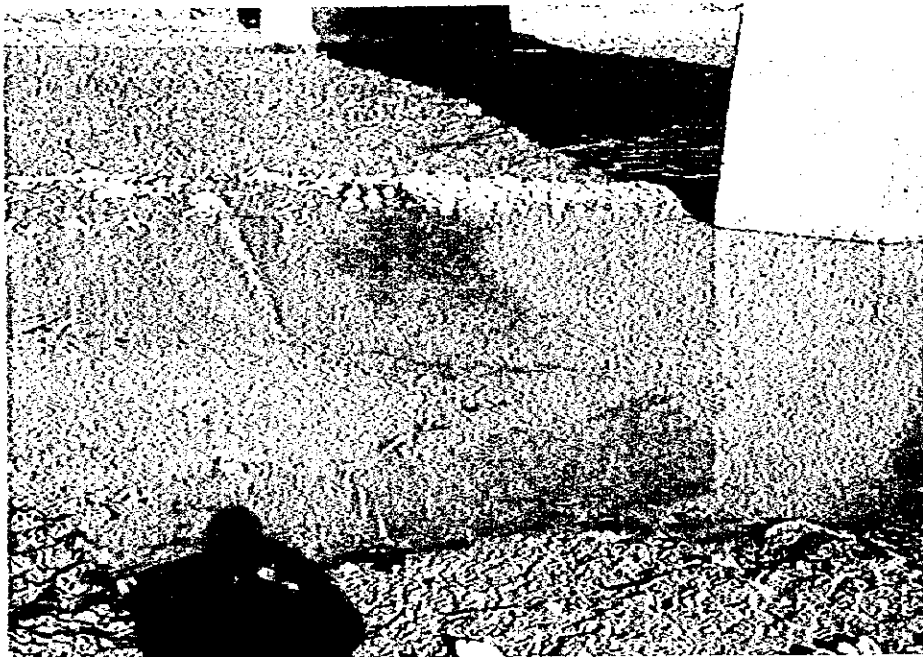
Rio Alja mayu river. Sampling point No. 15.



Photograph "Sampling at Contaminated Rivers" 7

Sampling point No. 25: "Puente Mendez" bridge.

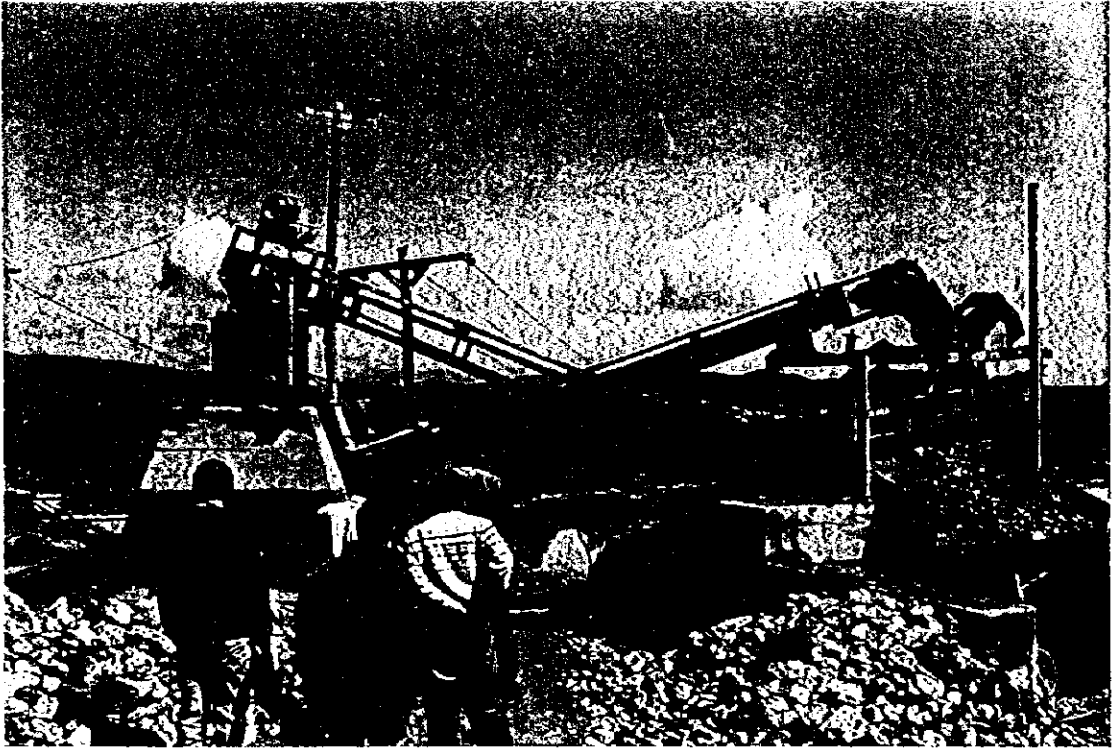
Rainy season. The river is flushed many times after hard rain.



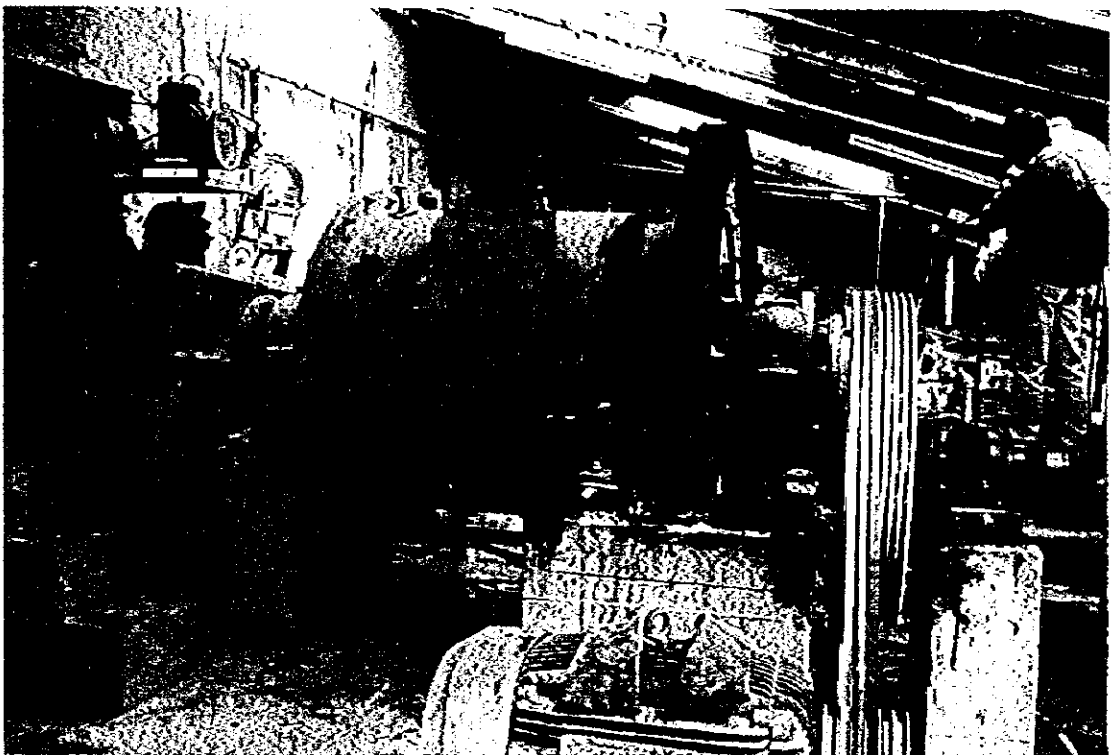
Photograph "Sampling at Contaminated Rivers" 8

Sampling point No. 25: "Puente Mendez" bridge.

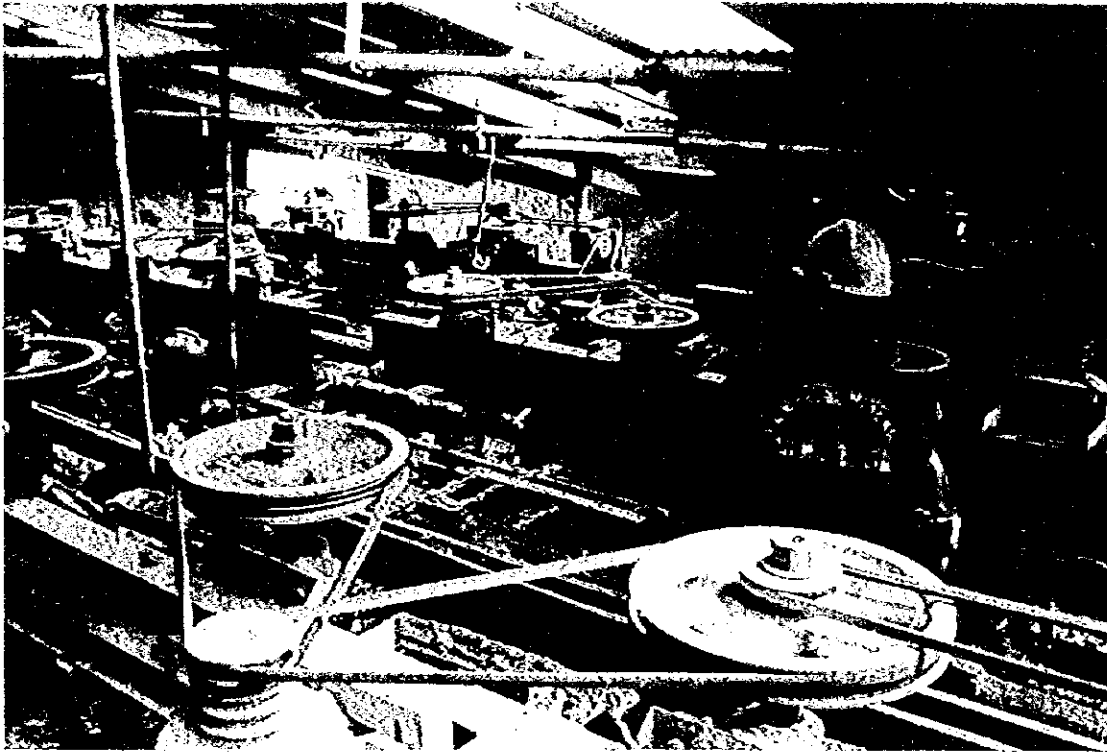
Dry season. Accumulated sediment color is different from rainy season, largely affected by tailing from Ingenios.



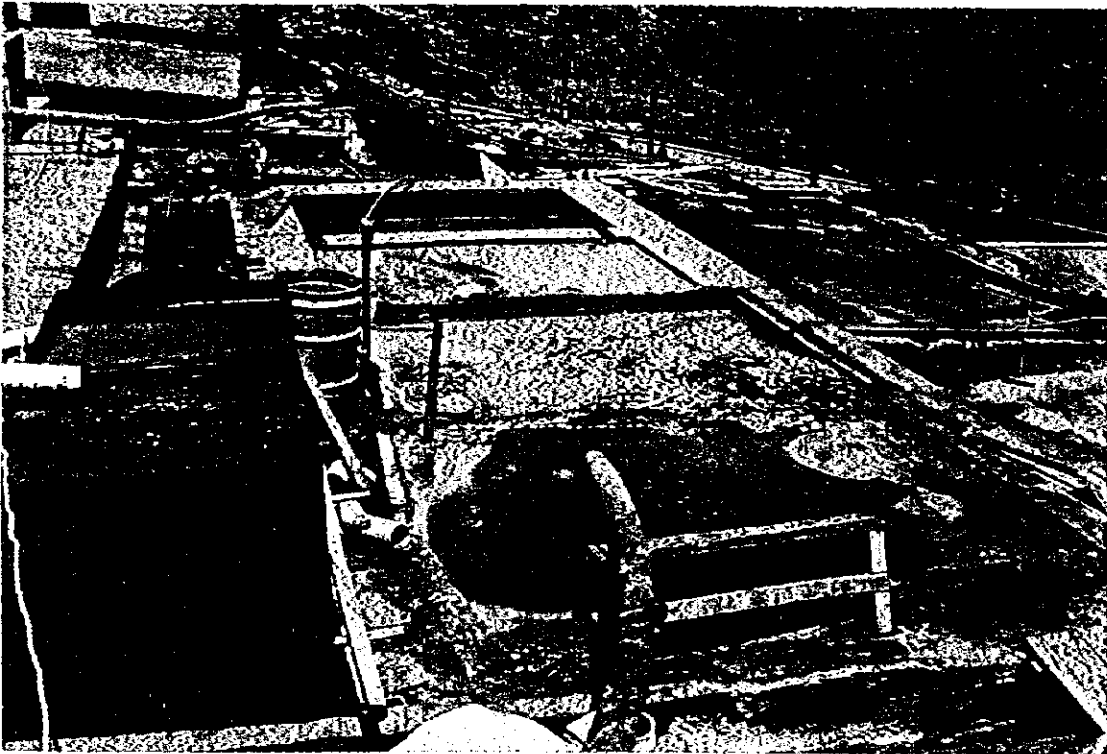
Photograph "Ingenios" 1
Typical crushing facilities(at San Miguel)



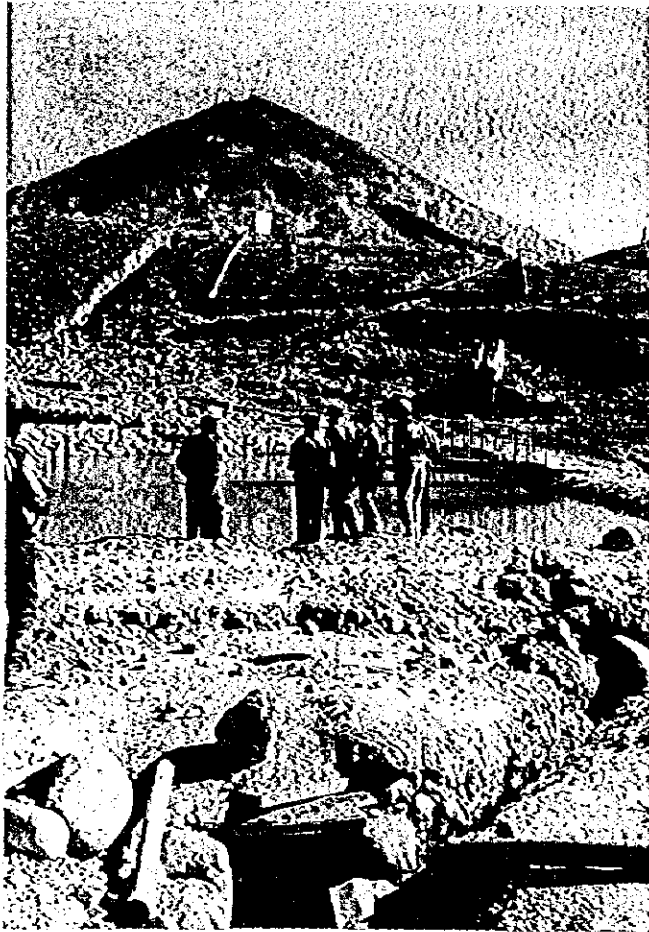
Photograph "Ingenios" 2
Typical grinding facilities(at San Miguel)



Photograph "Ingenios" 3
Typical flotation facilities (at San Miguel)



Photograph "Ingenios" 4
Typical concentrates treatment facilities (at Del Sur)
left: for Pb conc. and right: for Zn conc.



Photograph "Ingenios" 5

Typical individual tailing treatment facilities(at Del Sur) to get clarified water. Settled tailing is discharged to rivers.



Photograph "Ingenios" 6

A abandoned Ingenio.



Photograph "Ingenios" 7

"San Miguel" old Sn processing tailing pile.



Photograph "Seminar"

The first seminar at Potosi.(22, 23, Oct. 1998)