Encl.

AGIP - DIMI ARCHIVIO GEOL us/FI

UFFICIO CONTITOLARI RICERCHE IDROCARBURI
APPENNINO SETTENTRIONALE

AGIP ARCHIVIO POZZI AGEO

WELL : PONTREMOLI 1

E/PROF

Permit : Pontremoli
Rig : National 110 U/E (SAIPEM)
Spudding date : Febr. 6th, 1971 (11.00 p.m.)
Completion of drilling : August 15, 1971 (6.30 a.m.)
Completion date : August 17, 1971 (8.00 p.m.)
Total depth : 3520 m.
Státus : dry & abandoned
Location : on the Pontremoli - Zeri road, close to Case Baratti.
Coordinates : Long. 02° 35' 20" W
Lat. 44° 22' 01" N
Ground elevation : 376.71 m.
Elevation Rotary Table : 382.94 m.
K.B.D. : 383.34 m.

▨	sand	▤	clay	▩	schists
▨	sandstone	▤	marl	▨	chert: nodules/lenses.
▨	conglomerate	▦	limestone/marly ls.	▨	calcite/quartz
▤	siltstone	▨	dolomite/dol. ls.		
▤	shale	▩	anhydrite		

SHOWS

Visible gas shows
- ☼ Weak (e.g. emulsion)
- ☼ ☼ Strong (e.g. blow)

Chromatograph indications
- ✲ Weak
- ✲ ✲ Strong

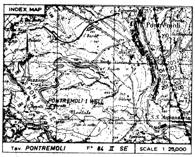
- ◐ Oil stain
- ● Oil show (traces)
- ● ● Oil show (evident)
- ● ☼ Oil and gas show
- ● ■ Heavy oil show
- ■ Bitumen show
- △ Salt water show
- ◇ Fresh water show

PROVEN RESERVOIR

- ☼ Interval with gas
- ● Interval with oil
- △ Interval with salt water
- ◇ Interval with fresh water

Porosity: poor, fair, good

- 1210 ② 1214 Core
- ◀ Squeezing
- 552 555 Casing perforation
- ⊠ Bridge plug
- ⊠ Bridge plug (drilled)
- az. 315° 30° dip Dipmeter data
- Casing shoe
- Cement plug
- Cement plug (drilled)
- DST 2 D.S.T.
- DST 1 D.S.T (failed)
- Mud loss



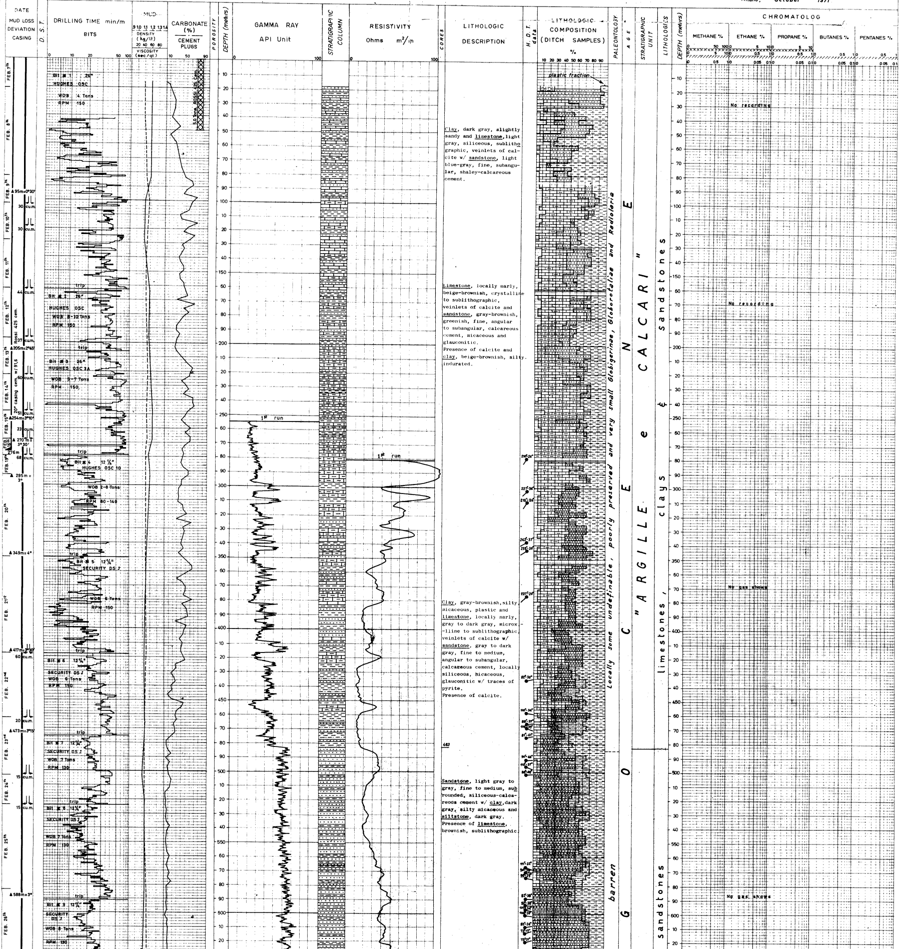
Tav. PONTREMOLI F° 84 II SE SCALE 1:25,000

Report : Pontremoli 1 well - Final geological report - Oct. 1971

SCALE 1:1,000

Mud logging Contractor : Geoservices (Paris - France)

Milano, October 1971



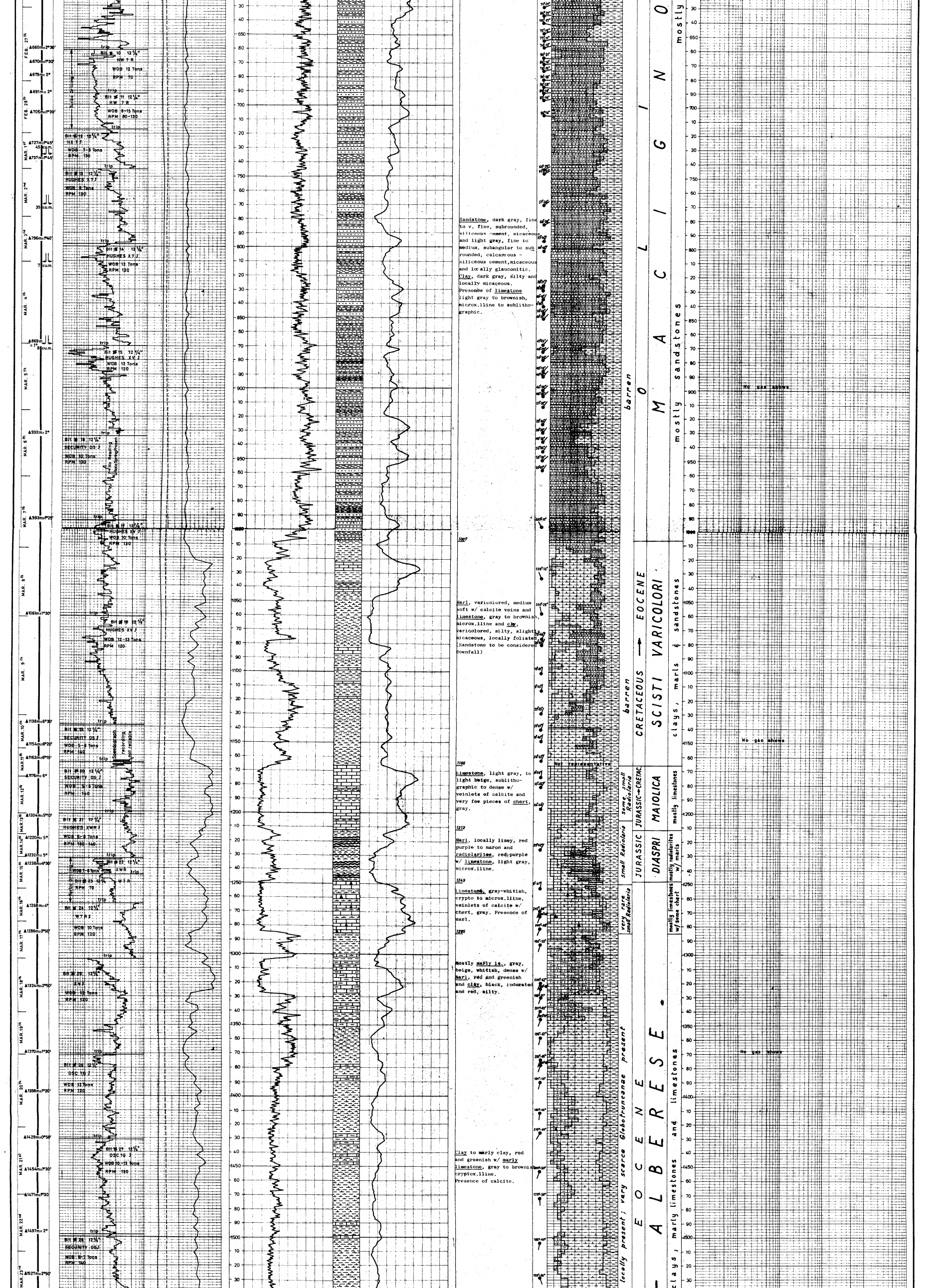
Clay, dark gray, slightly sandy and limestone, light gray, siliceous, sublithographic, veinlets of calcite w/ sandstone, light blue-gray, fine, subangular, shaley-calcareous cement.

Limestone, locally marly, beige-brownish, crystalline to sublithographic, veinlets of calcite and sandstone, gray-brownish, greenish, fine, angular to subangular, calcareous cement, micaceous and glauconitic.
Presence of calcite and clay, beige-brownish, silty, indurated.

Clay, gray-brownish, silty, micaceous, plastic and limestone, locally marly, gray to dark gray, microx--lline to sublithographic, veinlets of calcite w/ sandstone, gray to dark gray, fine to medium, angular to subangular, calcareous cement, locally siliceous, micaceous, glauconitic w/ traces of pyrite.
Presence of calcite.

483

Sandstone, light gray to gray, fine to medium, subrounded, siliceous-calcareous cement w/ clay, dark gray, silty micaceous and siltstone, dark gray.
Presence of limestone, brownish, sublithographic.



1007

Sandstone, dark gray, fine to v. fine, subrounded, siliceous cement, micaceous and light gray, fine to medium, subangular to sub rounded, calcareous - siliceous cement, micaceous and locally glauconitic.
Clay, dark gray, silty and locally micaceous.
Presence of limestone light gray to brownish, microx.lline to sublithographic.

Marl, varicolored, medium soft w/ calcite veins and limestone, gray to brownish, microx.lline and clay, varicolored, silty, slightly micaceous, locally foliated. (Sandstone to be considered downfall)

1166

Limestone, light gray, to light beige, sublithographic to dense w/ veinlets of calcite and very few pieces of chert, gray.

1212

Marl, locally limey, red purple to maron and radiolarites, red-purple w/ limestone, light gray, microx.lline.

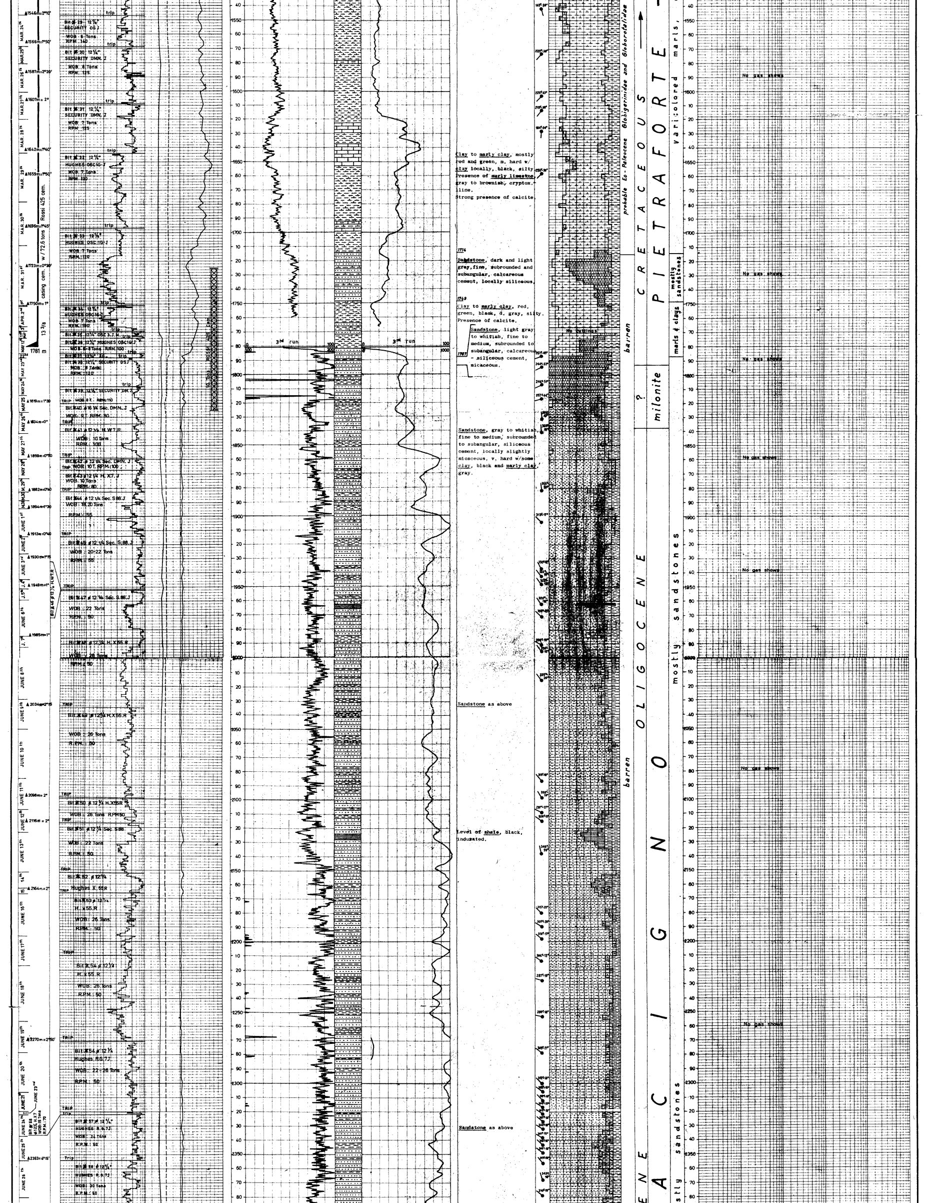
1249

Limestone, gray-whitish, crypto to microx.lline, veinlets of calcite w/ chert, gray. Presence of marl.

1285

Mostly marly ls., gray, beige, whitish, dense w/ marl, red and greenish and clay, black, indurated and red, silty.

Clay to marly clay, red and greenish w/ marly limestone, gray to brownish cryptox.lline.
Presence of calcite.



Clay to marly clay, mostly red and green, m. hard w/ clay locally, black, silty. Presence of marly limestne, gray to brownish, cryptox.-lline. Strong presence of calcite.

1714

Sandstone, dark and light gray, fine, subrounded and subangular, calcareous cement, locally siliceous.

1749

Clay to marly clay, red, green, black, d. gray, silty. Presence of calcite.

1787

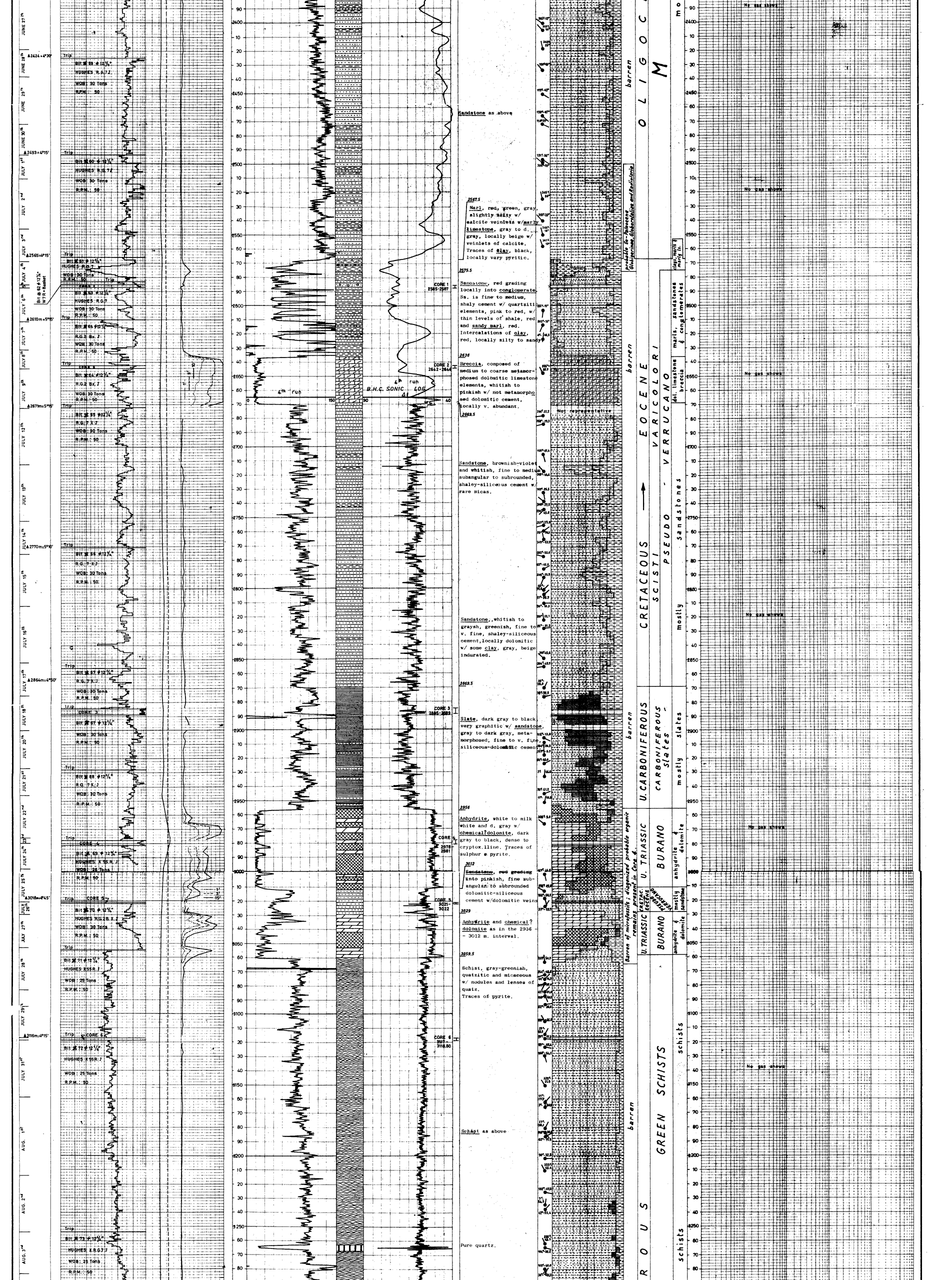
Sandstone, light gray to whitish, fine to medium, subrounded to subangular, calcareous - siliceous cement, micaceous.

Sandstone, gray to whitish, fine to medium, subrounded to subangular, siliceous cement, locally slightly micaceous, v. hard w/some clay, black and marly clay, gray.

Sandstone as above

Level of shale, black, indurated.

Sandstone as above



Sandstone as above

2567.5

Marl, red, green, gray, slightly silty w/ calcite veinlets w/ marly limestone, gray to d. gray, locally beige w/ veinlets of calcite. Traces of clay, black, locally vary pyritic.

2575.5

Sandstone, red grading locally into conglomerate. Ss. is fine to medium, shaly cement w/ quartzitic elements, pink to red, w/ thin levels of shale, red and sandy marl, red. Intercalations of clay, red, locally silty to sandy.

2636

Breccia, composed of medium to coarse metamorphosed dolomitic limestone elements, whitish to pinkish w/ not metamorphosed dolomitic cement, locally v. abundant.

2669.5

Sandstone, brownish-violet and whitish, fine to medium subangular to subrounded, shaley-siliceous cement w/ rare micas.

Sandstone, whitish to graysh, greenish, fine to v. fine, shaley-siliceous cement, locally dolomitic w/ some clay, gray, beige indurated.

2869.5

Slate, dark gray to black, very graphitic w/ sandstone, gray to dark gray, metamorphosed, fine to v. fine, siliceous-dolomitic cement.

2956

Anhydrite, white to milk white and d. gray w/ chemical? dolomite, dark gray to black, dense to cryptox.lline. Traces of sulphur e pyrite.

3012

~~Sandstone, red grading~~ into pinkish, fine subangular to subrounded dolomitic-siliceous cement w/dolomitic veins

3029

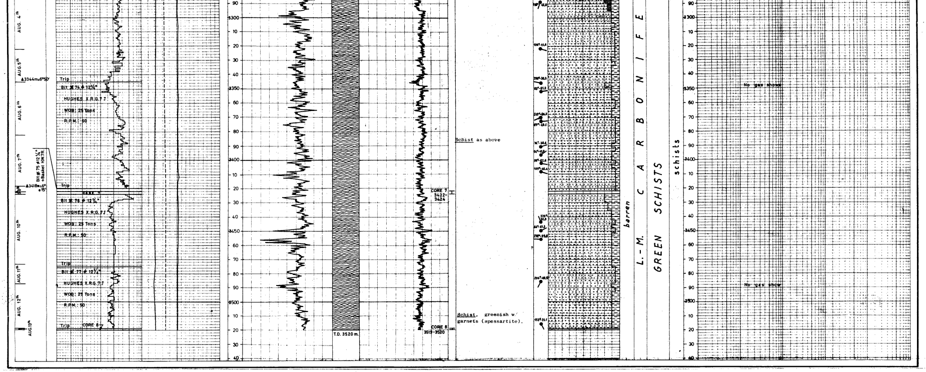
Anhydrite and chemical? dolomite as in the 2956 - 3012 m. interval.

3059.5

Schist, gray-greenish, quatzitic and micaceous w/ nodules and lenses of quatz.
Traces of pyrite.

Schist as above

Pure quartz.



1) CORES:

- 1 = from 2585 to 2587 m. Rec. 100% Dips 4°-5° No shows (sandstone, congl & shale)
- 2 = " 2642 " 2644 m. " 30% " none " " (dolomitic ls. breccia)
- 3 = " 2885 " 2889 m. " 75% " 5° " " (slate)
- 4 = " 2978 " 2981 m. " 100% " none " " (anhydrite & chem. dolomite)
- 5 = " 3021 " 3022 m. " 70% " none " " (sandstone)
- 6 = " 3117 " 3118,8 m." 100% " none " " (schist)
- 7 = " 3422 " 3424 m. " 25% " none " " (schist)
- 8 = " 3519 " 3520 m. " 50% " none " " (schist)

2) D.S.T.: none

3) CEMENT PLUGS:

- 1 = from 1825 to 1725 m. w/ 10,0 tons Rossi 425 cement
- 2 = from 50 to 0 m. w/ 5,0 tons Rossi 425 cement.

4) SCHLUMBERGER & WELL VELOCITY SURVEYS

- 1st run (in $12\frac{1}{4}$ hole)	IES	from 1765	to	276 m.	(SP curve unreliable)
	BHC/GR	" 1764	"	276 m.	(Caliper tool not working)
	CDM	" 1764	"	276 m.	(Unreliable)
- 2nd run (in $18\frac{1}{2}$ hole)	IES	from 1663	to	276 m.	(SP curve unreliable)
	HDT	" 1663	"	276 m.	
- 3rd run (in $12\frac{1}{4}$ hole)	IES	from 2675	to	1781 m.	(SP curve unreliable)
	BHC/GR/C	" 2672	"	1781 m.	
	HDT	" 2674	"	1781 m.	
	W.V.S.	w/ geophone at 300, 1000, 1700, 2250 and 2650 m.			
- 4th run (in $12\frac{1}{4}$ hole)	IES	from 3519.7	to	2610 m.	(SP curve unreliable)
	BHC/GR/C	" 3517.5	"	2610 m.	
	HDT	" 3520,0	"	2610 m.	

5) TOTAL MUD LOST : 548 cu.m.

NOTE : 12 1/4 hole enlarged to 18 1/2 from 279 to 1785 m.