

Geological Survey of Brazil

CPRM – COMPANHIA DE PESQUISA DE RECURSOS MINERAIS
(CPRM - Mineral Resources Research Company)

ONEGEOLOGY: SOUTH AMERICA & CUBA

ONEGEOLOGY MEETING # 15

14 -15 June 2018, Vancouver; GSC- Geological Survey of Canada

CONTENTS

- ✓ Regional Difficulties
 - ☐ Brazil
 - ☐ South America (Venezuela, Uruguay, Paraguay) and Cuba
- ✓ Continental Difficulties
 - ☐ Vocabulary (simplification of the geological knowledge level)
- ✓ Proposal submitting to OneGeology Board
 - ☐ Vocabulary (simplification of the *geological knowledge level*)
- ✓ *Venezuela Geological Map*
- ✓ Hydrogeological Map of Brazil and Plata Basin (*Cuenca del Plata*)
- ✓ Tectonic Map of South America 1: 1M (CGMW)
- ✓ Geological Map of South America 1: 1M (new version; OGS's and ASGMI)
- ✓ OneGeology 3D project

Regional Difficulties

- ✓ Regional Difficulties
 - Brazil

Chrono Lithostratigraphic Classification – simplification of the geological knowledge level when classified to Simple Lithology (CGI vocabulary)

- South America (Venezuela, Uruguay, Paraguay) and Cuba
 - ❖ CPRM Buddy (hardware & expertise)
 - ❖ OGS's Schedules often interrupted

Continental Difficulties

- ✓ Continental Difficulties
 - ❑ Vocabulary (simplification of the geological knowledge level)
 - ❖ Geological Map of South America – 1:1,000,000
New version ready in November 2018
 - ❖ Chrono Lithostratigraphy Classification

Submitting Proposal

- ✓ Submitting Proposal to OneGeology Board
 - ❑ Effective representation of CPRM/SA in the GTWG
 - ❑ Effective representation of CPRM/SA in the CGI
 - ❑ To attend the vocabulary to the others maps (i.e: hydro, tectonics, geology)

ONEGEOLOGY & CPRM

2015 – CPRM makes the data available in GeoSciML 3.2



GeoSciML - Cronológico



GeoSciML - Litológico

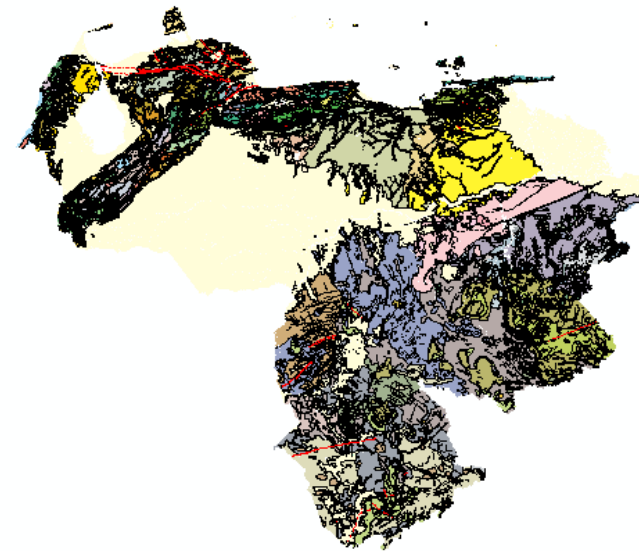
VENEZUELA GEOLOGICAL MAP 1:750,000

2018

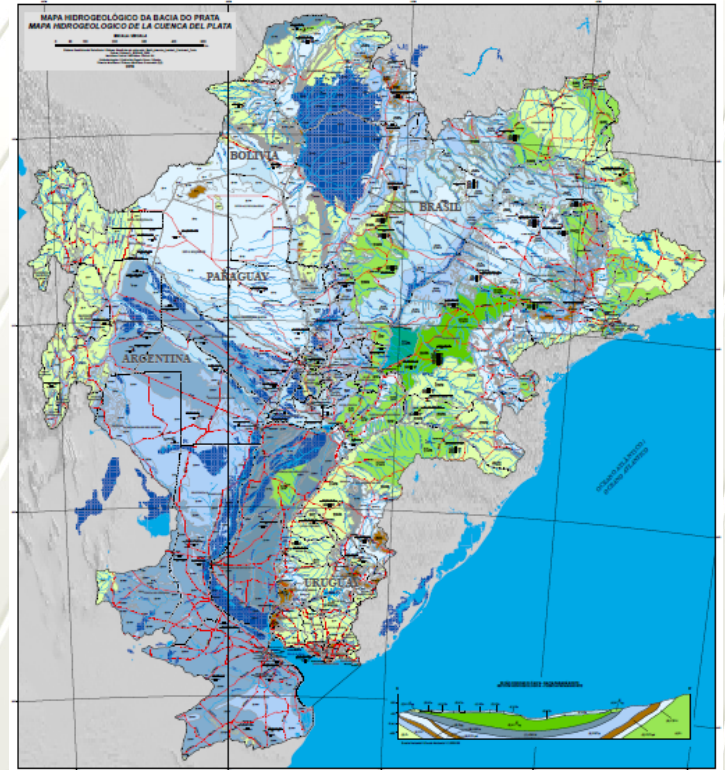
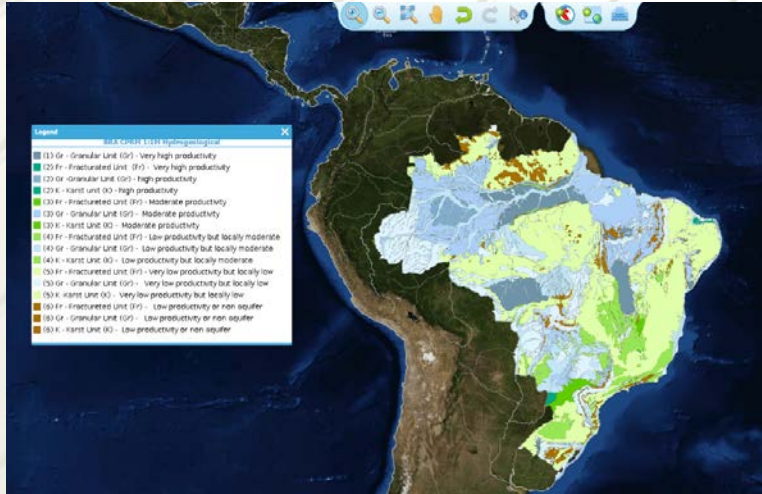
- ✓ Vector Format
- ✓ WMS Address
- ✓ 208 Chrono Lithostratigraphic classes
- ✓ Authorization of the new president of the Geological Survey of Venezuela (INGEOMIN)
- ✓ Next Step
 - Authorization of the new president of the Geological Survey of Venezuela (INGEOMIN)
 - Ready to go to OneGeology Portal - 3 stars

Table Of Contents

- Geologic map of Venezuela
 - C:\venezuela\USGS_06_DS_199\GMV.mdb
 - Geologic_features
 - Folds
 - Anticline or antiform - Location accurate
 - Anticline or antiform - Location coordinate
 - Syncline or synform - Location accurate
 - Syncline or synform - Location coordinate
 - Geologic_contacts
 - Contacts - Location accurate
 - Klippe - Location accurate
 - Normal fault - Location accurate
 - Normal fault - Location approximate
 - Thrust fault - Location accurate
 - Thrust fault - Location approximate
 - Transverse fault - Location accurate
 - Transverse fault - Location approximate
 - Unclassified fault - Location accurate
 - Unclassified fault - Location approximate
 - Geologic_units
 - Hydrologic_features
 - Drainage
 - Open_water
 - GMV_border



Hydrogeological Map of Brazil



✓ Available in RIGEO (PDF Data Repository of CPRM)

Map - http://rigeo.cprm.gov.br/jspui/bitstream/doc/17606/1/mapa_hidrogeologico_de_la_cuenca_del_plata.pdf

Report - http://rigeo.cprm.gov.br/jspui/bitstream/doc/17606/3/memoria_del_mapa_hidrogeologico_cuenca_del_plata_bilingue.pdf

OneGeology Ask Authorization to CIC (Comitê Intergovernamental de La Cuenca Del Plata)

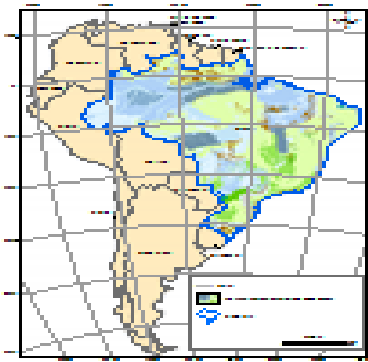


TOTAL MAPPED AREA

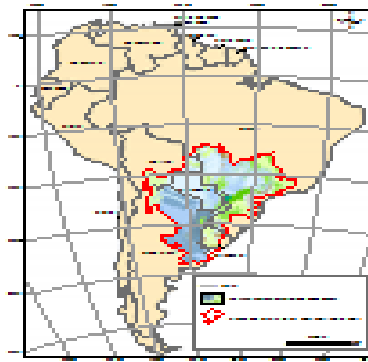


SECRETARIA DE
MINERACIA

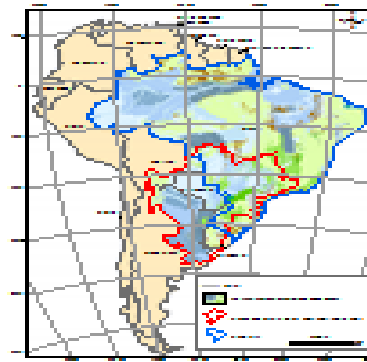
BRAZIL
8.515.000 km²



PRATA BASIN
3.100.000 km²



BRAZIL + PRATA BASIN
10.200.000 km²



SOUTH AMERICA
17.800.000 km²



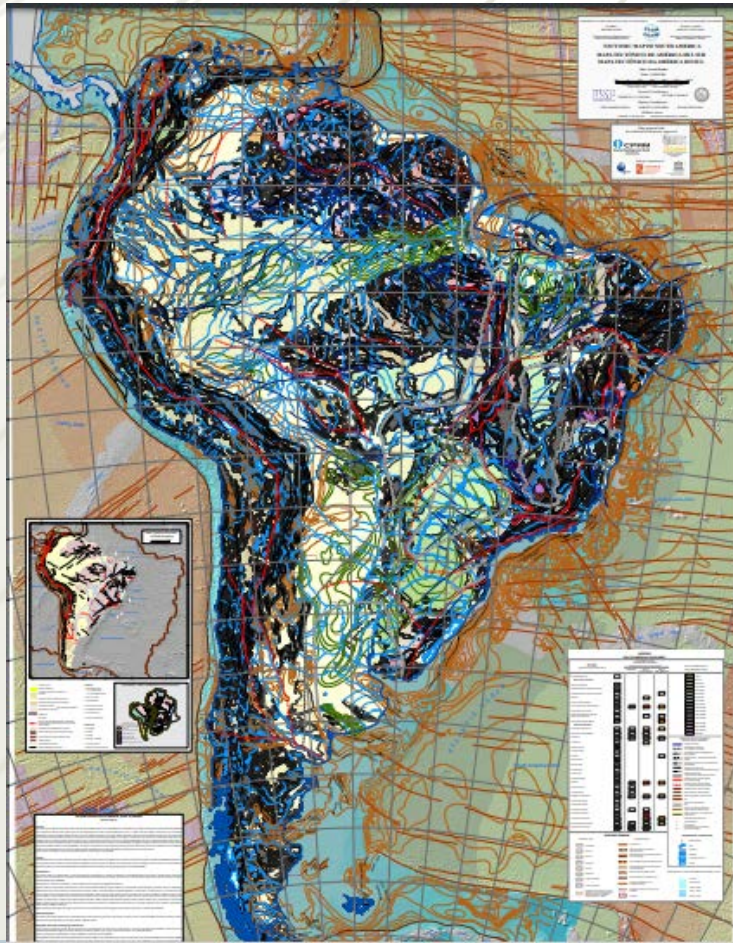
In this way, 57% of South America was mapped



Recently OEA – **Organization of American States** has already agree to support the mapping of the others 43% to complete the Hidrogeological Map of SA

TECTONIC MAP OF SA 1:5,000,000

- ✓ Commission for the Geological Map of the World (CGMW) authorized the availability on the OneGeology portal
- ✓ Three essential attributes in the legend and in the GIS database:
 - ❖ Age of the last tectonic event that affect area
 - ❖ Nature of the tectonic settings
 - ❖ Age of formation of the rocks
- ✓ Tectonic settings – 33 specifics patterns



SOUTH AMERICA TECTONIC MAP

1:5,000,000

2018

✓ Available in RIGEO (PDF Data Repository of CPRM)

Map -

http://rigeo.cprm.gov.br/jspui/bitstream/doc/16750/4/Mapa_tect_AmericaSul_atual.pdf

Report -

http://rigeo.cprm.gov.br/jspui/bitstream/doc/16750/5/NE-Mapa_tect_AmericaSul_2ed.pdf

✓ Available WebGIS -

<http://cprm.maps.arcgis.com/apps/webappviewer/index.html?id=6bd9c72461a142209a34341adbc8d695>

GIS - <http://geosgb.cprm.gov.br/downloads/#>

OneGeology 3D Project

- ✓ Brazil is currently on Pack 5. We are ready to participate as soon as there is any version of the code to be tested.
- ✓ If possible we would like to participate in the translating of the software to Portuguese.
- ✓ Right now CPRM is finishing all the legal requirements to increase the amount of developers. We would like to make ourselves available for other challenges.