

UNPLACED

SPAIN

Los ARCOS

Spain

Way (1962) 152
small way

Cu mined in a



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66113 Haigholand Mchr.

(34) Marchessault, R H (ed) : SMALL ANGLE SCATTERING
FROM FIBROUS AND PARTIALLY ORDERED SYSTEMS.

(N.Y. & London) JUNE 1966 176pp c.53/- \$7.40

8 Broad coverage of implications of radiation-
9 scattering as used in clarification of structures
commonly prevailing in solid polymers. Contents
include Light scattering from Oriented and fiber
structures; small angle light scattering from
deformed spherulities-theory and experimental
verification, Laser light scattering from Polymer
films; characteristics of cellulose gels, small
X-ray scattering from bulk crystalline polymers.

SPAIN (I)

MA 1 389 wulfenite "workable" at
several locs in SE Spain

MA 3 555 Chalcocite

MA 6 505 Cerussite xls (15 locs)

MA 8 354 Mineral locs.

286 "Ornetite", Xray = joseite [see SERRANIA
DE RONDA]

MM 28 312 Bibliography

MM 28 725 Bronze

(18) Reid, K.F.: PROPERTIES AND REACTIONS OF BONDS IN ORGANIC MOLECULES. (London) SEPT 1968 556pp 60/-

D The author has drawn upon the most recent research for his account of the structural features of molecules, energetic principles and the use of physical methods in elucidating reaction mechanisms and molecular structures. Consideration of bond types is made the basis for the discussion of chemical properties and most physical ones.



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SPAIN (II)

Montal. Rocks & Mins (1956) 31 563. MA 15 163

Scattered occ's of quartz xls incl.
citron; & cinnabar-impregnated.

Scheelite & wolframite, several locs.

~~///~~ Amer Min (1961) 46 146 Antlerite etc.

402

IR of U-asphaltilites.

Way (1962) = Ruth Way: A geog. of Sp. & Portug.

Dana (1932) = "Textbook" 4th Ed.

London (1962)

(35)

Zajic, J. E. MICROBIAL BIOGEOCHEMISTRY.

London and New York. Nov '69. 345pp 140/)
This book provides a summary of those bio-chem-
ical reactions in which minerals are either
solubilized or deposited, with emphasis on the
role played by microbes. The approach through-
out is interdisciplinary, combining the latest
information in the fields of microbiology and
geology.

E



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66113 Haigholand M.

4 147, 328, 26 330

5 156, 73 176 282

6 205 220 440

and 1/2 1/2 1/2



2
—
3

Perd. Spar

MA 1 389 24, 294 201

349 378 144 267

Would provide in SE 5 pairs

detached 8 (16)
on Fe and hawks

2 20 ~~413~~ 32

3 555, 322, 207, 525

83, 138, 151, 297, 139

4 147, 328. 26 330

5 136, 73 176 282

6 505 ~~2222~~ 440

35 73784 now by hawks

8 ~~343~~

9 ~~27~~ Min. May.

10 Portugal bibles 28 313

11

12

ASTURR ETA

Spain

MA 12 596
(Meixner)

Magnesite, lenticular xls

BARRANCO DEL FRANCÈS

Spain

BM

Natroalinite, compact
white massive.

SIERRA DE CAMEROS, Spain

MA 8 182 Pyrite xls.

COLMENAREJOS,

Spain

MA 10 374

Torbernite "very poor
material" on granite

GARLITOS

Spain

BM Mimetite, pale grey-brown
prismatic

HORCAJUELO

Spain

? Horcajuelo de la Sierra, Sa de Guadarrama,
BM. Rutile, large, fat xl. Madrid

Catalonia
HORTA de San JUAN, Spain

Way (1962) Bauxite

LLUMERES

Spain

Cantabrians

Way (1962)

Minor Fe deposit

MIGRANILLA

Spain

CA 68 88931

Aragonite

Sierra del NARANJO

Spain

Cantabrians

Way (1962) Minor Fe deposit

San PEDRO de OSCAR

Spain

Catalonia

Way (1962)

Zn

La PICOTA

Spain

Cantabrian

Way (1962)

Minor Fe deposit

PONT FERRADA,

Spain

Bull Soc Min (1956) LXI.

Scheelite — 6 cm xl[!!]

Monte RUBIO

NE Spain

Way (1962) Minor iron deposit

VAL FERRARA

Spain

~~Pyrenees Catalonia~~

Way (1962)

Minor Fe.

VIZCAYA. ~~2 S. Amer.~~, ? Spain ~~2 Port.~~

Bilbao area = Viscaya.

CA 2 1675 New occ. of aurichalcite, w.
smithsonite in an abandoned
mine in Ondarroa (Vizcaya).

REGIONS

SPAIN

ANDALUSIA, Spain

Dana (1932) Andalusite

CHARCHES

Andalusia, Spain

[? = CHARCHE, E of Guadix, Granada]

Way (1962) Pb.

HINOJOSA de CORDOBA ? Cordoba
Andalusia, Spain

Dana (1932) Conichalcite

JUANA ALONSO M.,

Andalusia, Spain

MA 226. Franklinite

ARAGON, Spain.

BM. Atacamite, good xls.

Azurite with outer zone of
malachite - large polished specimen.

Classically: Aragonite

ASTURIAS, Spain

BM: Cinnabar xls cf Mieres (Oviedo)
Muñon

Asturias

BUFERRERA

Spain

Way (1962)

Mn.

Asturias

CABRALES

Spain

Way (1962)

Minor Pb; Mn.

Asturias

CASTRILLÓN

? Santander

Spain

Way (1962)

2n

DEGANA

Asturias

Spain

Way (1962): W

Asturias
San MARTIN de OSCOS Spain

Way (1962) Minor Pb

MUÑÓN, Asturias Spain

way (1962) Minor Hg.

Asturias
NAVALES ? Santander Spain

Way (1962) Zn.

QUIROS

Asturias
Oviedo (?)

Spain

Way (1962) Fe

BASQUE PROVINCES, Spain

Bilbao (Viscaya); Vitoria (Alava);

San Sebastian (Guipuzcoa); Pamplona (Navarra)

Way (1962) Fe: Lesaca-Irún; Oyarzún; Cerain;
Matilola (on either side of R. Bidasoa);
Betelú.

Pb: Oyarzún; Irún; Vera, Oñate, Ezcurra

Zn Oyarzún; Barambio

Kaolin Nr Oyarzún & Legarreta

Marble (pure white) Mañaria.

Asphalt ex bitum. l'st: Alava-Logroño area.

GALICIA, Spain.

ARNAOYA

Spain

Galicia

Way (1962)

W



SIERRA DE LA CAPELADA, Galicia, Spain

MA II 104 Cr-chlorite, large green
plates in serpentinitised pyroxenite.
1.88% Cr_2O_3 .

CASAYO

Galicia, Spain

MA 5

136

Wolframite

CAUDÍN *galicia* Spain

Way (1962) Cu (^{v. line}~~insignif~~)



FREJO

Spain

galicia

Way (1962) Cu (v. little)

JUNO,

Galicia, Spain

MA5

136

wolframite

LAUSAME
LOUSAME

Galicia

Spain

Way (1962)

Sn.

MEREDO

Spain

Galicia

Dana (1932)

Geocronite

MUÑOS BLANCOS

Spain

Galicia

Way (1962) W

MONTE NEME

galicia, Spain

MA 5 136

Wolframite

SANTA COMBA

Spain

Galicia

Way (1962) W

SILVARROSA

Spain

Galicia

Way (1962) Fe

La VEGA del BOLO

Spain

Galicia

Way (1962)

W



VEIGA,

galicia, Spain,

MA 5 136 Wolframite

VILACOPA,

Galicia, Spain

MA5 136

Wolframite

VILLADECIERVOS

Spain

Galicia

Way (1962) Sn



VILLAR BACÚ

Spain

Galicia

Way (1962)

Sb

ALICANTE

SPAIN

Firestone map

LAGUNA de SALINAS, Alicante, Spain.

Way (1962) Minor rock-salt centre

HONDON de las FRAILES, Alicante, Spain.

RSWB 97-25 (Ex Unity Minerals).

Epidote superb rich silky
acicular cavity lining — from
CABEZO NEGRO.

ALMERIA

SPAIN

Firestone maps 8, 9

[~~See~~ "SIERRA NEVADA (granada)"]

BM Cerussite, hollow twin xl

Dana (1932) Hemimorphite; "almeriite"

MM (1963) 33 353 "Almeriite" from ADRA (type loc.)
= natroalunite with illite & kaolinite

Firestone Map 8 (N of province) Cueva de LOS LETREROS,
Cueva de LAS ESTALACTITAS, Cuevas de
ALMANZORA (cf Sierra de ALMAGRO)

Firestone Map 9:- (Those of Map 8, plus:-)

Cuevas de LOS UBEDAS (NE of Almeria),
Cuevas de LAS MEDINAS (NE of Almeria),
Cueva de LOS MILLARES (N of Almeria)

ADRA, Almeria, Spain.

MM (1963) 33 353 "Almerite" from
Adra (type loc) = natroalinite,
with illite & kaolinite

Sierra ALHAMILLA, Almeria, Spain

Firestone 9. NE of Almeria town

BM: Haematite pseudo after large
isolated pyrite xl.

SIERRA ALMAGRERA, Almeria, Spain.

[Firestone 879]

GR/GS 1967.

Siderite

~~Sphaerite~~

xls with

haematite inclusions → schiller.

Jarosite

(I)

MM 31 884 The Alumian = ~~Natroalunite~~
natroalunite (type loc) for 3 mines.

HA 3 297 Cassite, arrowhead twins,
from RAMO DE FLORES MINE

Sierra ALMAGRERA, Almeria, Spain (II)

BM: Native silver, large x-line mass

Dana (1932) "Sierra Almagrera, near
Aguilas, Murcia": - Ferberite,
alumian; bindheimite.

Davies (1888) Pb mines in micaceous
slate interstrat. w. trap & porphyry.
Ore in pockets & bunches along

Sierra ALMAGRERA, Almeria, Spain
(III)

The bedding, & die out at depth.

v. argentif anglesite + Fe oxide
at top; galena + siderite lower
down.

Galena of JAROSO vein, very
argentif - 130-180 oz/ton!

1:50,000 Military Map:-

Minas GUZMANA, TEMPLANZA,

Sierra ALMAGRERA, Almeria, Spain (IV)

MADRILENA, VENUS AMANTE, LA TONTA,
LA JUSTICIA, de SAN JUAN, BOLETIN,
RAMO DE FLORES

Sierra de ALMAGRO, Almeria, Spain

Firestone 9. Near Huerca-Overa.

1:50 000 Military map:-

Mina de S. CLEMENTE, La Cueva del
PESEBRE ; Cuevas del ALMANZORA

Sierra de BAZA, Almeria/Granada,
Spain.

Firestone 9, NNW of Almeria.

MA 17 786. Bull Soc Belg Geol (1964) 73, 571

Banded fluorite + galena, calcite, baryte
in veins in Trias l'st & doloms.

BERJA, Almeria, Spain

In Sierra NEVADA [See under granada prov.]

Way (1962). Lead mines, Berja, "granada".

Sierra CABRERA, Almeria, Spain

Firestone 9

Dana (1932) Cabrerite.

BM. Cabrerite, spherules.

Apatite, small orange xls
embedded in limestone

Sierra de los FILABRES, Almeria, Spain

Way (1962) Fe, at GERGAL, & near
SERÓN.

MA 16 100 MENAS DE SERÓN region

— metamorphism. Tourmaline,

rutile, apatite, epidote, pyrite,
zeolites, etc.

Sierra de GADO, Almeria, Spain

of Sierra de GADOR

Davies (1888) Pb ones.

Sierra de GADOR, Almeria, Spain

cf Sierra de GADO

See also GADOR

Davies (1888) Pb ores - Ag 2oz/ton

Lead (Imp. Inst. Monogr.) (1921) Lodes in district N

of Almeria have argentiferous galena
with Cu ores in baryte, siderite
& strontianite.

Secondary Ag
ores have been extensively mined

GADOR, Almeria, Spain

Firestone Map 9. Minas de Azufre,
near Gador

CABO DE GATO, ^{E 8} Almeria, Spain

RJ Whittaker 4/72. Means "Cape of agates."

Agate; ^{drusy} 1 quartz - one spec. w. small
brown xls jarosite [noticed e IR'ed, RSWB]

Way (1962) In CAPE GATA region, pyrite
yields 10-15 oz Ag; Ag & Au also
from one concentrate

La GRANADILLA, nr. Nijār, ^{Eg} Almeria, Spain

RJWhittaker 4/72. Old garnet mines in
valley.

Almandine [abs. spec. RSWB]
garnet ($\frac{1}{2}$ cm mostly) common in pits.

Also found in matrices:-

- (1) Studding a lava - look as though
taken up by the lava
- (2) In ~~the~~ schists with blue
cordierite [IR, RSWB], quartz; biotite

Presum. the original matrix.

NÍJAR, Almeria, Spain

See also La GRANADILLA

Way (1962) Pb

PATERNA, Almeria, Spain

Firestone 9, Paterna del Rio, N of Adra.

Dana (1932). Zincite

RAMO DE FLORES M., Sierra Almagrera^{Almeria}, Spain
See also S. ALMAGRERA.

MA3 297. Cenoste, arrowhead twins



RODALQUILAR, Almeria, Spain. (I)

Firestone 9, Sierra de Gata, E of Almeria.

MA 15, 107 Petrog. of Au deposit.

Pyrite, marcasite, pyrrhotite, covellite,
delafossite, jarosite, goethite, native
gold, lepidocrocite. Primary Au in
pyrite

Way (1962) Fe + a little Au mined.

RODALQUILAR, Almeria, Spain (II)

[CA 68 106760] Rodalquilarite, new
mineral, $\text{Fe}_2^{\text{III}} [\text{TeO}_3 / (\text{TeO}_3\text{H})_3 / \text{Cl}^-] \cdot \frac{1}{2} \text{H}_2\text{O}$, small
emerald green xls e crusts, with jarosite
and native gold.

R.J. Whitaker 4/72 Spec's to RSWB.

SERÓN, Almería, Spain

See Sierra de los FILABRES

VÉLEZ RUBIO, Almeria, Spain

Way (1962) Pb

700-1
VERA, Almeria, Spain

Way (1962) Fe

CUEVAS DE VERA, Almeria, Spain

Way (1962) Pb

BADAJOS

SPAIN

Firestone Map 7

AZUAGA, Badajoz, Spain

Firestone 7. Mine shown.

Way (1962) Pb.

BADAJOS, Badajoz, Spain

Firestone 7

Way (1962) Hg at several mines
around Badajoz

BURGUILLOS DEL CERRO, Badajoz, Spain

SW Sci ~~lett~~. Bulletin, 1969: "Danaite" (Co-arsenopyrite) - x-line masses



CASTUERA, Badajoz, Spain.

Firestone 7,8. Minas de MIRAFLORES

FERIA, Badajoz, Spain

Way (1962) Cu mined in a small way
in the Feria district, Badajoz

HORNACHOS, Badajoz, Spain.

Firestone 7

Davies (1888) Numerous old Pb mines
near Hornachos, ~~ores~~ said to
give 100 oz/ton Ag.

JERES^Z de los CABALLEROS, Badajoz,
Spain.

Firestone 7 · Jerez de los C.

Way (1962). Inferior Fe ore.

MONASTERIO, Badajoz, Andalusia, Spain

MA 2 26 "Oxides of Uranium"

PUEBLO de ALCACER, Badajoz, Spain

Serena valley [q.v] Firestone 7

Way (1962) Sb

La SERENA VALLEY, Badajoz, Spain.

Firestone 7 Mine shown at VALLE de la SERENA
(town).

Way (1962)

W.

See also PUEBLO de ALCACER

VALLE de LA SERENA, Badajoz, Spain

See also La SERENA valley.

Firestone 7. Mine

BARCELONA

SPAIN

Firestone 3

MA 17 781 Study of beaches & sands.

Sci. Journ (1967) May; 17. Lignites of lower Ebro basin
have 0.05 - 0.15 % U

BALSAREMY, Llobregat Valley, Barcelona,
Spain.

Way (1962). Sylvine, carnallite

BARCELONA, Barcelona, Spain

Sinkankas, Rocks & Mins (1955) 30 121. MA 15 238

MONTJUICH HILL, in quarries —
quartz (rock xl.); jasper, opal,
calcite, limonite

Mina BERTA San Cugat del Vallés,
Barcelona, Spain. (I)

Firestone 3. NW of Barcelona.

MA 17 739 Fluorite veins, a network
with bands of mylonite. Calcite.

MA 17 768 Fluorite, phys. props.

CA 68 14710 Temp of xln of fluorite.

Way (1962) Referred to as PAPIOL MINE
(cf Anglès, Gerona)

Mina BERTA, San Cugat del Vallés,
Barcelona, Spain (II)

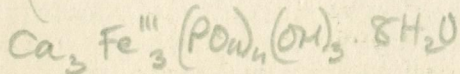
MA 17, 787. 44 mineral species
listed (10 new to here). Ident
by X-ray :- chalcocite,
cubanite, sphalerite, chalcopyrite,
covellite, galena, pyrite,
~~pr~~ proustite, argentite, rathite

Mina BERTA, San Cugat del Vallés,
Barcelona, Spain (III)

CA 65, 10337: - Calcite, fluorite, nat.
silver, cuprite, haematite, ~~pyrite~~ MnO₂, wad,
goethite, limonite, cerargyrite, siderite,
rhodochrosite, smithsonite, strontianite,
cerussite, aurichalcite, malachite,
azurite, leadhillite, baryte, gypsum,
anglesite, chalcantite, melanterite,
pisanite, brochantite, linarite, apatite,
CO₃-apatite, pyromorphite, hemimorphite,
quartz, kaolinite.

BRUGUES, Barcelona. Spain

BM Calcioferite, green mucky
crust, with apatite



D. New cat. Tinticite, Brugues, prov.
of Barcelona. Yellow-green crusts.
& globules on limonite

CARDONA Llobregat Valley, Barcelona. Spain

Firestone 3

MM 26 326, 330 Gypsum var. selenite
(window type)
(Salt mines.)

Way (1962) Main centre for K salts.

A minor centre in mid-Llobregat valley
has purer salts.

Dana (1932) Halite

Sylvite &
carnallite

FIGOLS, Barcelona, Spain

Firestone, Map 3. MINA PEPITA, NW
of Berga, in very N of province,
near FIGOLS.

Way (1962) Lignite

FONT-RUBI, Barcelona, Spain

Way (1962) Bauxite

GUALBA, Barcelona, Spain

Firestone 3. E edge of province.

Sijp, MA 12 151 Epidote & wollastonite
at granite-marble contact.
Grossular & diopside nearby.

La LLACUNA, Barcelona, Spain

Way (1962) Bauxite

MEDIONA, Barcelona, Spain

Way (1962) Bauxite

MONTJUICH HILL, Barcelona, Spain.

See BARCELONA

ORSAVINYÁ, Barcelona, Spain

Way (1962) Cu mined in a small
way at Orsavinyá, near Barcelona.

PAPIOL MINE, San Cugat del Vallés,
Barcelona, Spain.

See Mina BERTA

SAINT-FOST CAPCENTELLA,

Barcelona, Spain

Bull Soc Min (1956) LX! Tungstenian
Wulfenite ("chillagite") 4 cm specs.

SALIENT, Llobregat Valley, Barcelona,
Spain

Firestone 3

Way (1962) Sylvite, carnallite

D. New Cat. (1974) Kaliborite, sharp
transparent $\frac{1}{64}$ " plates.

SURIA, Llobregat Valley, Barcelona, Spain.

Firestone 3

Way (1962). Sylvite, carnallite

BILBAO (VISCAYA)

SPAIN

Firesone maps 1, 2, 3.

BILBAO, Bilbao, Spain

Davies (1888) Mines of BISCAY, 15-20
miles from port of Bilbao. Opencast
levels into mountain. Good
haematite. ORCANERA & TRIANO
mines are above.

CA 5 3668 (1911) Haematite & siderite
replacing limestone

MA 15 112 Siderite is primary ore

Mina FEDERICO, Bilbao, Spain

Firestone 1. Mine, 25 km W of B.

ONDARROA, Bilbao, Spain.

CA 2 1675

New occurrence of
aurichalcite, with smithsonite,
in an abandoned mine
in ONDARROA (Vizcaya) ["Vizcaya"
= Bilbao prov.]
[cf GUIPÚZCOA province]

CACERES

CÁCERES

Cáceres

W. Spain (I)

Firestone 4.7

(egg-shell)

BM Apatite, v.g. colourless, on quartz; amblygonite
(blue + white mass) w. cassit

MA 13 125 From TRASQUILÓN, 6 ml S

of Cáceres, amblygonite (montebrasite)
in pneumatolytic lin-veins, with
cassiterite, augite, tabular xls
intergrown w. amblyg; childrentite,
brownish small prismatic xls in
druses

CÁCERES, Cáceres, Spain (II)

Way (1962) Apatite mined in the
Tagus valley around Cáceres

Sierra de GATA, Cáceres, Spain

See under Salamanca province

GRANADILLA, Cáceres, Spain.

Firestone 4. 90 km NNE of Cáceres

Way (1962) Pb

PLASENCIA, Cáceres, Spain.

Firestone 4. Town NE of Cáceres.

RSWB 84-133 (Ex R. Tayler).

Chiastolite, good nicely zoned
xls projecting from slate
"Plasencia (Cáceres)".

GASTELLON

SPAIN

Firestone 6

CHOVAR, Castellon, Spain.

Firestone 6

Way (1962) Hq.

Cuevas de VINROMA, Castellon, Spain

Map. N of Castellon

CIUDAD-REAL

SPAIN

Firestone 7, 8

ALMADÉN, Ciudad-Real

Spain

Firestone 7, 8

MA 3 525 Cinnabar

MA 8 276. Cinnabar xl.

MA 9 236 Veinlets of cinnabar, with
native mercury, quartz, zeolites.

Dana (1932) Cinnabar, amalgam, calomel

Davies (1888) Belt of ancient mines
from CHILLON to ALMADENEGOS

(I)

ALMADÉN, Ciudad Real, Spain (II)

Way (1962) Most important mines:-

SAN DIEGO; SAN PEDRO; SAN NICOLÁS
SAN FRANCISCO.

1:50 000 Military map.

Near Almadenejos:- MINAS PLOMO;
MINA DE LA CONCEPCION; LAS MINETAS
CERCO DE FUNDICIÓN (Fundición = Foundry);
MINA VALDEAZOGNES

CA (1967) 67 23907 MA (1969) 20, 20

ALMAGRO, Ciudad Real, Spain,

Firestone 7

Way (1962) High-quality Mn ore

ALMODÓVAR del Campo, Ciudad Real, Spain

Firestone 7,8 40 km SW of C-R.

Way (1962) Minor Cu mines.

Firestone maps show mines:-

7 km N of A: S. VICENTE
MINA TARFANO.

13 km WNW of A: MINA de la ABUNDANCIA, Sierra del
Ojuelo.

15 km NW of A: Around SAN QUINTIN,
(Pb/Ag) Sierragorda ME. [qv]

ALMURADIEL, Ciudad Real, Spain.

Firestone 7, 8. 60 km SE of C-R.

Way (1962) Sb mined between
Almuradiel and Torrenueva.

CIUDAD REAL, Ciudad Real, Spain

Firestone 7

BM: Psilomelane, botryoidal.

(cf Almagro; El Pozuelo de Calatrava)

Michael Z. prakt. Geol (1908) 16 129.

Cobaltiferous psilomelane.

Sierra de DESPEÑAPERROS, Ciudad Real,
Spain.

Firestone 7, 8 . 40 km W of C-R.

Science Journ (1967) May; 17. u/zr minerals
in a large quartzite deposit in
the Despeñaperros mtn. range.

HORCAJO, Ciudad-Real, Spain.

Firestone 8,7. EL HORCAJO in Sierra
de Alcudia, in S part of the province.
Nearby are MINA DE S. SERAFIN and
MINA LA ENCARNACIÓN. ↓
70km
SW of
C-R

Dana, (1932): Pyromorphite, fine xls from
Horcayo, Ciudad-Real.

BM: Pyromorphite, superb aggregate of
bright green prisms. EL HORCAJO MINE, Spain

^{EL}
HORCAJO, Ciudad-Real, Spain

MA 28 208 Pyromorphite

Rsub 98- (Bakerwell Shale)

vg cacoxenite "El Horcajo, Ciudad Real"

El POZUELO de CALATRAVA, Ciudad Real,
Spain.

Firestone 7

Way (1962) High quality Mn ore.

SAN QUINTIN M., Puertollano, Ciudad Real, Spain

Firestone 7 Mines shown, 35 km SW of C-R.

MAZ 567 Silver lead mine, 28 km N^(W)

Puertollano. Specimens of galena, blende,
ankerite, baryte described

SOLANA DEL PINO, Ciudad Real, Spain.

Firestone 7, 8. 50 km S of C-R.

Way (1962) Zn ore, recently discovered,

TORRENUEVA, Ciudad Real, Spain

See ALMURADIEL.

Firestone 8

CORDOBA

SPAIN

Firestone Map 7

Way (1962) Small amounts of U.

MA 10 374 Betafite (age) - LA COMA MINE

SIERRA ALBARRANA, Córdoba, Spain

Firestone 7,8 70 km WNW of C.

MA 10 374 Pitchblende (age)

Firestone 7,8 MINAS de VALDEINFIERNO

cf FUENTE OVEJUNA

CERRO MURIANO, Cordoba, Spain

Firestone 7, 8. 12 km N of C.

Way (1962) Cu mined in a small way
in the Muriano Hills, N of Cordoba.

~~LA~~ COMA MINE, Córdoba, Spain.

MA 10 374 Beta file

CORDOBA, Cordoba, Spain

Firestone 7

BM: Chalcoate, small twinned
xls on botry. chalcopysite

CUERDA de la NAYA, Cordoba, Spain

Firestone 7,8 Mtn range, 80 km NNW of C.

"MINAS DE PLATA Y PLOMO" (Ag, Pb)

El DESCUIDO MINE, Cordoba, Spain.

Firestone 7. 40 km NW of C. Sb mine,
~~near~~ 5 km W of Espiel

ESPIEL, Cordoba, Spain

Firestone 7. 40 km NW of C. Shows

EL DESCUIDO antimony mine, in
Sierra de los Santos, 5 km W
of Espiel

FUENTE OVEJUNA, Córdoba, Spain
Firestone 70 km NW of C.

MA 12 442 Brannerite

AM 1961 46 1086 Metamict brannerite

(orig. considered to be uraninite &
after keyl) from a pegmatite
cf SIERRA ALBARRANA

HIGUERAS, Córdoba, Spain
cf VILLAFRANCA

MA 5 294 "Hydroromente" $\text{CaO} \cdot \text{Sb}_2\text{O}_5 \cdot 3\text{H}_2\text{O}$
yellow ψ morphs after stibnite

HORNACHUELOS, Córdoba, Spain

Firestone 7 40 km W of C

HA 9 34

green

Manganapatite,
prisms. Itawe ca

blueish-

50% Mn (spec)

MONTORO, Cordoba, Spain

Firestone 7, 8 40 km ENE of C.

Dana (1932) Cuproscheelite, near Montoro

MURIANO HILLS, Cordoba, Spain

See CERRO MURIANO

PEDROCHES valley, Cordoba, Spain.

Way (1962) ca 95 tonnes/yr Bi mined.

CA 66 20981 (Spanish ref.). Descrip of
LOS PEDROCHES region. Cu, Bi, Ni, Co, Ag,
Pb, V, Sb, Au, Sn, W, Ti, Zr, Ce, U
deposits listed (but not in the abstract!)

PEÑARROYA, Cordoba, Spain.

Firestone 7,8 65 km NW of C.

Way (1962) Some Pb mining - also coal

POSADAS, Cordoba, Spain

Firestone 7 30 km W of C.

Unnamed mine shown on map 5 km

N of Posadas

SAN JAIME M., Torrecampo, Córdoba, Spain

MA 2 48 Nat. Bi., in quartz, largely alt.
to greenish-yellow bismite. Some
erythrite & black heubachite

TORRECAMPO, Córdoba, Spain

See SAN JAIME MINE

Minas de VALDEINFIERNO, Cordoba, Spain

See Sierra ALBARRANA

CORUÑA

SPAIN

Firestone 1

La BARQUERA, Coruña, Spain

Way (1962) Cu (v. little)

Firestone 1 50 km NE of La Coruña

BAYO, Comuña, Spain.

Firestone 1: MINAS DE CAOLIN
shown just NNW of Bayo,
50 km WSW of La Comuña.

CORUÑA, Coruña, Spain.

Firestone 1

Way (1962)

W in the district

FINISTERRE, Comuña, Spain.

Firestone 1 60 km W of Santiago

MA 13 408 Coastal sands,

with zircon, monazite

LOUSAME, Comuña, Spain

Firestone 1 27 km WSW of Santiago;
shows MINAS just SE of Lousame.

Way (1962) Sn - "LAUSAME", galicia.

NOYA, Coruña,

Firestone 1 30 km W of
Way (1962) W

Cabo ORTEGAL, Coruña, Spain

Firestone 1 60 km NE of La Coruña

Dana (1932) Near Cape Ortegal; -
morenosite, on magnetite with
which some millenite is mixed.

RAZO, Coruña, Spain.

Firestone 1; Mine shown SW of
Razo, (on coast 25 km W of La Coruña)

SANTA COMBA, Coruña, Spain.

Firestone 1. 27 km NW of Santiago
Way (1962). W

PUERTO DE SON, Coruña, Spain

Firestone 1 40 km WSW of Santiago

MA 13 487 Phosphates, eg eosphorite,
cardosonite ("new basic iron
phosphate of dufrénoite series")

GERONA

SPAIN

Firestone 3

MA 13 89 ; 408 ; 17 344.

BRAVA igneous rocks.

Petrology of COSTA
Age of the granite.

ALP, nr. PUIGCERDÀ, Gerona, Spain

Way (1962) Fe; Mn.

ANGLÉS, Gerona, Spain

WSW of Gerona.

Way (1962). Fluorite, from ANGLÉS mine

BELLAVER DE CERDENA ^{Lerida} Gerona Prov., Spain

SWSci Cat

Anapaite xls in phosphate
geodes

La CERDAÑA, ~~Spain~~ Gerona, Spain

NW corner of province, in the Pyrenees.

Way (1962) Minor Mn mining, in
the CERDAGNE, Pyrenees.

San JUAN de las ABADESAS, Gerona,
Spain

NE of province.

Way (1962) Sb . Inferior coal.

RIBES, Girona prov. ~~Catalonia~~, Spain

MA 2 117 Bixbyite "Ribes, Girona"

TALLTENDRE, "Gerona" Spain

See under Lérida province.

5

GRANADA

SPAIN

Firestone 7, 8, 9.

ALQUIFE, Granada, Spain

Near Lacalahorra

Way (1962) Fe

BAZA, Granada, Spain

NE of province.

Way (1962) S at Benamarel [qv]

Firestone 9 CUEVAS del CAMPO (NW of
Baza)

Sierra de BAZA, Granada/Almeria, Spain

See under Almeria province

BENAMAUREL, Granada, Spain

N of Baza

Way (1962)

Sulphur mine(s)

BERCHULES, Granada, Spain

In Sierra Nevada [q.v.]

Way (1962). Hg.

CASTARAS, Granada, Spain

In Sierra Nevada [qv]

Way (1962) Hg.

CHARCHE, Granada, Spain

[E of Guadiz]

Way (1962) Pb, "Charches". (?)

HUENEJA, Granada, Spain

Way (1962) Fe

HUÉTOR

granada

Spain

Way (1962)

Pb.

(NE of granada)

Barranco de San JUAN, Granada, Spain

Sierra Nevada.

MA 14 482 Talc from serpentine deposit.

MA 16 45 DTA of serpentines - antigorite.

LACALAHORRA, Granada, Spain

Way (1962) Fe - Alquife, near L.

Firestone 9. Mine near L.

MOLVIZAR, Granada, Spain

MA 28 230; 77-2381. Tyrolite. in
oxid. Cu-Co ores

(2T)040, 71072

MONACHIL, granada, Spain

Way (1962) Pb.

MOTRIL, Granada, Spain

SW. On coast.

Way (1962) Zn ore recently discovered
at Motril.

Mo occurs between
Granada e Motril.

SIERRA NEVADA, Granada, Spain

BM: Vanadinite, vg. brown barrels
in aggregate

Way (1962) Lead mines at Berja (actually
in Almeria - g.v.).

Mercury at CASTARAS & BERCHULES.

GUADALAJARA

Spain

Firestone 6 37 57 4.

"Lead" (Imp. Inst. Monogr.) (1921). Lead deposits similar to those of Almeria. Lodes have much barite, & cross gneiss & schists.

COBETA, Guadaluajara, Spain

Firestone 6

W of Molina de Aragon.

BM: Aragonite, wheel-twins

HIENDELAENCINA, Guadalajara, Spain

Firestone 6

N of province

MA 5 282, 176. Stephanite xls.

BM: Frieslebenite, group of striated
prisms with siderite.

Dana (1932): Frieslebenite,
Hiendelaencina, NE of Guadalajara

MOLINA de Aragon, Guadalajara, Spain.

Firestone 6

BM: Aragonite, wheel-twins.

Dana (1932) Aragonite, first described
from Aragon, the most notable
occurrence being in ψ -hex. twins
at Molina.

TIERZO, Guadalajara, Spain.

Way (1962). Minor rock-salt centre

HUELVA

SPAIN

Firestone 7, 9.

MA 15 102 Origin of ores.

BIM Native copper; dendritic sheet coated with
malachite

Dana (1932) Smaltite

Davies (1888) Details of pyrite deposits

Way (1962) Pyrite yields 10-15 oz Ag/ton rock;
15-40 oz Au/ton & 80-150 oz Ag/ton from
ore concentrates by cyanide process

ALMONASTER, Huelva, Spain

Firestone 7. 26 km NW of Rio Tinto

Way (1962) Chief Spanish Mn deposits
are ~~in~~ in the ALMONASTER LA REAL
— SOLOVIEJO area. One good but
somewhat siliceous.

SANTA BARBARA, Huelva, S

Firestone 7 55 km WNW of Rro Tin

Way (1962) Lead mines at S to
Barbara, [nr Cabezas Ru

ant
cia

SANTA BARBARA, Huelva, Spain

Firestone 7 55 km WNW of Rio Tinto

Way (1962) Lead mines at Santa
Barbara, [nr Cabezas Rubias]

BITRON, Huelva, Spain

Firestone 7; 15 km WSW of Rio Tinto
Near ZALAMEA ~~la~~ REAL (q.v.). Mines
shown at BITRON, ORIENTE and
EL CASTILLO

See also RIO TINTO, etc.

Davies (1888) Details of pyrite (+Cu)
deposit in greenstone, at Bitron
mine.

CABEZAS del PASTO, Huelva, Spain

Firestone 7. 65 km W of Rio Tinto
Mine shown.

CALA, Huelva, Spain.

Firestone 7, 9. Minas de Cala, ca

5 km SW of Cala, & 35 km NE

of Rio Tinto

CALAÑAS, Huelva, Spain.

Firestone 7 25 km W of Rio Tinto.

La ZARZA mine shown, 5 km N of
Calañas.

BM. Halotrichite, silky needles
with melanterite

CAMPOFRIO, Huelva, Spain

Firestone 7 6km N of Rio Tinto
See also RIO TINTO

Way (1962) Mn

EL CASTILLO, Huelva, Spain

See BUITRON

La CONCEPCIÓN, Huelva, Spain

Firestone 7. 15 km NW of Rio Tinto

~~See~~ Mine shown.

See RIO TINTO also

El GRANADO, Huelva, Spain

Firestone 7. 75 km WSW of Rio Tinto

Way (1962) Mn

La JOYA, Huelva, Spain

Firestone 7. Near Cabezas Rubias.
45 km W of Rio Tinto. Mine shown

Way (1962) Mn.
Pb at ~~El~~ "El Hoya"

San MIGUEL, Huelva, Spain

Firestone 7. 15 km WNW of Rio Tinto

Mine shown.

See also RIO TINTO

CUEVA de MORA, Huelva, Spain

Firestone 7 20 km NW of Rio Tinto.

Mine shown:

See RIO TINTO also

ORIENTE, Huelva, Spain

See BUITRON

La PONDEROSA, Huelva, Spain.

Firestone 7. 8km NW of Rio Tinto.
Mine shown.

See also RIO TINTO

RIO TINTO, Huelva, Spain (I)

Firestone 7 60 km NW of Sevilla.

MA 15 516 Origin of porphyries zones

BM: Haematite, red earthy.

Native copper, large specimen

Datolite, tiny xls on botry.

iridescent goethite

See also: HUELVA province; CAMPOFRIO; ZALAMEA;
BUITRON; CALAÑAS, Cueva de MORA, La CONCEPCIÓN,
La PONDEROSA, San MIGUEL

RIO TINTO, Huelva, Spain (II)

Dana (1932) Rio Tinto mines:-

Chalcanthite; pisanite;
chalcopryite; pyrite, large deposit

Davis (1888) Large pyrite deposit with
a percentage of copper; main
deposit worked opencast.

THARSIS, Huelva, Spain

Firestone 7 50 km W of Rio Tinto

Dana (1932) Large pyrite deposits
at Cu mines at Tharsis.

ZALAMEA La REAL, Huelva, Spain

Firestone 7. 6km W of Rio Tinto.

Way (1962)

Mn

[cf BUITRON]

BM: Coquimbite, group of large violet
xls; copiapite, loose aggreg
of yellow scales.

See also RIO TINTO; BUITRON

La ZARZA mine, Huelva, Spain

See CALAÑAS

HUESCA

SPAIN

Firestone 2,3.

BIELSA, Huesca, Spain.

Way (1962) Cu; Pb; fluorite

See also GISTAIN; PARZAN

CANFRANC ESTACION, Cent. Pyrenees, ^{Huesca} Spain

See also REFUGIO de la MINA

Firestone 3 W of Pantriosa

MA 15 110 Arsenopyrite-pyrite ore; also
tennantite; bismuth; chalcopysite;
kobellite; enargite.

MA 19-274. As above, in qtz + siderite

ESTOP^(IN)~~IAN~~, Huesca Prov., Spain

See also JUSEU

~~SW~~Sci Cat. Aerinite, blue massive,
in trap. resembles lapis.

FORCADA, Huesca, Spain.

Way (1962) Minor rock-salt centre

GISTAIN, Huesca, Spain.

Way (1962) Pb ; fluorite

See also BIELSA; PARZAN

JUSEU, Huesca prov.

Spain.

See also ESTOPINIAN

MA II 179 On S. side of Pyrenees. Near
vill. of Juseu, veins of sky-blue aerinite
in intrusions of sphite. Fibrous,
with fibres along vein - pleochroic
deep blue $\rightarrow$ pale yellow. X-rays suggest
chain structure, rather than chlorite sheet.

PANTICOSA, Huesca Pyrenees, Spain

MA 14 396 Pb-Zn ores of YENEFRITO
near Panticoza - qtz veins w.
sulphides, mainly pyrite, blende, &
galena, with, microscopically,
chalcopyrite, jamesonite, pyrrhotite,
gersdorffite.

Minas de PARZAN, Huesca, Spain.

Firestone 3. Near BIELSA e

GISTAIN [q.v.]

REFUGIO de la MINA, Huesca, Spain

Firestone 3. W of CANFRANC [qv]
near French border

JAEN

SPAIN

Firestone 7, 8, 9

Cueva del AGUA, Jaen, Spain

Firestone 8.

E of Jaen

La CAROLINA, Jaen, Spain

Firestone 7 . 20km N of Linares

Way (1962). Pb.

See also LINARES

* COLONIA DE LA CRUZ, Linares, Jaen, Spain.

See LINARES also

Firestone 7 5 km N of Linares. Mine

Way (1962) Pb - La CRUZ.

Mina de las DOLORES, Linares, Jaen, Spain.

See LINARES

Santa ELENA, Jaen, Spain

Firestone 7. 30km NNE of Jaen

See also LINARES.

Way (1962) Pb.

Cueva de la GRAJA, Jaen, Spain

Firestone 7, 8. 25 km ENE of Jaen

GUARROMAN, Jaen, Spain

Near Linares.

Way (1962) Fe

LINARES, Jaen, Spain (I)

Firestone 7,8 . 40 km NNE of Jaen.

Two mines shown ca 5 km N of Linares:-

COLONIA DE LA CRUZ & MINA DE LOS
DOLORES

See also LA CAROLINA; SANTA ELENA; Colonias
de La CRUZ, Los DOLORES

LINARES, Jaen, Spain (II)

Way (1962). Linares is centre of a Pb mining district with 30 of the 53 lodes in Jaen province. Most important are LA CAROLINA; La CRUZ & Santa ELENA. Fe at VILCHES & GUARROMAN

Imp Inst Monogr ("Lead") (1921). One of the

LINARES, Jaen, Spain (III)

chief Pb districts. Lodes traverse
granite & Silurian slates & quartzites.

Ore = galena, only slightly Ag-ous
(blende & pyrite practically absent)
Gangue = quartz, some dolomite,
occas. baryte & siderite. Cerussite,
linarite.

LINARES, Jaen, Spain (IV)

Davies (1888). Galena - Ag 9 oz/ton.

Area 14 x 12 mls, between Linares & the main road to the N. Veins with quartz, locally much baryte, calcite deeper down. Sec^y Cu & Pb min's in upper horizons.

Anglesite more common in sandstone cap; arsenopyrite more in slates.

LINARES, Jaen, Spain (V)

Dana (1932). Linazite, supposed to
have been found formerly
at Linares, prov. Jaen

L. J. Spencer "The World's Minerals"

Linazite named from Linares
but not found there.

VILCHES, Jaen, Spain

Firestone 7 . 15 km NE of Linares

Way (1962) Fe

LEON

SPAIN

Firestone 1, 2 ; Picos de Europa

CABRILLANES, Leon, Spain

See also VILLABLINO; PORTILLA de LUNA

Firestone 1

Picos de Europa } Mines shown in area

centred on cabrillanes, also Cueva
de Misin, a few km to ENE.

Mines are ① near LA RIDRA NE of C.

② Near PENALBA de los CILLAROS, SE of C

③④ SW of C, above PIEDRAFITA de Babra.

[These are at head of Rio Luna - cf PORTILLA de LUNA

CÁRMENES MINES, Villamanín, León Prov. (I)
Spain.

Picos de Europa map.

Firestone l. 40 km N of León. Mines between
CÁRMENES & VILLAMANÍN

MA 124 Villamaninite, $(\text{Cu}, \text{Ni}, \text{Co}, \text{Fe})\text{S}_2$ Iron-
black, dull metall lustre - small nodular
masses & rather obscure cubic xls, dissem
in white xline dolomite
streak sooty black.

MA 1655 Hey, MM 33 169. Re-examin. of

Villamaninite $(\text{Cu}, \text{Ni})\text{S}_2$ from type area at
Cármenes. cf MM 19 14; MA 1, 260

CÁRMENES MINES, Leon, Spain (II)

Dana (1932) Villamaninite in dolomite

COTO WAGNER, Leon, Spain

Way (1962) "Coto Wagner" - a series of
veins & lodes 14 ml long, parallel
to the railway; between Leon
& Ponferrada [W of Leon]. The iron
one is smelted at Ponferrada.

ISOBA, Leon, Spain

Firestone 1: 55 km NNE of Leon.

Picos de Eu. map: Talc mines.

LEON, Leon, Spain

See COTO WAGNER

NOCEDA, Leon, Spain

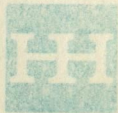
See TORENO

PALACIOS del SIL, Leon, Spain

75 km WNW of Leon. Firestone I.

Way (1962) Cu (v little), "Palacio
de Sil"

Firestone I shows CUEVAS ~ 5 km to NE (shown
on Picos de Europa map as "cuevas del Sil")



PICOS de EUROPA, Leon, Spain

See under Santander province.

PONFERRADA, Leon, Spain.

See COTO WAGNER; VILLAFRANCA

PORTILLA de LUNA, Leon, Spain

Firestone 1. Not shown. Other ".... de Luna"
places ~ 35 km NNW of Leon.

MA 15 436 Gibbsite; halloypite, in
bauxite deposit.

cf. CABRILLANES [q.v.]

RIAÑO, Leon, Spain.

Picos de Europa map shows mine
at Riaño, 25 km S of P. de E.

TORENO, Leon, Spain

Firestone 1. Mine shown between

Toreno & Noceda, 75 km W of Leon

TREMOR de ARRIBA, Leon, Spain

Firestone l. Mine shown; in

Sierra los Nóculas

VILLABLINO, Leon, Spain

Firestone 1. Shows mine a few km to N.
Picos de Europa.

See also CABRILLANES

VILLAFRANCA, Galicia, ? Leon Spain

cf HIGUERAS

MAS 294 "Hydroromeite" $3\text{CaO} \cdot \frac{2}{1}\text{Sb}_2\text{O}_5 \cdot 8\text{H}_2\text{O}$, yellow

ψ morphs after stibnite.

Firestone 1. 95 km W of Leon, nr PONFERRADA

VILLAFRANCA del BIERZO, Leon, Spain

? = VILLAFRANCA [qv]

Way (1962) Cu (v. little)



VILLAMANÍN, Leon, Spain

Picos de Europa map.

Firestone 1 40 km N of Leon.

Mines shown between V. e Cármenes.

See also CÁRMENES

LERIDA

SPAIN

Firestone 3

ARAN { Val d'
Valle de , Lérida, Spain

See also BOSOST.

Firestone 3. NW corner of province.

Way (1962) Zinc mined in Val^d'Aran,
Pyrenees

MA 15 54 geol of Valle de Aran (low grade metamorphic)

MA 14 417 Chloritoid in slates, with
sericite, qtz, penninite, tourmaline & ores

BELLMUNT ? Lérida Spain

cf BELLMUNT de CIURANA, (Tarragona)

One just in Lérida, SE of Cervera. (Firestone 3)

One NW of Cervera

Bellmunt de Ciurana, Tarragona. ← Most likely

BM: Millerite, part altered → green; compact
radiating masses of needles with
calcite & chalcopyrite

BOSOST, Lérida, Spain

Firestone 3. In Vald' ARAN [qv].

MINA MARGARITA; MINA VICTORIA

BM:- Gahnite

EUREKA MINE

Lérida, Spain

CA(1968) 68 5200 Recently discov. Eureka
mine, in Trias sand- & silt-stones.

Radioact. asphaltite, carburan; pyrite,
pitchblende, chalcopyr, bornite, with
gummite; U+Cu vanadates, sengierite,
zinnerite.

LLAVORSI, Lerida, Spain

Pyrenees

Way (1962)

Iron ore

Collecting centre for
mined in the valley of

the NOGUERA PALLARSA, [9v]

NOGUERA PALLARESA valley,

See also LLAVORSI

Lerida, Spain

Way (1962). Close to Andorra. Fe

PRATS-SAMPSOR, prov. Lérida, Spain

MA 12 209 Anapaite (X-ray)

BM: Anapaite

TALLTENDRE, Lérida, Spain.

[Michelin Map 86. NW of Alp, just inside
Lérida province]

Way (1962) Mn, "Talltendre, Gerona"

VALIRA valley, Lerida, Spain

Michelin Map 86 Rio Valira, passing through
Firestone Maps spell it "BALIRA" Andorra

MA 14 427 Chloritoid in slates

LOGROÑO

SPAIN

Firestone 2, 3.

See also "BASQUE PROVINCES"

AMBASAGUAS, Logroño, Spain.

H. Corke, Priv. Comm. (12/74) The v.g. "Logroño"
pyrite cubes came originally from
AMBASAGUAS itself - more recently also
from VALLE DE LOS PERILLOS, Ambasaguas.
[See also SORIA]

Sierra de la DEMANDA, Logroño, Spain

Way (1962): Minor Fe-mining district.
(also coal)

LOGROÑO, Logroño, Spain.

Various dealers:- Superb pyrite cubes
[see AMBASAGUAS]

Way (1962) Asphalt from bituminous
limestones - Alava - Logroño area.

Valle de ~~LOS~~ ~~PERILLOS~~, Logroño, Spain.

See AMBASAGUAS

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La RIOJA, ~ Logroña, Spain

Logroño is the main town of "La Rioja" area.

Dana (1932) Mirabilite - district of
La. Rioja

MA 13 443 Vermiculite + sepiolite
in sandstones

SORIA, Logroño, Spain

RSUB 83-31 Vg large pyrite cube
Soria (near Logroño).

MADRID

SPAIN

Firestone "Madrid" 4, 5.

ALBERCHE RIVER, Navas del Rey,
Madrid, Spain

MA 13 482 Adularia in gneisses
etc. of the river bed

ARANJUEZ, Madrid, Spain

Firestone 4 . 40 km S of M; on
borders of Toledo province.

Dana (1932) Thenardite, prov's of
Madrid & Toledo, espec. at
ESPARTINAS, near Aranjuez.

Firestone "Madrid" shows, just in Toledo province,
CANTERAS de YESO [gypsum]; CUEVAS de la ERENA;
CUEVA de NARANJO; CUEVAS del ANDALUZ;
CUEVA de los MIRANDA

Canteras del BORREBUNO, Madrid, Spain.

Firestone "Madrid" map

~~LA~~ CABRERA, Madrid, Spain

Fires tone 4 60 km N of M.

MA 13 408 Almandine with qtz,

ol, bi, muscov. in pegmatitic
granites

SIERRA GUADARRAMA, Madrid Spain
Firestone 4. 60 km NW of M.

MA 12 113 The "guadarramite" is
ilmenite + monazite in felspar

BM Rutile big xl "Horcajuelo"
(cf Horcajuelo de la Sierra, S'a Quad.)

MA 13 481 Petrology of biotite-chlorite
granite, Central Sra de G.

HORCAJUELO Madrid? Spain

? = HORCAJUELO, Madrid, on Firestone 4, 75 km
N of Madrid in Sra Guadarrama.

BM. Rutile, large fat xl

HOYO DE MANZANARES, nr Madrid,

Firestone 4. 25 km NW of M.

Spain

Ex. H. Conke. Vg scheelite octahedra

Cueva de la JIRANA, Madrid, Spain

Firestone "Madrid" map

Cueva del REGUERILLO, Madrid, Spain

Firestone "Madrid" map, La Altamira de
Madrid.

Mina SAN JOSÉ, Madrid, Spain

Firestone "Madrid" map.

VALDEMORO, Madrid, Spain

Firestone 4. Mine, 40 km N of M,

VALLECAS, Madrid, Spain.

Firestone 4 SE outskirts of Madrid.

BM: Sepiolite, white compact mass.

(cf MM 31 328; C&Ind. (1957) 1492.)

Firestone "Madrid" map. CANTERAS de VALLECAS

Canteras de YESO, Madrid, Spain

Firestone "Madrid" map

YESO = Gypsum

MALAGA

SPAIN

Firestone 9

Cueva de MENGIA; Cuevas BAJAS — N
Cueva la PILETA; Cuevas del BECERRO — W
Cueva de NERTJA — E

CARRATRACA, Malaga, Spain

NW of M.

Way (1962)

Cr, Ni.

ESTEPONA, Malaga. Spain

BM Scheelite. vg almost transparent,
big etched xl.

S. Coast N of Brazil

MALAGA, Malaga, Spain

Firestone 9

Dana (1932) Genthite - near Malaga

Davies (1888) A silicate of Ni, free
from Co, Sb, & As, with 4% Ni,
found near Malaga.

See also OJEN

MARBELLA, Malaga, Spain.

in marble
works

~~Rubies~~ in mtns; Agates $\checkmark$ N of ~~La~~engirola

Times 9/2/70

Diamonds confirmed

from the Malaga hills a few miles

N of Marbella, in kimberlite. So far only industrial quality, max $3/4$ ct.

Prospecting 50,000 acres between Marbella & Coin, 16 mi to NE. Found by a S. African geol working in recently reopened Cr/Ni mines in the area.

Diamonds found near Spain tourist spot

FROM OUR CORRESPONDENT

Madrid, Feb. 9
Mineralogists have confirmed a report that there are diamonds in the Malaga hills rising behind the tourist-frequented beaches in the south of Spain—diamonds, so far, of only industrial quality, but diamonds nevertheless.

Prospectors representing the Spanish Real Compania Asturiana de Minas said at the weekend that its investigations had given a positive result. The possible lode of diamonds lies only a few miles north of the resort of Marbella.

Señor Juan Blas Sitges, Director-General of the Real Compania Asturiana, said that examination of the kimberlite rock found in the area showed that it contained diamonds, although the largest found so far was only three-quarters of a carat. His company was setting up a pilot mining plant and it should be clear by the summer whether the Malaga find was rich enough to support a permanent operation for the production of diamonds for industrial

Together with the Government-sponsored holding company known as the Instituto Nacional de Industria and other companies, Señor Blas Sitges's firm is prospecting some 50,000 acres lying between Marbella and the country town of Coin, 16 miles to the north-east.

The first samples were sent to Canada for analysis by a mineralogist of the University of British Columbia. "He gave us the green light for further study and possibly exploitation of the find", Señor Blas Sitges explained.

Although the Real Compania Asturiana has carried out prospecting operations throughout Spain, the diamond-bearing rock was discovered largely by accident.

A South African geologist was working in some old nickel and chrome mines in the area which the company recently put back into operation after 150 years of idleness.

He identified some of the rock found there as diamond-bearing kimberlite.

MARBELLA

Malaga

Spain

Econ Geol (1967) 62 926 [C. Abs]

Magnetite deposit nr. Marbella,
in metamorphics with cordierite,
sillimanite, etc.

MIJAS, Malaga, Spain

Way (1962) Mica produced

OJÉN, Málaga prov. Spain.

MA 6 185 Haematite xls (measurements)

SW Sci Bull. 1969: Maucherite $Ni_x As_y$

copper-coloured xl-aggregates

Way (1962) Eores in Sierra de Ojen,
exported via port of MARBELLA [qv]

SERRANIA DE RONDA, Malaga, Spain

Firestone 9

W of Malaga.

MA 1 201, Orueteite, new "mineral" (a mixture!) "Bi₈Te₂"
resembling tetradymite, ~~rather~~ in dolom,
with scheelite pyrite, aspy, nat bismuth
& bi-glance.

Dana (1932) Clinohumite, polysynth lamell,
in ll^e w. humite, in xline limestone
at Llanos de Juanar, Serrania de Ronda

MURCIA

SPAIN

Firestone 8

Map shows "Minas de Azufre" [S] S of
HELLÍN (Albacete prov.) but just in Murcia.

ALMENDRICOS, Murcia, Spain

SW Murcia between Huerca-Overa e Puerto
Lumbieras

MA 15 343

Fe ore of SIERRA DE

ENMEDIO, nr. Almendricos, Murcia.

goethite, haematite, assoc. w.

pyrolusite - polianite e psilomelane

AGUILAS, Murcia, Spain

See also Sierra ALMAGRERA (Almería).

Firestone 8 On coast, nr. Almería b'dry.

BM: Yellow massive bindheimite.

Dana (1932) Orig. jarosite was from
BARRANCO TAROSO near Aguilas
in the Sra Almagrera, Murcia.

Sierra ALMAGRERA, "Murcia", Spain

See under Almeria province

BARRANCO JAROSO, Murcia, Spain

See ÁGUILAS

CARTAGENA, Murcia, Spain (I)

See also La UNION

Firestone 8

Big centre, on coast

"Lead" (Imp. Inst. M'graph, 1921). Around C. &
other places in Murcia, Pb lodes
in slates, & replacements in l'stones
Galena (rock in Ag) w. blende, pyrite
in calcite & siderite. Ag ores occur
Pilz. Z. Pr. Geol (1908) 16 177. One deposits

CARTAGENA, Murcia, Spain (II)

Way (1962) Minor Zn mines, SIERRA DE
CARTAGENA. Zn, Pb, some Sn at
La UNIÓN [qv].

Davies (1888) Native lead in clay slate
at C. Pb ores much mixed w.
blende & pyrite.

MA 17 47 [Geo Cosmo. Acta (1964) 28 683. S isotope

CARTAGENA, Murcia, Spain (III)

ratios for sulphides & baryte
from SIERRA DE C. ore deposits.

galena, blende, pyrite, marcasite,
pyrrhotite, chalcopyrite

Dana (1932) Anglesite.

BM. Cerussite, large & good specimens
Anglesite, $\frac{1}{2}$ " v. pale green xls on limonite

CARTAGENA, Murcia, Spain (IV)

MA 16 58. Ferroantigonite in
hydrothermal ore deposits, with
siderite, quartz, magnetite,
sulphides — SIERRA DE C.

Sierra de ENMEDIO, Murcia, Spain.

See ALMENDRICOS

LORCA, Murcia, Spain

Way (1962) S

JUMILLA, Murcia, Spain

Firestone 8

In N of Murcia

Dana (1932) Apatite (asparagus-
stone) with pseudobrookite

Classic loc for good yellow apatite xls
D New cat (1974) Hypersthene, pale to greenish
yellow plates in scoria, w. minor black
haematite & magnetite-micromounts.

PASTRANA, Murcia, Spain
Mazarrón-Águilas area.

MinDat 1/07 Superb Cobat-arthurite
red hedgehogs on matrix (photo).
DOLORES PROSPECT

La UNION, Cartagena, Murcia, Spain

Way (1962) Zn, Pb, Sn.

ORENSE

SPAIN

Firestone 1

Way (1962) Wolfram, in the Orense e
Coruña districts.

AMIUDAL, Orense, Spain.

Firestone 1; Mine shown near
Pontevedra border, ca 3 km
WSW of Amiudal, 32 km WNW
of Orense

ARNOYA, Orense, Spain

See also RIVADAVIA; CASTRELO del Mino.

Firestone 1. ARNOYA, ~~23~~ 23 km WSW of Or.

Way (1962) W - "ARNAOYA"

CARBALLINO, Orense, Spain

Way (1962) Au

Firestone 1 ; 20 km NW of Or.

CASAYO, Orense, Spain

Firestone 1. Mine shown at
end of track to head of
Rio Valvorráz, S of Casayo,
90 km E of Orense.

CASTRELO del Miño, Orense, Spain

See also RIVADAVIA, ARNOYA

Firestone 1. 20 km WSW of Orense

DOADE, Orense, Spain

Firestone 1. Mine shown just N of
Doade, 40 km NW of Orense,
near Pontevedra border. NOT
far from CERDEDO (Pontevedra) [q.v.]

REFOJOS, Orense, Spain.

See also RIVADAVIA

Firestone l. Mine shown just NE

of Refojos, 23 km WSW of Orense.

Rivadavia district [qv]

^V
RIBADAVIA, Orense, Spain

See also REFOJOS, ARNOYA, CASTRELO DEL MINO

Way (1962) Sn - RIBADAVIA

Firestone 1 = RIVADAVIA, 23 km W of Or.

VILLANUEVA, Orense, Spain.

Firestone 1. Mine shown a few km
SE of Villanueva, 85 km E of Orense

OVIEDO

SPAIN

Firestone 1, 2, Picos de Europa

P de E map: A no. of caves shown in NE of
province, many with cave-paintings.

S. ANDRÉS, Oviedo, Spain

See MIERES

Mina ANNA, Ribadesella, Oviedo, Sp.

RSN (100)31.

BERBES, Oviedo, Spain. (I)

RSN(100)31. Fluorite locs/mines
in area, eg at Berbes, Colunga,
Caravia, Ribadesella.

At Berbes, La Cabana section of
El Frondil pit best for purple fluorite
Also on cliff face, purp, yell, clss
Above cliffs, quartz ("Herke dior") in
hydrocarbon-rich matrix. Some fluor
blue w. h'carb. inclusions.

BERBES, Oviedo, Spain (II)

Min Rec (1992) Jan/Feb, 69-76 Details of
AREA, photos, etc. v.g.

BLIMEA, Oviedo, Spain

See MIERES

Picos de Eu. map Oviedo?

CANGAS DE ONIS, Asturias, Spain

Firestone 1: 25 km NW of Picos de Eur.

Bull Soc Min (1965) 88 xxxviii Tyrolite

xls up to 1cm! with chrysocolla
stalactites - Penamella nr.

Cangas de Onis.

Way Cangas de Onis - Mn

CARAVIA, Oviedo, Spain.

Nr Berbes (q.v.)

RSN (100) 31.

Rio CARES, Oviedo, Spain

Firestone I } River, rising in the
Picos de Europa map. } Picos de Europa.

BM: Sampleite, minute blue-green xls
with pink & green gypsum.
Morenosite, crust on dolomite.

CASTROPOL, Oviedo, Spain

Firestone l. On coast 90 km WNW of Ov.

Way (1962) Fe

La COLLADA

Oviedo, Spain

S of Gijón

RSN(100)31. Fluorite, blue cubes

→ 8", v.g. v. diff to collect without
mechanical tools.

Min Rec (1992) Jan/Feb, 69-76 Details, photos
includes La Viesca at La Collada. Fluor, eg
purple edged; calcite + calcena, baryte 'sheafy'

COLUNGA

Oviedo, Spain

W of Berkes

RSN('00)31 Has mine.

COVADONGA, Oviedo, Spain
Firestone 1; Pde E. 15 km NW of Pde E

Way (1962) Mr.

DELFINA M., Ortiguero, ^{? Oviedo} Spain

See ORTIGUERO

~~MESTIS de CON, Oviedo Spain.~~

EMILIO M.,

Oviedo, Spain

RSNL('00) 31. Fluorite

EL FRONDIL PIT, Berbos, Oviedo, Sp.

See BERBES

JAIMINA M.,

Oviedo, Spain.

RSNL(100) 31. Fluorite

LAVIANA, Oviedo, Spain

Near AVILÉS — Forest 1. 25 km N of Ov.

P de E Map:

Way (1962) Fe

4 km N of Aviles

LLANES Oviedo, Spain

Firestone I; Pde E. 25 km NNE of Pde E

Way (1962) Fe

LUANCO, Oviedo, Spain

Way (1962) Fe

LUARCA, Oviedo Spain

Firestone I 60 km WNW of Ov

Way (1962) Fe

MESTAS de CON, Oviedo (?) Spain
? The MESTAS E of Cangas de Onís, Oviedo?

RSN(100)32. Bronze age Cee mine. Rich in
greens/blues in orange/yell dolomite,
good mal, incl v-bones; vg azurite xls
→ 1 cm (gemmy) in pockets.

MIERES, Oviedo, Spain

[Picos de E. map) 12 km S of Ov

Way (1962) Minor Hg. Big
mining centre, especially coal.

P de E Map. Many mines shown in area
Mostly within 5 km of Mieres, or of
BLIMEA, 14 km to E. Most remainder: one
high in mtns above Córigos, 12 km SE
of Mieres; also one near S. ANDRÉS, 18 km WNW
of Mieres

MOSCONA M., Solis nr Villabona,
SW of Gijón. Oviedo, Spain.

RSN(00)31. Yellow cubes fluorite.

Min Rec (1992) J/F, 69-76 Details, photos
vg yell etc fluor; baryte, calcite, pyrite
(like wet grooves)

NARAVAL, Oviedo, Spain

Firestone I; Pde E. 55 km W of Ov.

"Minas de Oro Romanas" shown

ORTIGUERO, ?Oviedo, Spain

The one ESE of Cangas de Onís?

RSN(100)33. DELFINA M, Ortiguero, "in
same area as Mestas de Con".

Decorators' ladder needed to get roof-top
specimens. Access via steps & rope/incline

Exc. vugs of gemmy azurite also tyrolite
"blue/grey [?] platy" "some of best in world"

PICOS DE EUROPA, Oviedo, Spain

See under SANTANDER province

PROAZA, Oviedo Spam

Finest l. 20km W of Ov

Way (1962) Fe

RIBADESELLA, Oviedo, Spain

See Mine ANNA

Telephone
Haight & Hochland Limited
SOBRES CABIO

Briedo

Spam

Way (1962)

Fe

SOLIA, Oviedo, Spain.

See MOSCONA M.

VILLABONA, Oviedo, Spain.

See also MOSCONA M.

RSN(100)31. How mines

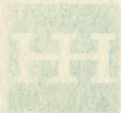
PONTEVEDRA

SPAIN

Firestone I

CARBIA; Pontevedra, Spain
Firestone 1 / 50 km NE of P.

Way (1962) Sn



ERT EDO, Pontevedra, Spain

Prestone l.
Mine

23 km NE of P.
shown.

CERDEDO, Pontevedra, Spain

Firestone l. 23 km NE of P.

Mine shown.

CERDEDO

1. 2

Firstone
Mine

A

CERDEDO, Pontevedra, Spain

Firestone l. 23 km NE of P.

Mine shown.

Goyás, Lalin, Pontevedra, Spain

See also LALIN

Firestone 1. 5 km NE of Lalin

MA 7 41 Anals of Li-peg. & of
spodumene

LALIN, Pontevedra, Spain.

Firestone 1 50 km NE of P.

See also GOYÁS

MA 10 432; Min Petr. Mitt., (1948) 28 324

Li-pegs of Lalin; spodumene

PONTEVEDRA, Pontevedra Spain

Firestone 1

MA 14 498 Bolivante (Al phosphate),

type material

SILLEDADA, Pontevedra, Spain

Firestone 1 50 km NE of P

Way (1962) Sn

VIGO, Pontevedra, Spain

Firestone l. 20 km S of P.

MA 13 487 Zirconiferous sands.

SALAMANCA

SPAIN

Firestone 4, 5.

BARRUECOPARDO, Salamanca, Spain

Firestone 4: 85 km W of Sal. Mines shown
SE SW of Villabuenas

Rocks & Mins (1956) 31 563. MA 15 163

In Barruecopardo district near
VILLASBUENAS, scheelite, wolframite,
reinite & arsenopyrite

Way (1962) Minor Fe mining: "The LUMBRALES
[qv] & BARRUECOPARDO mines of Badajoz [sic]"

CIUDAD RODRIGO, Salamanca, Spain

Firestone 4. 80 km SW of Sal.

Sci. Journ. (May, 1967) 17. The most important
U ore reserves are here (0.1 - 0.16 % U)

Sierra de GATA, Salamanca, Spain

Firestone 4: 100 km SW of Sal., on border
with Caceres prov.

Way (1962) W

LOSACIO, Salamanca Spain

MM 30 107 The brown or black
stibiconite contains admixed
triphyte

Way (1962) Pb. Near Portug. border

LUMBRALES, Salamanca, Spain

Firestone 4: 90 km W of Sal.

MINAS de ESTAÑO shown a few km
E of the town.

Way (1962) Minor Fe mine [cf BARRUECOPARDA]

MARTINAMOR, Salamanca, Spain

Way (1962) Mica produced

PEDRO ALVARO, Villavieja, Salamanca, Spain

Firestone 4; 65 Km W of Sal.

Swab coll, ex H. Waldeck:

tiny yellow ds in
matrix

Sabugalite (?)
friable limonite



La PEÑA, Salamanca, Spain.

MA 28 230; 77-2380 Triplite from
BEATRIZ MINE in town of La Peña, Sal.

La TALA, Salamanca, Spain.

H. Corke, Priv. Comm (12/74) Specimens from
Ecole des Mines, also from Möckel:—
Wulfenite with stolzite; very pale
yellow mucky mixed-up veinlets in
pale brown shaly matrix.
Unattractive

VILLASBUENAS, Salamanca, Spain

See BARRUECOPARDO

SANTANDER

SPAIN

Firestone 1, 2, Picos de Eu.

A no. of caves many with cave-paintings,
eg Cuevas de Altamira.

BIEN VENIDO, Santander, Spain

Davies (1888), 35 ml W of Santander —
lodes cross each other & form a
network of calamine [smithsonite]
deposits

CABEZÓN de la SAL, Santander, Spain

Way (1962) Rock salt mines

CAMARGO, Santander, Spain.

Way (1962) Fe, Zn.

COMILLAS

Santander

Spain

MA 1 294 Hydrozincite

68 CS

W of
Santander



DOLORES MINE, Udias Valley, Santander, Spain

See also UDIAS

Dana (1932): Hydrozincite in great
quantities

^{Pineres}
El HOZARCO, Santander, Spain

In lower Picos range inland from Unquera.
E of La Hermida, N of Potes

RSN(100)32-3 galena, gypsum xls, cinnabar,
vg mal lazurite xls; vg rosasite &
aurichalcite from narrow tunnel
w. poor air

Min Rec(1996) 27 (May/June) 177-188 Potos(!)

MATA, Santander, Spain

Firestone l, Pde E 7 km S of Torrelavega.

Way (1962) Minor Fe mines

PALANCO, Santander, Spain

See POLANCO

PICOS DE EUROPA, Santander

Firestone 1, 2, Pde E.

See also REOCIN (?)

MA 7 137 Spectro. of sphalerites from
Green (Co, ?Fe); red (Sn, In, Ag, Mo)
- Ge, Ga, Cu, Hg. Cd in all - cause of

BM. Sphalerite, clear honey-coloured
x's, with calcite. Also faceted

Way (1962) Some Fe mined

PICOS DE EUROPA, Santander, Spain (II)

Dana (1932) Sphalerite, beaut. transpar. var.

Firestone P. de E map shows 3 mines, all
in Santander province.

- (i) MINAS DE LA REAL C.A. 9km NW of Potes,
reached by a jeep-track from Beges, above
La Hermida; or Sotres.
- (ii) MINAS ASTURIANA just NW of Refugio de ALIVA
14 km W of Potes. The Refugio is reached by
jeep-track from Espinama or cable-car
& footpath from Fuente De

PICOS DE EUROPA, Santander, Spain (III)

(iii) Unnamed MINE at PEÑA VIEJA,
2km NW of the top of the cable-
way from Fuente Dé

Russ Soc Newsl. (2000) 37 31-33.

Visit - coll'g forbidden as Nat. Park.

Details
for
AREA

MIN REC 1996 27 May/June 177-188

POLANCO, Santander, Spain

Firestone 1, 2. ~~Pic. de Eu~~ marks POSADILLO
where Firestone Pic. de Eu marks POLANCO
ca 4km NNE of Torrelavega.

Way (1962) Rock salt mines of
PALANCO [is this POLANCO?] and
Cabezón de la Sal [NOT found on maps]

POSADILLO, Santander, Spain

See POLANCO

REINOSA, Santander, Spain

Firestone 1, 2, Pde E. 57 km SSW of Santander

Way (1962) Subsidiary Pb mining centre

REOCIN area, Santander, Spain
See also PICOS DE EUROPA (?)

MA 4 330. Fan shaped aggs of pyrite needles
from MERCADAL.

Way (1962) Zn. The bulk of Spanish Zn
comes from area of COTO DE REOCÍN, a
rocky tract near PICOS DE EUROPA. 1000'
deep galleries produce a blende with
58-60% Zn. Subsidiary Pb

MA 16 35. Blende-marcasite deposits + galena
+ pyrite

SANTANDER

Spain

See also PICOS DE EUROPA; REOCIN

MA 1 294

Hydrozincite [cf DOLORES MINE]

3 322

Sphalerite. Also 4 26; 7 385 [cf PICOS DE E.]

MA 12 16; 7 385

Phys props of sphalerite

xls - eg colourless - 0.2 % Fe.

Dana (1932) Hemimorphite

BM

Hydrozincite, botryoidal.

Sphalerite, clear yellow/honey zoned, ^{cleavage} slab.

SOLARES, Santander, Spain

Firestone 1 10 km SE of Santander.

Way (1962) Minor Fe mines

SUANCES, Santander, Spain

Way (1962) Zn.

TORRELAVEGA, Santander, Spain

Firestone 1, 2, PdeE. 20 km SW of Santander

See also SUANCES; CAMARGO; MATA; POLANCO

MA 15 195 Torrelavega region :- deposit
of baryte are residual; calamine-galena
in ox. zone; zoned sphalerite + specks
of galena.

UDIAS, Santander, Spain

See also DOLORES MINE

Way (1962) Zn.

SEVILLA

SPAIN

Firestone 7, 8, 9.

ALMADÉN de la PLATA, Sevilla, Spain

See also REAL de la JARA.

Firestone 7: 55 km N of Sevilla

El CERRO del HIERRO, Sevilla, Spain

Firestone 7, 8, 9; Mine, 5 km SE of
S. Nicolás del Puerto, 70 km NNE of Sev.,
in Eastern Sierra Morena.

Marked on Firestone general map as
"Minas de El Cerco del Hierro"

GUADALCANAL, Sevilla, Spain.

Firestone 7. 80 km N of Sevilla

Dana (1932) Löllingite ("glaucoopyrite"),
Guadalcanal, Sierra Morena, Sevilla

El PEDROSO, Sevilla, Spain

Firestone 7. 50 km NNE of Sevilla.

Way (1962) Inferior Fe ore

MA 1 349 Prismatic baryte xls -
PEDROSO MINE, Sevilla prov.

REAL DE LA JARA, Seville prov., Spain

Firestone 7: El Real de la Jara 65 km NNW of
Seville.

MAZ 26 Stephanite

See also
ALMADÉN de la
PLATA

SORIA

SPAIN

NAVAJON,

Soria, Spain

Classic sharp bright pyrite
cubes, often corner-linked to
interesting clusters

Mike Wilson 9/2000 Visited & collected.

In a soft talcy matrix in a
mountainside vein exposure
and mine

TARRAGONA

SPAIN

Firestone 6, 3(2?)

BELLMUNT de CIURANA, Tarragona, Spain

cf BELLMUNT (?Lerida) See also MOLÁ

Both MOLÁ & BELLMUNT de CIURANA near FALSET

CA 68 106796 Galena deposit of W. of
Tarragona
Bellmunt de Ciurana.

Way (1962) Subsidiary Pb mining centres:-
Bellmunt & Molá

FRANCOLÍ, Tarragona, Spain

cf Esplugas de Francolí, N of Tarragona

MA 6 185 A large block, mainly of niccolite,
with galena, calcite & fluorite, shows
xls of native silver, argentite, hessite,
sphalerite, millenite, chloanthite,
pearceite, cerussite, & annabergite.

cf VIMBODÍ; POBLET

MOLÁ, Tarragona, Spain.

See also BELLMUNT de CIURANA

Map: near FALSET, W of Tarragona.

Way (1962) Subsid. Pb mining centre

MA 28 208 72-2180 KWalena. Unknown
arsenate ~~g~~-sulphate of Pb Fe Cu from
a dump nr Mola is similar to a
min. from Clara M (Baden) & to tsumcorite
or tsumebite group.

POBLAS, Tarragona, Spain

Way (1962) Bauxite

POBLET, Tarragona, Spain

See also VIMBODÍ; FRANCOLI

Way (1962) Ni, with Pb in the
district between Vimbodí e Poblet.

SANT^A~~AND~~ CREUS, Tarragona, Spain

Way (1962) Bauxite

SARREAL, Tarragona, Spain

Way (1962) Alabaster, high quality.

VIMBODÍ, Tarragona, Spain
See also POBLET; FRANCO

Way (1962) A v. little Cr.

Not assoc w. Pb between
Vimbodi e. Poblet.

TERUEL

SPAIN

Firestone 6, 5?, 4??

Cuevas Labradas (N of Teruel)

ALBARRACIN, Teruel, Spain.

Way (1962). High-grade haematite

ALFAMBRA, Teruel, Spain

Way (1962) Mm mined in the
Alfambra - Camañas [q.v.] area

CAMAÑAS, Teruel, Spain

Way (1962) Mn mined, in the
Alfambra [q.v.] - Camañas area.

CUCULAN, Teruel, Spain
? = CUCALÓN (on Gr's map)

Way (1962): Fe mines. In Sra Menera

LIBROS, Teruel, Spain

Way (1962): Sulphur deposits

OJOS NEGROS, Teruel, Spain.

Way (1962) Fe mines; in Sra. Menera

PARDOS, Teruel, Spain

Way (1962) Fe mines; in Sra. Menera



TERUEL / Teruel Spain
Firestone 6

MA 11 554 "Teruelite", lustrous black
5mm acute rhombohedra sprinkled
through Trias gypsum are abundant
in the neighbourhood of Teruel.
= dolomite rather than breunneite.

Dana (1932) Dolomite, unusual dark xls.

Way (1962) Bauxite, in a few scattered somewhat
inaccess. mines in the hills around Teruel

RSUB 78-21



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pp 780

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D This volume deals with aliphatic compounds with functional substituents on five or more separate carbon atoms. This means in effect that the book deals with the polyhydric alcohols from C5 upwards, their reduction and oxidation products and their numerous classes of related compounds.

RSUB 78-20 "Teruelike" in matrix from
EL SALOBRA, Teruel.

OTHER PROVINCES

~~###~~ SARAGOSSA prov., Spain

See under ZARAGOZA

Sierra GUADARRAMA, Segovia, Spain

• See under MADRID province.

(ARANJUEZ area) Toledo, Spain.

ARANJUEZ is in Madrid province, 40 km
S of Madrid. See also under Madrid
prov.

Firestone "Madrid" - shows, just in Toledo prov;
CANTERAS de YESO [gypsum]; CUEVAS de la ERENA;
CUEVA de NARANJO; CUEVAS del ANDALUZ;
CUEVA de los MIRANDA.

Dana (1932): Thénardite, prov's of Madrid
& Toledo, espec. at ESPARTINAS, near Aranjuez.

MADRIDEJOS, Toledo, Spain.

Firestone 7

60 km SE of Toledo

Way (1962)

Pb

Cueva de ARAÑA, Valencia, Spain.

Firestone 66r8 SW of Valencia

VIZCAYA province, Spain

= BILBAO (q.v.)

CALATAYUD, Zaragoza, Spain.

Firestone 3.

Dana (1932) Epsomite

D New Cat. (1974) Epsomite, pure snow-white
fibrous vein sections

Minas de SANTA ROSA, Zaragoza, Spain

Firestone 3,

W of Zaragoza.

HELLÍN, Albacete, Spain.

Firestone 8

Way (1962) One of 2 main sulphur
deposits in Spain is at Hellín,
(Upper Guadalquivir basin)
Map shows "Minas de Azufre"
S of Hellín, but just in Murcia
province

HUERTA ARRIBA, Burgos, Spain

MA 4 237. Copper pitch, in large quantities

CONIL, Cadiz, Spain

Firestone 9 SE of Cadiz, on coast

Dana (1932) Native sulphur

BM: Native sulphur, large rough xl.

GRAZALEMA, Cadiz, Spain.

Firestone 9 NE of province

Way (1962), Cu.

BELINCHÓN, Cuenca, Spain

Firestone 6

Way (1962). Minor rock-salt centre

CIUDAD ENCANTADA, Cuenca, Spain.

Firestone b. NE of Cuenca

? why noted by GR.?

MINGLANILLA Cuenca Spain

Envro 77 H1

Way (1962) Halite (S. Meseta)

Locs 72-498 (Ex H. Corke) Aragonite, white
fibrous radiating (greenish by
transmitted light).

PRIEGO Cuenca Spain

Geo 77 G4

MM 26 326 Gypsum, var selenite
for windows. "Segobriga = Priego"

TARANCÓN, Cuenca, Spain.

Firestone 6.

SE of Madrid, W corner
of Cuenca.

MA 13 443. Illite; montmorillonite

GUIPÚZCOA } Province Spain
= SAN SEBASTIAN }

BM. Aurichalate [cf ONDARROA (Bilbao)]

Way (1962) . Subsid. Pb centre

CERVANTES, Lugo, Spain

Way (1962) Sb.

Dana (1932) Cervantite - at Cervantes
in Lugo.

BM: Stibiconite, yellow massive.

RIBAS de MIÑO, Lugo, Spain

Firestone 1. 6 km E of Chantada,
~45 km SSW of Lugo

VILLADORID, Lugo, Spain

Firestone 1; 47 km NE of Lugo

Way (1962) Fe

EUGU, Navarre. Spain

Ex H. Conke. superb dolomite xls
(Transpt rhombs, in clusters)

(cf Chem Abs 68 116390 Magnesite 9
Fr & Spain Pyrenees ?)

SAN SEBASTIAN } Province, Spain.
= GUIPÚZCOA [qv] }

SAN SEBASTIAN } Province, Spain.
= GUIPÚZCOA [qv] }