THE JOINT CHIEFS OF STAFF

Joint Intelligence Committee

Washington 25, D. C.

ENEMY OIL COMMITTEE

M E M O R A N D U M

In reply refer to:
SP-959-BHG

APR 5 1944

S E C R E T

To: Mr. Sidney Kilbey
Mr. Walter Levy
Major Russell Tarr

From: B. H. Grove
Executive Secretary
Enemy Oil Committee

Subject: European Refinery Position

Some weeks ago Colonel Perera, of the COA, requested a memorandum which would bring up to date the refinery position in Axis Europe insofar as this might have changed since the last official EOC report. Mr. Murch asked Mr. Noel to prepare a memorandum on the subject, copy of which is attached for your information and file.

I should like to discuss this memorandum with you at an early opportunity to revise it into a form more directly suitable to Colonel Perera's needs.

Attachment

C
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S E C R E T

March 25, 1944

European Refineries

Mr. John D. Murch
Special Representative
Foreign Division
Petroleum Administration for War
1204 Chanin Building
New York 17, New York

Dear Sir:

In reply to your letter of March 22, to which was attached Mr. Grove's letter of March 21 and an item of Military Intelligence, we have the following comments to offer.

The source of Military Intelligence has shown Roumanian refinery capacity figures very similar to our own. The figures for production during the first six months of 1941 are interesting new data. We note that this source has mentioned one refinery which was not shown in our Roumanian table, namely Friedmann at Dej (36,000 tons per year). On the other hand, we have mentioned four refineries which this source does not show, namely Cometa, Aurora, Carmen and Orsova.

As regards changes to our report EOC 68-2, in the light of present knowledge we believe the following revision is worth mentioning (figures are in thousands of metric tons per year):

Roumania:	9605	Total available capacity before raid, including some obsolete plants
	2570	Damaged capacity still unrepaired
	7035	Now available
	5067	Crude now being produced in Roumania
	19 68	Excess capacity
Germany:	1800	Total crude oil capacity
	993	Crude now being produced in Germany
	807	Excess capacity

Czechoslovakia:	700	Total capacity
	32	Crude now being produced in Czechoslovakia
	668	Excess capacity
Austria:	500	Total capacity, rating Lobau at 200
	1000	Crude being produced in Austria
	-500	Deficit in capacity
Hungary:	600	Total capacity including Munkacs and rating Petfurdo 100
	800	Crude being produced in Hungary
	-200	Deficit in capacity
Yugoslavia:	220	Total capacity
	50	Crude being produced in Yugoslavia
	170	Excess capacity
Poland:	970	Total capacity
	400	Crude being produced in Poland
	570	Excess capacity

Total Excess Capacity - 3483

If more than this amount of capacity were destroyed in Ploesti under present conditions, there would be crude shut back in the wells. If 5483 capacity (five refineries) were to be destroyed in Ploesti, under present conditions, 2000 of actual crude supplies would become unavailable.

If in addition, the 1800 German capacity (four refineries at Hamburg and one at Hannover) and the 500 Austrian capacity (six refineries at Vienna) were destroyed there would be a total decrease in crude consumption of 4300 (say 4000 of products) or nearly 25% of the total Axis oil supplies. This shortage would prevail until (1) the operable refineries in southern France (1900 capacity) could be mobilized, (2) the operable capacity in the low countries (say 1100) could be mobilized, or (3) some refinery units repaired. Such repairs would be difficult and time-consuming in any case and would be practical to only a limited extent because of the shortage of spare parts.

It is to be noted that the capacity of the operable Italian refineries at La Spezia, Venice, Trieste, and Fiume (totalling 1430) is ignored as depending on a very tenuous supply line and as being extremely vulnerable to attack. On the other hand, the Polish capacity (totalling

970) is listed as available to Germany, although it may soon be taken over by the Russians.

Trusting that this revision of the conclusions in our EOC 68-2 will be of use.

Yours very truly,

H. M. NOEL

HMN:mmm

NOTE: Note that the equipment removed from France includes only one or two pipe stills, the rest being all cracking, lube or finishing units. It is logical to expect the equipment capable of running crude to show up in Roumania.

PRESENT POSITION OF THE REFINING INDUSTRY IN GERMAN-HELD EUROPE

(1) Whereas German-held Europe had, at the time of our last report, (EOC 45-2) a comfortable and fairly well distributed excess of refining capacity, it is now clear that the excess has been reduced to the danger point. The loss of certain Italian refineries, the destruction of certain Italian, German and Rumanian refineries, added to the impotence of the French and Lowlands refineries, has completely changed the outlook. For the first time it is evident that an immediate effective blow at the European refining industry would cause crude oil to be shut back in the wells.

(2) The Allied capture of the Naples and Bari refineries represents a permanent loss to the German economy of 450,000 (a)* tons per year of crude handling capacity. The approach of Allied armies and the destruction of crude supply lines by guerrillas is understood now to have immobilized the remaining Italian capacity to the further extent of 1,600,000 (b) tons per year. The damage to Rumanian and German refineries represents a loss, at least for several months, estimated at 3,925,000 (c) tons and 540,000 (d) tons respectively. The destruction of tankage and dismantling of equipment in Northern France and the Lowlands is calculated to represent a loss of 5,030,000 (e) tons. The total actual loss therefore is estimated to have been 11,545,000 (f) tons. In addition it must be noted that, excepting the small plants for local oil, the remaining capacity in France and the Lowlands, 4,085,000 (g) tons, is unavailable due to its remoteness from the centers of production and consumption. Furthermore, of the so-called "capacity" in Germany, 720,000 (h) tons represents simply lube or gasoline finishing capacity which could not be adapted to handling crude. This leaves only 9,765,000 (i) tons, of the original 26,115,000 (j) tons of European refining capacity, now available to the Germans for crude handling.

(3) If subjected to no further molestation it is believed that a large part if not all of the damaged refinery equipment in Rumania and Germany could be replaced by the Spring of 1944. Equipment has been removed from French refineries which, with attendant facilities, would be capable of handling several million barrels per year of crude oil. Some of this equipment may be destined for the Lobau refinery, now under construction, or for the rumored new refineries to be built at Komarom and Smederevo. It is even possible that "unknown" plants have been erected with these transplanted facilities, although no intelligence whatsoever has been received to such effect. On the other hand, a large part of it may have been consumed in the construction of the new synthetic plants. In any case, this or newly fabricated equipment could be installed in the presently damaged refineries and a safe margin of excess capacity reestablished by next Spring. It is obvious that the recovery of such a margin, before further raids, would be a matter of first urgency for the Germans.

* These letters refer to items in the set of notes attached.

NOTES ON REPORT OF REFINING INDUSTRY IN GERMAN-HELD EUROPE--Nov. 1943

(Figures, in thousands of metric tons per year, are those of Report EOC 45-2 except as regards present crude production, item K).

(a) Italian loss

Naples	200
Bari	250
	450

(b) Italian Immobilization

Aquila-Trieste	300
SIAP-Trieste	150
ROMSA-Fiume	150
AGIP-Venice	350
NAFTA-Spezia	400
ANIC-Leghorn	250
	1,600

(c) Rumanian loss

Astra (50%)	900
Colombia (100%)	535
Concordia (15%)	225
Credit Minier (100%)	535
Orion (30%)	230
Steaua (100%)	1,500
	3,925

(d) German loss (assumed)

Rhenania-Harburg (40%)	320
Ebano-Harburg (40%)	160
Eurotank-Pet'haven (40%)	160
	540

(e) French loss

Dunkerque	450
Courchelettes	300
Gonfreville	1,600
Port Jerome	1,250
Gravenchon	300
Petit Couronne	750
Consomm.-Donges	130
Pechel.-Donges	250
	5,030

(f) Total actual loss

Italian loss	450
Italian shutdown	1,600
Rumania damage	3,925
German damage	540
French demolition	5,030
	11,545

(g) French Immobilization

Pauillac	500
Bec d'Ambes	350
Frontignan	300
Martigues	650
Berre	550
L'Avera	400
Belg. Netherlands	
Denmark, Norway	1,335
	4,085

(h) German non-crude cap'y

Vacuum-Schulau	15
Albrecht-Grasbrook	30
Schliemann-Grasbrook	65
Rhenania Ossag-Grasbrook	130
DPAG-Neuhof	65
Schindler-Neuhof	40
Deutsche Gasoline-Dollbergen	40
Vacuum-Bremen	80
Schindler-Peine	20
Niedersachen-Dollbergen	10
Deutsche Gasoline-Emmerich	60
Ersag-Wintershall-Salzbergen	30
Schmitz-Dortmund	20
Rhenania-Ossag-Monheim	115
	720

(i) Residual Capacity

Total	26,115
Lost (item f)	11,545
	14,570
Immobilized (item g)	4,085
	10,485
Immobilized (item h)	720
	9,765

(j) Original Cap'y Figures

Germany	2,505
Czechoslovakia	700
Austria	800
Hungary	400
Italy	2,100
Yugoslavia	180
Rumania	9,280
Poland	800
Estonia	100
France	7,915
Lowlands, etc.	1,335
	26,115

(k) Crude Production Rate, Dec. 1, 1943

Germany	993
Czechoslovakia	32
Austria	1,268
Hungary	800
Italy	10
Yugoslavia	50
Rumania	5,067
Poland	400
Estonia	95
France	95
	8,810

(l) Excess Refining Cap'y

Available (item i)	9,765
Crude	8,810
Excess	955

APPENDIX B

DATA SHEETS FOR EUROPEAN RIVERS

The authorities quoted are indicated as follows:

(a) SOCONY (Economics Dept.)
(b) Socony Vacuum (Dept. of Economics)
(c) Shell Jun. 28th (Haywood of Asiatic)
(d) Texaco Development Co. (Gee)
(e) SOCONY (Foreign Refining Dept.)
(f) Socony Vacuum (H.L. Simpson)
(g) Shell (Pfister)
(h) Shell (Perquin, et al)
(i) Miscellaneous Oil Companies

(j) Foster Wheeler Co.
(k) Universal Oil Products Co. (Wilson)
(l) M.W. Kellogg & Co.
(m) A.G. McKee & Co.
(n) Lummus & Co.
(o) Winkler-Koch Co.
(p) Miscellaneous equipment companies (Badger, etc.)

(q) Feith of Jalonolska
(r) Gottlieb of Petrolmin
(s) Sonfield of Redevontza
(t) Stevan of Erod
(u) Lamright of Romana Americana
(v) Bell of Italy
(w) Miscellaneous individuals (Schindler of Schindler, Lunston of Fanto, Stern of Shell, Schenk of Socony Vacuum, R. Carroll of Survey of Foreign Experts, L. Wachtel, F.T. Seinfeld, Muhlreuter, Z. Rudolf.

(x) British Trade Control Committee
(y) British and U.S. Intelligence reports
(z) M.E.W. Target Report July 1, 1942
(aa) M.E.W. Report of March 31, 1942
(bb) British aerial reconnaisance reports
(cc) British "Vulnerability of Oil Objectives" M.E.W. August 14, 1942
(dd) British Air Ministry (Wilbey's letter April 20, 1943)
(ee) Socony Vacuum supplied to FOC
(ff) Shell letter Oct. 11, 1943
(gg) SOCONY letter
(hh) Socony Vacuum letter
(ii) Dept. of Justice, Anti-Trust Section, report
(jj) Charles Wachtel
(kk) Foreign Property Holders Protective Committee (Aug. 25, 1943)
(xx) Italian Petroleum Facilities reports
(xxx) Berthoud's report

LIST OF EUROPEAN REFINERIES

(showing crude capacity in thousands of metric tons per year)

Germany		
1	NAFAG-Hamburg	150
2	Europaische Tank.-Hamburg	400
3	Rhenania Ossag-Hamburg	550
4	Ebano Asphalt-Hamburg	400
5	Rhenania Ossag-Hamburg	-
6	Albrecht-Hamburg	-
7	Schliemann-Hamburg	-
8	Deutsche Petrol.-Hamburg	-
9	Schindler-Hamburg	-
10	Rhenania Ossag-Hamburg	-
11	Deutsche Vacuum-Hamburg	-
12	DEURAG & NERAG-Hannover	300
13	Schindler-Hannover	-
14	Deutsche Gasolin-Hannover	-
15	Niedersachen-Hannover	-
16	Deutsche Vacuum-Bremen	-
17	Deutsche Gasolin-Emmerich	-
18	Ersag Wintershall-Salzbergen	-
19	Schmitz-Dortmund	-
20	Rhenania Ossag-Monheim	-
21	Rhenania Ossag-Reisholz	-
	Total	1,900
Czechoslovakian		
22	Apollo-Bratislava	150
23	Lederer-Kralupy	60
24	Vacuum Oil Co.-Kolin	90
25	Fanto Werke-Hardubice	200
26	Fanto Werke-Novy Bohumin	60
27	Privezer Mineralol-Privez	50
28	Government Ref. Dubova	90
	Total	700
Austrian		
29	Shell Floridsdorfer-Florid.	100
30	Creditul Minier-Korneuburg	50
31	Vacuum Oil Co.-Kagran	60
32	Osterreichische-Vosendorf	40
33	Neva-Schwechat	50
34	Wintershall-Lobau	200
	Total	500
Hungarian		
35	Shell-Budapest	175
36	Magyar Petroleum-Budapest	60
37	Asvanyol Fanto-Budapest	60
38	Vacuum Oil Co.-Almasfuzito	125
39	Nyirbogdany Petrol.-Nyirbog.	20
40	Szoregi Petrol.-Szoreg	20
41	Del Karpati-Munkacs	30
42	Hungarian Hydro.-Petfurdo	100
43	Schonberg-Csap	10
44	Weinberger-Alsonhalyi	10
	Total	600
Italian		
45	Ronsa-Fiume	150
46	Aquila-Trieste	350
47	SIAP-Trieste	150
48	AGIP-Venice	450
49	Permolio-Roma	30
50	Lombardia-Milan	10
51	INPET-Shell-Spezia	350
52	ANIC-Leghorn	*250
53	Petrolifera-Fornovo Taro	50
54	Petroli-Fiorenzuola	10
55	Raff. Napoli-Vacuum	*230
56	ANIC-Bari	*250
	Total	2,250
Yugoslavian		
57	Standard-Brod	100
58	Shell-Caprag	100
59	Ipoil-Osijek	20
	Total	220
Rumanian		
60	Astra Rom.-Ploesti	1750
	Ploesti	1450

Rumanian (Cont'd)		
63	Unirea Orion-Ploesti	730
64	Unirea Sper.-Ploesti	440
65	Colombia Aq.-Ploesti	*535
66	Petrol Block-Ploesti	495
67	Xenia-Ploesti	290
68	Dacia-Ploesti	130
69	Petrolmina-Ploesti	130
70	Noris-Ploesti	60
71	Prahova- Bucarest	200
72	Petrol Block-Bucarest	55
73	Steaua Rom.-Campina	*1500
74	Credit Minier-Brazi	* 535
75	Photogen-Brasov	35
76	Steaua Rom.-Moinesti	60
77	Romano Bel.-Rumnicu Sarat	40
	Total	9,605
Polish		
78	Vac. Oil Co.-Czechowice	75
79	Galicya Min.-Jedlicze	75
80	Polski-Trzebinja	100
81	Jaslo-Nieglowice	70
82	Polmin-Drohobycz	160
83	Galicya-Drohobycz	140
84	Nafta-Drohobycz	60
85	Galicya-Klinik Mariam.	80
86	Gazy Z.-Zniesienie (Lwow)	40
87	Limanowa-Limanowa	100
88	Fanto-Ustrzyki	50
89	Stawiarski-Krosno	80
	Total	970
Estonia		
90	Polevkivi-Kohtla	40
91	Consolidated-Kohtla	12
92	Eesti Kivioli-Kivioli	30
93	Olikonsortium-Sillamagi	13
	Total	95
France, Belgium, Netherlands, and Scandinavia		
94	Dunkerque-France	*450
95	Courchelettes-France	*300
96	Gonfreville-France	*1600
97	Port Jerome-France	*1250
98	Gravenchon-France	* 300
99	La Mailleraye-France	-
100	Petit Couronne-France	* 750
101	Donges-France	* 130
102	Donges-France	* 280
103	Pauillac-France	* 500
104	Bec d'Ambes-France	* 350
105	Frontignan-France	300
106	Martigues-France	650
107	Berre-France	550
108	L'Avera-France	400
109	Autun-France	15
110	Pechelbronn-France	120
111	Kiel-Belgium	120
112	Hoboken-Belgium	100
113	Kiel-Belgium	80
114	Tardonck-Belgium	65
115	Antwerp-Belgium	130
116	Wandelgem-Belgium	130
117	Langerbrugge-Belgium	30
118	Pernis-Netherlands	1100
119	Flushing-Netherlands	40
120	Vallo-Norway	50
121	Kalundborg-Denmark	30
	Total	5,750
	Grand Total	26,490
	Less inoperable refineries	9,170
		17,320
	Less inaccessible refineries	5,305
	Net Available	12,015

THE JOINT CHIEFS OF STAFF
Joint Intelligence Committee
Washington 25, D.C.

JOINT OIL COMMITTEE

In reply refer to:
SU-959-MLI

JUN 2 1944

RESTRICTED

M E M O R A N D U M

To: Members of the Western Axis Subcommittee

From: R. H. HALL, Executive Secretary
Enemy Oil Committee

Subject: Transmittal of Press Abstracts

We are enclosing herewith for your information a copy of the 2d May 1945 issue of Press Abstracts compiled by the Interdepartmental Committee for the Acquisition of Foreign Publications.

Enclosure

Maj. Stark

35 Nova Oel und Brennstoff — Schwechat (Vienna), Austria

Common Name of the Refinery: Nova

Name of the Company: Nova Oel und Brennstoff A.G.

Address of Company: Vienna

Affiliations of Company: -

Location of Refinery: Schwechat, 4 miles downstream from E. RR bridge at Vienna

Capacity in metric tons per year; 50,000 based on 50,000(a), 40,000(q), 50,000(z), 50,000(an)

Distillation Facilities: Pipe still

Cracking Facilities: None

Lube Facilities: Acid and clay

Tankage Capacity in metric tons: 22,000

Piers and Dandelion: None

Remarks: Fairly modern

34 Wintershall-Elwerath — Lobau (Vienna) Austria

Common Name of the Refinery: Lobau

Name of Company: -

Address of Company: -

Affiliations of Company: Wintershall-Elwerath

Location of Refinery: Lobau, on the left bank of the Danube just downstream from Vienna proper.

Capacity in metric tons per year: 200,000(y)

Distillation Facilities: Pipe still

Cracking Facilities: None

Lube Facilities: -

Tankage capacity in metric tons: 57,000 m^3(y)

Damage and Demolition: none

Remarks: This refinery put into operation in 1943 and still under construction.

35 Shell Nederland ... Csepel (Budapest), Hungary

Common name of the Refinery: Csepel

Name of Company: Shell Chemical ... .

Address of Company: Budapest, Hungary

Affiliation of Company: Shell Transport & Trading ..., Ltd..., (an NV Koninklijke Nederlandsche Maatschappij). St. Helen's Court, London E.C.3.

Location of Refinery: Csepel, on the large island in the Danube just S. of Budapest, on the petroleum harbor in N part of the island.

Capacity in metric tons per year: 175,000, later on 190,000 (a), 150,000(b) 130,000 (c), 90,000 (d), 170,000 (aa), 150,000 (dd), 170,000 (x), 170,000 (z), 130,000 (f), no reports of recent expansion

Distillation Facilities: Pipe still for 400 T/D

Cracking Facilities: None

Lube Facilities: Plant with Foster Wheeler vacuum pipe stills

Tankage Capacity in metric tons: 30,000 (g), 57,000 M^3(e), 57,000 (x), 57,000 M^3(ff).

Damage and Demolition:

Remarks: The Hazai refinery was dismantled to supply some equipment for Csepel.

36 Magyar Petroleum Ipar- Dr. Freund Budapest, Hungary

Common Name of the Refinery: Magyar Petroleum; Dr. Freund

Name of Company: Magyar Petroleum Ipar, R.T.

Address of Company: Budapest, Hungary

Affiliations of Company: -

Location of Refinery: Budapest.

Capacity in metric tons per year: 60,000, based on 70,000 (a), 50,000 (b) 50,000(q), 30,000 (z), 85,000(a').

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities: Acid and dewaxing

Tankage Capacity in metric tons: -

Damage and Demolition:

Remarks:

37 Budapesti Ásványolaj-Bánya ..... Budapest, Hungary

Common Name of this Refinery: Fanto

Name of Company: Budapesti Ásványolaj .

Address of Company: Budapest, Hungary

Affiliations of Company: -

Location of Refinery: Budapest

Capacity in metric tons per year: 50,000 (last on 40,000(a), 40,000(b), 55,000m^3 (x), 48,000 (z), 45,000 (ac).

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities: Acid Treating

Annual Capacity in metric tons:

Date of Operation

Remarks: This is the "Nyergalut" or "Long" refinery. Fanto had also a small installation called "Novi" refinery in the north part of Budapest.

38 Vacuum Oil Co. Almasfuzito, Hungary

Common Name of the Refinery: Almasfuzito

Name of Company: Vacuum Oil Co., N.V.

Address of Company: Budapest, Hungary

Affiliations of Company: Socony-Vacuum Oil Co., New York

Location of Refinery: Almasfuzito, near Komarom, on the Danube river.

Capacity in metric tons per year: 125,000 basis on 150,000 (a), 90,000(b), 75,000 (c), 150,000 b.s.(x), 168,000 (z), 168,000(aa), 125,000(hh).

Distillation Facilities: Foster-Wheeler atmospheric pipe still for 1500 B/D twelve rerun shell stills. Vacuum stage added to pipe still raising capacity to 125,000 T/yr (hh)

Cracking Facilities: None.

Lube Facilities: Acid treating, with centrifuge.

Yearly Capacity in metric tons: 70,000(b), 60,000 refinery only (hh).

Date of Construction:

Remarks:

39. Nyirbogdanyi Petroleum — Nyirbogdany, Hungary

Common Name of the Refinery. Nyirbogdany

Name of Company. Nyirbogdanyi Petroleum RT

Address of Company. Nyirbogdany, Hungary.

Affiliations of Company. -

Location of Refinery. Nyirbogdany, near Nyiragyhaza

Capacity in metric tons per year. 20,000, based on 20,000(a), 15,000(h), 15,000(c), 15,000 M3(x), 13,000(z), 13,000(aa).

Distillation Facilities. Shell stills

Cracking Facilities. None

Lube Facilities. -

Tankage Capacity in metric tons. -

Damage and Demolition.

Remarks.

40 Szoregi Petroleum Szoreg, Hungary

Common Name of the Refinery: Szoreg

Name of Company: Szoregi Petroleum. R.T.

Address of Company: Szoreg, Hungary.

Affiliations of Company: -

Location of Refinery: Szoreg, just S. of Szeged, on the Tisza river.

Capacity in metric tons per year: 40,000, based on 20,000(a), 10,000(b), 8,000(c), 21,000(x), 13,000-(z).

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks:

41 Del Karpati Petroleum ..... Munkacs, Hungary.

Common Name of the Refinery: Del Karpati

Name of Company: Del Karpati Koolaj Finomito es Kereskedelmi R.T.

Address of Company: Munkacs (Mukacevo), Hungary.

Affiliations of Company: "Galicya"

Location of Refinery: Munkacs, or Mukacevo, in the NE corner of Hungary. Just N. of the former boundary of Czechoslovakia.
About 75 KM of Kassa (22° 40' E, 48°25'N)

Capacity in metric tons per year: 20,000, based on 30,000(a), 40,000(b), 12,000(c), 14,000-(z).

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Otherwise known as Jiacokarpatska Rafinerie Mineralnich Oleju

Common Name of the Refinery: Petfurdo

Name of Company: Magyar Hydrobenzin R.T.

Address of Company: -

Affiliations of Company: Government

Location of Refinery: Petfurdo, just N. of Lake Balaton

Capacity in metric tons per year: 100,000(y)

Distillation Facilities: -

Cracking Facilities: Small experimental cracker

Lube Facilities: Modern lube equipment reported installed

Tankage Capacity in metric tons: -

Damage and Demolition: -

Remarks: -

Common Name of Refinery: Csap

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: Csap

Capacity in metric tons per year: 10,000(e)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks:

Common Name of the Refinery: Weinberger & Ortner

Name of Company:

Address of Company:

Affiliations of Company:

Location of Refinery: At Lagyna Mihalny near Satoraljya Ujhely 50 km SE of Kassa (21°40'E, 48°32'N)

Capacity in metric tons per year: 10,000 (-)

Distillation Facilities:

Cracking Facilities:

Lube Facilities:

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks:

Common Name of the Refinery: ROMSA-Fiume

Name of Company: Raffineria di Olii Minerali, S.A.

Address of Company: Fiume, Italy

Affiliations of Company: AGIP

Location of Refinery: Just behind petroleum harbor of Fiume. Between 2 railroad lines, just W. of Freight depot.

Capacity in metric tons per year: 130,000 based on 130,000(a), 140,000(b), 150,000(q), 120,000(z), 120,000 M³(x), 2500 B/D (v), 2600 B/D (kk)

Distillation Facilities: Brunn Konigsfeld pipe still with two towers 6' diameter and 52 tubes 30' long in furnace. Capacity 260-420 T/D depending on crude, the heater being the bottleneck. Shell stills

Cracking Facilities: Shell Holmes Manley unit.

Lube Facilities: Benzol acetone dewaxing; Edeleanu solvent extraction. 3 old vacuum shell stills.

Tankage Capacity in metric tons: 50,000(w), 80,000(x), 50,000(aa), 42,000(xx)

Damage and Demolition:

Remarks: Obsolete type pipe still. Lummus had designed modifications plus a vacuum re-running still in 1940. Low steam pressure due to antiquie boiler house. Reported shutdown in Autumn '43.

Common Name of the Refinery: Aquila

Name of Company: Aquila-S.A.I.I.

Address of Company: Trieste, Italy

Affiliations of Company:

Location of Refinery: Just W. of Zaule which is 3 miles SE of Trieste on the SE shore of the Bay of Muggia.

Capacity in metric tons per year: 350,000 based on 340,000(a), 300,000(b) 150,000(q), 350,000(s), 350,000(z), 550,000 M^3(x), 6,000 B/D (v) 6,800 B/D (kk)

Distillation Facilities: Foster Thacker pipe still, atmospheric and vacuum stages, rated for 6000-8000 B/D (w)

Cracking Facilities: None. HCP cracker and polymerization plant projected in 1940.

Lube Facilities: Benzol acetone dewaxing; Edeleanu solvent extraction.

Tankage Capacity in metric tons: 120,000(w), 180,000(s), 200,000(x), 800,000(aa), 100,800(xx), 85,500 M^3(y)

Damage and Demolition:

Remarks: Modern. Synthetic oil residues received from Lutzkendorf in July '43. Reported shutdown in Autumn '43.

47 SIAP - SOCONJ — Trieste, Italy

Common Name of the Refinery: SIAP - Trieste

Name of Company: Societa Italo Americana nel Petrolio

Address of Company: Genoa, Italy

Affiliations of Company: Standard Oil Co. (N.J.), New York, N.Y.

Location of Refinery: At San Sabba SE of Trieste on the N. shore of the E. end of the Bay of Muggia.

Capacity in metric tons per year: 150,000 based on 150,000 (a), 100,000 (b), 120,000 (z), 120,000 M$ (x), 2000 B/D (v), 3000 B/D (kk).

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities: Acid and cold settling. Vacuum rerunning

Tankage Capacity in metric tons: 60,000 (a), 50,000-[illegible],000 (x), 50,000 (aa) 50,400 (xx)

Damage and Demolition:

Remarks: Old fashioned. Reported shutdown in Autumn '43.

Common Name of the Refinery: AGIP - Marghera

Name of Company: Aziendo Generale Italiana Petroli

Address of Company: Rome, Italy

Affiliations of Company:

Location of Refinery: At Mestre section of Porto Marghera, near Venice

Capacity in metric tons per year: 450,000 based on 350,000 (a), 350,000 (p), 50,000 (q), 450,000 (z), 450,000 M^3 (x), 12,000 B/D (v), 5800 B/D (kk)

Distillation Facilities: Foster Wheeler pipe still; McKee heater and rerun unit.

Cracking Facilities: Dubbs cracker for 3100 B/D Lummus figures on Knowles coker and stabilizer for 1700 B/D PD also gas absorber 3,000,000 capacity.

Lube Facilities: None

Tankage Capacity in metric tons: 200,000 (w), 250,000 (w), 250,000 (aa), 168,000 (mm)

Damage and Demolition:

Remarks: Ran no crude since early in 1942 but did a little lube regeneration. Reported shutdown in Autumn '43.

Common Name of the Refinery: Permolio

Name of Company:

Address of Company: Rome

Affiliations of Company:

Location of Refinery: Rome and Milan

Capacity in metric tons per year: 30,000

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities: None

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Asphalt primarily

Milan, Italy

EO Lombardi

Common Name of Refinery: Lombardi

Name of Company: Lombardi Petroli

Address of Company: -

Affiliations of Company: -

Location of Refinery: Milan

Capacity in metric tons per year: 10,000(r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Crude Capacity in metric tons:

Year Up and Demolition:

Remarks:

51 INPET-Shell ..... La Spezia, Italy

Common Name of the Refinery: Spezia

Name of Company: Societa per L'Industria Italiana del Petrolio

Address of Company: La Spezia, Italy.

Affiliations of Company: Shell.

Location of Refinery: Spezia

Capacity in metric tons per year: 350,000 based on 170,000(a), 300,000(b) 340,000(c), 310,000-400,000(d), 400,000(g), 310,000(z), 310,000 M³(x), 12,000 B/D (v), 350,000(ff), 3500 B/D (kk)

Distillation Facilities: 2 Pipe stills combined for 1100 B/D

Cracking Facilities: 2 Dubbs cracker for 360 B/D total - 110,000 T/yr (ff) plus two old Dubbs units for 2000 B/D total (v)

Lube facilities: None

Tankage capacity in metric tons: 90,000 (u), 123,000(x), 104,000(aa), 122,000 M³(c), 75,000(xx), 123,000 M³(ff).

Damage and Demolition:

Repairs: Asphalt plant started in 1940-30,000 T/yr.

Common Name of the Refinery: Leghorn

Name of Company: ..zion. Nationale Idrogenazione e Combustibili

Address of Company: Milan, Italy

Affiliations of Company:

Location of Refinery: ...ar the Fonte Bjioni ..port ... miles NE of Leghorn and just o.. drainage canal.

Capacity in Metric tons per year: 250,000 based on 250,000(a), 310,000(b), 125,000(c), 1.. 000M^3(x), 10,000 B/D (v) 5000 B/D (AA)

Distillation Facilities: Pipe still good for 1000 B/D

Cracking Facilities: 2 modified Kellogg Hander units - 500 B/D total

Lube Facilities: Udex sol duomix, Duosol solvent extraction 2 Lummus vacuum units - one for hydro product (which contained a large % lube) and one for crude bottoms.

Tankage Capacity in metric tons: 150,000(v), 150,000-250,000(x), 150,000(aa) 126,000(xx).

Damage and Demolition: Damaged in May '43 and Luber completely demolished Personnel moved away.

Remarks: Modern. Hydro unit good for 150,000 tons.

53 Petrolifera-Cooch J ... Fornovo di Taro, Italy.

Common Name of the Refinery: Fornovo

Name of Company: Societa petrolifera Italiana

Address of Company: Genoa, Italy.

Affiliations of Company: Standard Oil Co. (N.J.)
New York, New York

Location of Refinery: Near Fornovo di Taro, which is 12 miles S/ of Parma.

Capacity in metric tons per year: 50,000 based on 50,000(a), 50,000(b), 1000 L/D (v)

Distillation Facilities: Shell stills

Cracking Facilities: None

Lub. Facilities: None

Tankage Capacity in metric tons: 2,000(a), 1000(xx)

Damage and Demolition:

Remarks: Only 4 little shell stills and 6 agitators.
See Facilities report

24 Petroli — Fiorenzuola, Italy

Common Name of the Refinery: Petroli

Name of Company:

Address of Company: Naples

Affiliations of Company:

Location of Refinery: Fiorenzuola

Capacity in metric tons per year: 10,000

Distillation Facilities: Small stills

Cracking Facilities: None

Lube Facilities: None

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Operated on a small part of the local crude

55 Raff. di Augusta — Augusta, Italy

Common Name of the Refinery: Raffineria di Augusta

Name of Company:

Address of Company: Augusta, Italy

Affiliation of Company: Socony-Vacuum Oil Co.,
New York, New York

Location of Refinery: Augusta

Capacity in metric tons per year: 220,000 based on 3,000 (a), 220,000(b), 250,000(c), 260,000 B/D(x), 5000 B/D (y), 7,000 B/D (xx)

Distillation Facilities: Pipe still with atmospheric and vacuum steps.

Cracking Facilities: Dubbs cracker 2200 B/D and Houdry catalytic cracker for 4000 B/D.

Lube Facilities: Duo-Sol dewaxing (benzol acetone), Duo-Sol solvent extraction.

Lube Capacity in metric tons: 105,000(b), 100,000-13 ,000(x),180,000(xx) 172,000(y)

Damage and Demolition:

Remarks: Included some equipment from the S.M.I.T. refinery, Milazzo, which will be used with a Dubbs cracker of about 30, [illegible] B/D and a small reforming unit (Ref. Lockwood). Started operations July 1937, merging S.M.I.T. Completely rebuilt between 1939 and Nov. 1941. Tanks and pipe still salvaged.

Bari, Italy

50 AMIC

Common Name of the Refinery: Bari

Name of Company: Azienda Nazionale Idrogenazione Combustibili.

Address of Company: Milan, Italy

Affiliations of Company:

Location of Refinery: One mile W of Bari on road to Modugno

Capacity in metric tons per year: 250,000 b. on 250,000(a), 200,000(b), 240,000(c), 160,000(d), 155,000(e), 10,000 B/D (f), 5000 B/D (gg)

Distillation Facilities: Foster Wheeler pipe still unit for 1000 T/D.
Also railroad stills

Cracking Facilities: 2 tubular thermal, reforming, each for 500 T/D

Lub. Facilities: Lube dist. by Hydrogenation but no finishing facilities

Tankage Capacity in metric tons: 150,000(a), 150, 000-25,000(c), 150,000(d) 125,000 (ee), 215,000(gg), 151,000 (f)

Date and Demolition:

Remarks: Hydro unit used for 15,000 T/yr

57 Vacuum Oil Company — Bosanski Brod, Yugoslavia

Common Name of the Refinery: Brod

Name of Company: Standard-Vacuum of Croatia, Inc.

Address of Company: Bosanski-Brod

Affiliations of Company: Socony-Vacuum Oil Co., New York, New York

Location of Refinery: Bosanski Brod which is on the N bank of the Sava River about 113 miles ESE of Zagreb.

Capacity in metric tons per year: 100,000 based on 110,000 (a), 100,000 (b) 100,000 (x), 94,000 (z), 100,000 (y)

Distillation Facilities: Atmospheric pipe still and vacuum shell stills

Cracking Facilities: None

Lube Facilities: Acid

Tankage Capacity in metric tons: 80,000 333,709 bbls. (b), 33,000-41,000 (x, 44,000 (m), 33,200 (x)

Damage and Demolition:

Remarks:

Common Name of the Refinery: Caprag

Name of Company: Shell Co. of Yugoslavia, Ltd. (Jugoslavensko Shell DD)

Address of Company: Sisak

Affiliations of Company: Shell, London

Location of Refinery: Caprag, which is just across the bridge and 1½ miles from Sisak on the Sava River, about 38 miles SE of Zagreb

Capacity in metric tons per year: 100,000 based on 80,000 (a), 110,000 (b) 100,000 (c), 80,000 (dd), 12,000 (z), 100,000-120,000 (x), 100,000 (ff), 120,000 (y)

Distillation Facilities: Shell stills atmospheric and vacuum

Cracking Facilities: None

Lube Facilities: Yes

Tankage Capacity in metric tons: 43,000 M^3 (ff) 34,900 (x)

Damage and Demolition:

Remarks:

59 Ipcil

Common Name of the Refinery: Osijek

Name of Company: Ivanovich & Co. (Astra DD)

Address of Company: Osijek

Affiliations of Company:

Location of Refinery: Osijek

Capacity in metric tons per year: 20,000 (a)

Distillation Facilities: A few shell stills

Cracking Facilities: None

Lube Facilities: None

Tankage Capacity in metric tons: 2,500 (x)

Damage and Demolition:

Remarks: Built of second-hand equipment

Common Name of the Refinery: Astra Romana

Name of Company: Astra Romana, S.A.

Address of Company: Bucuresti, Rumania

Affiliations of Company: Shell Co.
London

Location of Refinery: S edge of Ploesti

Capacity in metric tons per year: 1,750,000 based on 1,950,000(a), 2,500,000(
2,000,000(c), 1,650,000(w), 1,750,000(dd),
2,000,000 43(x), 1,750,000(z), 1,200,000
4,000,000(ff)

Distillation Facilities: Two-stage tubular pipe still good for 3600 T/D maximu
also Shell still battery with pretopper good for
3000 T/D maximum

Cracking Facilities: Four tube cracker and reformer - 750,000 T/yr capacit

Luse Facilities: Vacuum rerun pipe still.
Acid treating and filtration

Tankage Capacity in metric tons: 400,000(B), 420,000(c), 147,000(x)

Damage and Demolition: Considerable damage, now repaired.

Remarks: Alkylation unit

61 Concordia "Vega" — Ploesti, Rumania

Common Name of the Refinery: Concordia "Vega"

Name of Company: Concordia Vega SA Roumaine pour l 'Industrie du Petrole

Address of Company: Bucarest, Rumania

Affiliations of Company: -

Location of Refinery: Nedge of Ploesti

Capacity in metric tons per year: 1,450,000 based on 1,460,000(a), 1,670,00(
1,450,000(q), 1,070,000(w), 1,470,000 M³(
1,300,000(z) 1,300,000(bc).

Distillation Facilities: Two pipe stills good for 670,000 T/yr and three batteries of shell stills good for 800,000 T/yr

Cracking Facilities: Winkler Koch cracker for 210,000-260,000 T/yr

Lube Facilities: Acid treating plant and vacuum rerun pipe still

Tankage Capacity in metric tons: 147,000 (x)

Damage and Demolition: Considerable damage now repaired.

Remarks:

Common Name of the Refinery: Romano-Americana

Name of Company: Romano Americana SA pour l'Industrie, le Commerce et l'Exportation du Petrole

Address of Company: Bucarest Rumania

Affiliations of Company: Standard Oil Co. (N.J.)
New York, New York

Location of Refinery: Teleajen, which is 5 miles E of Ploesti

Capacity in metric tons per year: 1,170,000 based on 1,170,000(a),1,750,000(900,000(w), 1,400,000 (x), 1,100,000(z)

Distillation Facilities: Pipe still for 15,000 B/D and 12 Shell Stills for 12,000 B/D
Also Foster Wheeler pipe still for 4,500 B/D bottoms and 6 asphalt shell still.

Cracking Facilities: Tube and Tank cracking coil for 20,000 B/D

Lube Facilities: 6 vacuum shell stills
acid agitators.

Tankage Capacity in metric tons: 110,000 based on 808,780 bbls(a) 164,000(b) 164,000(x)

Damage and Demolition: None

Remarks:

Ploesti, Rumania

(3) Unirea Orion

Common Name of the Refinery: Orion

Name of Company: Unirea Si Romana de Petrol

Address of Company: Bucuresti, Romania

Affiliations of Company: -

Location of Refinery: Adjoining and nearly surrounded by Astra Romana refinery on S edge of Ploesti

Capacity in metric tons per year: 720,000 based on 730,000(a), 550,000(q), 635,000(w), 720,000 (x), 600,000(z).

Distillation Facilities: Pipe still with two furnaces

Cracking Facilities: None(r) (Winkler Koch cracker (x)).

Lube Facilities: Ten vacuum shell stills

Tankage Capacity in metric tons: 90,000 57,000(x)

Damage and Demolition: some damage now repaired.

Remarks:- Three asphalt stills. This refinery works in connection with Speranta.

64 Unirea Speranta — Ploesti, Rumania

Common Name of the Refinery: Speranta

Name of Company: Unirea "A Romana de Petrol

Address of Company: Bucarest, Rumania

Affiliations of Company: -

Location of Refinery: "E edge of Ploesti

Capacity in metric tons per year: 440,000 based on 110,000(c),340,000(q), 420,000(w), 441,000(x), 400,000(z).

Distillation Facilities: Wcase pipe still good for 295,000 T/yr: Two batteries of shell stills good for 146,000 T/yr.

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons: 50,000 33,000(x)

Damage and Demolition: No appreciable damage

Remarks: Works in connection with Orion

Columbi, "Aquila" — Ploesti, Rumania

Common Name of the Refinery: Columbia "Aquila"

Name of Company: Bucuresti, Rumania

Affiliations of Company: -

Location of Refinery: S edge of Ploesti

Capacity in metric tons per year: 225,000 based on 215,000(a), 670,000(b), 450,000(q), 450,000(z), 540,000 BP(x), 485,000(z), 485,000 (bb).

Distillation Facilities: Winkler Koch pipe still good for 500,000 T/yr(15.0 T.

Cracking Facilities: Winkler Koch in combination with the pipe still. Two old Dubbs crackers were abandoned.

Tube Facilities:

Tankage Capacity in metric tons: 65,000 65,000(x)

Damage and Demolition: Severe damage, now repaired.

Remarks: Clay skimming unit (600 B/D) block in with new Winkler Koch equipment which was completed in 1930 in collaboration with A.F. Craig.

66 Petrol Block "Standard" — Ploesti, Rumania

Common Name of the Refinery: Petrol Block "Standard"

Name of Company: "Petrol Block" S.A. Romana

Address of Company: Bucharest, Rumania

Affiliations of Company: -

Location of Refinery: Adjoining Unirea Sperantei refinery on its S boundary. On E edge of Ploesti

Capacity in metric tons per year: 400,000 based on 165,000(a), 27[illegible](b), 40,000(c), 33[illegible](d), 330,000(e), 330,000(w), [illegible] 330,000 M3(x), 330,000(z), 330,000(bb).

Distillation Facilities: Two batteries of small stills.

Cracking Facilities: Libbs cracker good for 110,000 T/yr

Lube Facilities: Battery of vacuum stills

Tankage Capacity in metric tons: 90,000 [illegible](h).

Damage and Demolition: No appreciable damage.

Remarks: Proposed to add catalytic polymerization and hydrocracker plant but it was near delivery (d). The refinery not operated in 1942.

67 Konia

Common Name of the Refinery: Konia

Name of Company: Konia, S.A.

Address of Company: Bucharest, Rumania

Affiliation of Company:

Location of Refinery: [illegible] of Ploesti

Capacity in metric tons per year: 220,000 b. d. on 220,000(a), 3[illegible],000(b)
150,000(c), 230,000(d), 2[illegible],000 B3(x),
230,000(e)

Distillation Facilities: Lorman pipe still and two shell run stills

Cracking Facilities:

Lube Facilities:

Tankage Capacity in metric tons: 40,000 [illegible],000(x)

Damage and Demolition: No damage

Remarks:

66 Ducla Roman ---------- Ploesti

Common Name of Refinery: Ducla

Name of Company: Ducla Romano Petroleum Products

Address of Company: Ploesti

Affiliations of Company: -

Location of Refinery: 1 Km. East of Ploesti

Capacity in metric tons per year: 120,000 (a) 280,000 (a) 220,000 (b) 120,000 (?)

Distillation Facilities:

Cracking Facilities:

Lube Facilities:

Tankage Capacity in metric tons:

Piping and Demolition: No Figures.

Remarks: Ref 120,000 tons in Bulk

69 Petrolmin-Lumin. Ploesti, Rumania

Common Name of the Refinery: Petrolmin

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: In the southern part of Ploesti

Capacity in metric tons per year: 150 000 (r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity in metric tons: -

Damage and Demolition: None

Remarks: -

Common Name of the Refinery: Noris

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: In the northern part of Ploesti

Capacity in metric tons per year: 60,000(r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity in metric tons: -

Damage and Demolition: None

Remarks: -

71 Prahova - Petrolul Bucuresti ---------- Bucharest, Rumania

Common Name of the Refinery: Prahova

Name of Company: "Prahova" S.A. Romana pentur Industria si Comertul Petrolul

Address of Company: Bucuresti, Rumania

Affiliations of Company: [illegible]

Location of Refinery: In the Crivita district of Ceremus

Capacity in metric tons per year: 200,000 based on 205,000 (a), 262,000(b) 350,000(d), 150,000(f), 210,000 [illegible]3(x) 300,000(z)

Distillation Facilities: Tube pipe still used for 210,000 T/yr

Cracking Facilities

Lube Facilities:

Tankage Capacity in metric tons: 32,000 32,000(x)

Damage and Demolition: No damage.

Remarks:

72 Petrol Block — Bucharest, Rumania

Common Name of the Refinery: Petrol Block-Bucharest

Name of the Company: -

Address of Company: -

Affiliation of Company: -

Location of Refinery: Bucharest

Capacity in metric tons per year: 18,000(r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity in metric tons: -

Dismantling and Demolition: None

Remarks:

Bucuresti, Romania

ZZ Petrom (proposed)

Combination of Unirea and Steaua Romana

Name of company: "Petrom Romana" SA pour l'Industrie du Petrol

Address of company: Bucuresti, Romania

Affiliations of company: Romanian, French and British

Location of Refinery: In SE outskirts of Ploesti which is W of Ploesti

Capacity in metric tons per year: 1,500,000 based on 1,214,000(c), 1,120,000(b) 1,200,000(c), 1,400,000(w), 1,500,000(dn) 1,240,000 TPS(x), 1,500,000(

Distillation Facilities: four batteries of reduction units all stills and
1 pipe still (c) 1 atmospheric and vacuum
pipe still good for 600,000 T/yr(b) 3 reduction
batteries

Cracking Facilities: Thermal cracking good for 210,000 T/yr or Dubbs
thermal good for 60,000 T/yr

Lube Facilities: Known naphthenic

Tankage Capacity in metric tons: 200,000 197,000(x)

Pumps and Manifolds: Individual units adequate, not required.

Remarks: Two plant complex. Asphalt plant

74 Creditul Liniar — Brasi, Romania

Common name of the Refinery: Brasi

Name of Company: "Creditul Liniar" CAP pentru Les'olvarea Industrial Iniare

Address of Company: Ploiesti

Affiliations of Company: -

Location of Refinery: Brasi which is between Ploesti and Ploiesti

Capacity in metric tons per year: 1,100,000 based on 350,000 (a), 700,000 (b), 400,000 (q), 400,000(w) 500,000 M³(x), 30,000 (z)

Distillation Facilities: Brasi Combined pipe still

Cracking Facilities: Dubbs cracker good for 165,000 T/yr

Lube Facilities:

Tankage Capacity in metric tons: 61,000 71,000(x) 70,000(-)

Damage and Demolition: Main units destroyed. Not repaired

Remarks: Supposedly existent since Oct. '47.

75 Photogen-Vacuum ..... Brasov, Rumania

Common Name of the Refinery: Photogen

Name of Company: Photogen Rafinerie de Petrol, S.A.

Address of Company: Brasov, Rumania

Affiliations of Company: Socony-Vacuum Oil Co.
New York, New York

Location of Refinery: Brasov, which is North of Campina

Capacity in metric tons per year: 25,000 basic on 25,000(a), 100,000(b)
25,000 1.3(x).

Distillation Facilities: Vacuum pipe still for 250 B/D & vacuum shell stills

Cracking Facilities: None

Lube Facilities: Furfural treating unit.

Daily production in metric tons: 10,000(b)

Damage and Demolition: No damage.

Remarks:

Common Name of the Refinery: Steaua Romana-Moinesti

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: Moinesti

Capacity in metric tons per year: 60,000(r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Thruput Capacity in metric tons: -

Drums and Demolition: None

Remarks: -

77 Romano Bolzano 'Venus' — Ruginiu Strit, Rumania

Common Name of the Refinery: Venus

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: Ruginiu Strit

Capacity in metric tons per year: 40,000(r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity: -

Damage and Dereliction: None

Remarks: -

78 Vacuum Oil Co. Czechowice (Dziedzice), Poland.

Common Name of the Refinery: Dziedzice

Name of Company: Vacuum Oil Co.

Address of Company: Dziedzice

Affiliations of Company: Socony-Vacuum Oil Co.,
New York, New York

Location of Refinery: Czechowice, otherwise called Dziedzice, in the SW corner of Poland, between Cewiecim and Bielsko. Refinery one kilometer E of RR station alongside tracks leading to Bielsko.

Capacity in metric tons per year: 75,000 based on 100,000 (a), 75,000 (b), 90,000 (r), 90,000 (aa).

Distillation Facilities: Foster Wheeler two-stage pipe still for crude and a few shell stills.

Cracking Facilities: Kellogg (Cross) cracking for 60,000 T/yr (b)

Lube Facilities: Acid and clay with dewaxing facilities for 28,000 T/yr.

Tankage Capacity in metric tons: 116,000, 104,000(hh)

Damage and Demolition:

Remarks: Running Austrian crude in 1943 (y)

79 Galicja-Malopolska Judlicze, Poland

Common Name of the Refinery: Judlicze

Name of Company: Galicyjskie Karpackie Naftowe, T.A.

Address of Company:

Affiliations of Company: Chopolska

Location of Refinery: Jedlicze which is in the south central part of Poland

Capacity in metric tons per year: 75,000 based on 80,000(a), 50,000(b), 75,000(q), 42,000(z), 42,000(aa)

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities: Acid

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Running at rate of 48,000 T/yr in 1943 (y)

80 Polski-Związkow-Wielkopolska ——— Trzebinja, Poland

Common Name of the Refinery: Trzebinja

Name of Company: Polski Związkow Rafinerja Olejow Skalnych

Address of Company:

Affiliations of Company: Wielkopolska

Location of Refinery: Trzebinja, which is in the SW corner of Poland

Capacity in metric tons per year: 100,000 based on 100,000(a), 70,000(b), 100,000(q), 90,000(z).

Distillation Facilities: Shell Stills

Cracking Facilities: None

Lube Facilities: Vacuum rerunning, Acid and pressed
Solvent extraction equipment from France (y)

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Not supposed running in 1943 (y).

81 Jaslo-Gartenberg : Schreier Miuglowice (Jaslo), Poland

Common Name of th Refinery: Jaslo

Name of Company: Rafinerja Jaslo

Address of Company:

Affiliations of Company: Gartenberg & Schreier

Location of Refinery: Miuglowice, close to Jaslo, in south central Poland

Capacity in metric tons p r year: 70,000 based on 70,000(a), 90,000(q), 60,000(z)

Distillation Facilities: Pip still

Cracking Facilities: None

Lube Facilities: Vacuum rerunning, Acid and presses

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Running at rate of 44,000 T/yr in 1943 (y).

62 Polmin Drohobycz, Poland

Common Name of the Refinery: Polmin

Name of Company: Polmin State Oil Works

Address of Company:

Affiliations of Company:

Location of Refinery: Drohobycz, near S boundary of Poland

Capacity in metric tons per year: 160,000 based on 160,000(a), 120,000(b)
160,000(q), 120,000(z)

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities: Foster Wheeler Vacuum rerun pipe still, acid and presses

Tankage Capacity in metric tons:

Damage and Demolition: Badly damaged by bombing in 1941 but repaired

Remarks: Running at rate of 92,000 T/yr in 1945 (y)

-43 Galicia - Drohobycz, Poland

Common Name of the Refinery: Galicja-Drohobycz

Name of Company: Rafinerja Galicja

Address of Company:

Affiliations of Company:

Location of Refinery: Drohobycz near S boundary of Poland

Capacity in metric tons per year: 140,000 based on 100,000(a), 100,000(b), 140,000(g), 90,000(x)

Distillation Facilities: Foster Wheeler pipe still

Cracking Facilities: Unit for 50,000 T/yr (a), 100,000(b), 30,000(g)

Lube Facilities: Vacuum running, acid and presses

Tankage Capacity in metric tons:

Largest unit destillation:

Remarks: Running at rate of 84,000 T/yr in 1943 (y).

Common Name of the Refinery: Nafta-Drohobycz

Name of Company: "Nafta" Spolka Akcyjna

Address of Company:

Affiliations of Company: Malopolska

Location of Refinery: Drohobycz, near S boundary of Poland

Capacity in metric tons per year: 60,000 based on 60,000 (a), 60,000 (b), 60,000 (c), 30,000 (z)

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities: Acid treating and presses

Tankage Capacity in metric tons: Acid treating and presses

Damage and Demolition:

Remarks: Not running in 1945 (y)

Common Name of the Refinery: Glinik-Mariaopolski

Name of Company: Rafinerja Glinik-Mariaopolski

Address of Company:

Affiliations of Company: Malopolska

Location of Refinery: This town is near Gorlice

Capacity in metric tons per year: 80,000 based on 90,000(a), 45,000(b), 80,000(c), 60,000(z).

Distillation Facilities: Shell stills

Cracking Facilities: One unit for 20,000 T/yr (a), 20(b), 6(z).

Lube Facilities: Vacuum redistillation, acid and presses

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Running at rate of 50,000 T/yr in 1943.

Common Name of the Refinery: Gazy Ziemne

Name of Company: Rafinerja Gazow Ziemnych

Address of Company: Lwow

Affiliations of Company:

Location of Refinery: Zniesienie, near Lwow

Capacity in metric tons per year: 40,000 based on 40,000( ), 42,000(b), 60,000(c)

Distillation Facilities: Foster Wheeler pipe still with atmospheric and vacuum stages.

Cracking Facilities: None

Lube Facilities: Acid treating and presses.

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Running at rate of 52,000 T/yr in 1943(y).

Common Name of the Refinery: Linnow

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: Linnow

Capacity in metric tons per year: 100,000(r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity in metric tons: -

Dates and Demolition: None

Remarks:

Common Name of the Refinery: Ranto-Ustrzyki Dolne

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: Ustrzyki Dolne

Capacity in metric tons per year: 50,000(r)

Distillation Facilities:

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity in metric tons: -

Dorage and Demolition: None

Remarks: -

Common Name of Refinery: Stwiarski

Name of Company: -

Address of Company: -

Affiliations of Company: -

Location of Refinery: Krosno

Capacity in metric tons per year: 20,000(r)

Distillation Facilities: -

Cracking Facilities: -

Lube Facilities: -

Tankage Capacity in metric tons: -

Damage and Demolition: None

Remarks: -

30 Eesti Pol-vkivi Toostus Kohtla, Estonia

Common Name of the Refinery: Pol-vkivi Toostus (Turk III)

Name of Company: National Oil Shale Industry-A/S EK Pol-vkivi Toostus

Address of Company: Kohtla-Jarv

Affiliations of Company:

Location of Refinery: Kohtla, in NE corner of Estonia

Capacity in metric tons per year: 40,000 based on 12,000(a), 12,000(b), 40,000(y), 50,000(y)

Distillation Facilities:

Cracking Facilities: Unit for 6,000 T/yr (b)

Lube Facilities:

Tankage capacity in metric tons:

Dismantled and Demolition:

Remarks: Producing at rate of 42,000 in 1965 (y)

91 New Consolidated Goldfields Kohtla, Estonia

Common Name of the Refinery: New Consolidated Goldfields (Work V)

Name of Company: New Consolidated Goldfields, Ltd.

Address of Company: Kohtla

Affiliations of Company:

Location of Refinery: Kohtla, in NE corner of Estonia

Capacity in metric tons per year: 12,000 based on 6,000(a), 12,000(b)
10,000-12,000(y)

Distillation Facilities:

Cracking Facilities: Unit for 5,000 T/yr (b)

Lube Facilities:

Tankage Capacity in metric tons:

Dismantling and Demolition:

Remarks:

92 Eesti Kivioli — Kivioli, Estonia

Common Name of the Refinery: Kivioli (Work I)

Name of Company: Estonian Shale Oil Co. A/S Kivioli

Address of Company: Kivioli

Affiliations of Company:

Location of Refinery: Kivioli, in extreme NE corner of Estonia

Capacity in metric tons per year: 30,000 based on 24,000(a), 36,000(b) 30,000(y).

Distillation Facilities:

Cracking Facilities: Unit for 17,000 T/yr (h)

Lube Facilities:

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks: Producing at rate of 38,700 in 1943 (y) Letters and maps in file

93 Eestima Olikonsortium Sillamae, Estonia

Common Name of the Refinery: Olikonsortium (Work IV)

Name of Company: Eestimaa, Olikonsortium

Address of Company: Sillamae

Affiliations of Company:

Location of Refinery: Sillamae near Vaivari in NE part of Estonia, W of Kohtla

Capacity in metric tons per year: 13,000 subject to increases

Distillation Facilities:

Cracking Facilities:

Lube Facilities:

Tankage Capacity in metric tons:

Dredge and Demolition:

Remarks: Started producing in 1943

Common Name of the Refinery: Raffinerie du Nord

Name of Company: Raffinerie de Petrole du Nord

Address of Company: 20, rue Troyon, Paris, or Caisse 12, St. Pol sur mer, Nord

Affiliations of Company: Compagnie Financiere Belge des Petroles, through Petrofina Francaise, S.A.

Location of Refinery:

Capacity in metric tons per year: 450,000 is accepted. The total run in 1936 was only 396,000. Other figures are: 450,000 (a), 500,000 (b), 350,000 (q), 410,000 (z).

Distillation Facilities: Topping unit rated at 1100 T/D crude and a vacuum unit rated at 400 T/D aspahlt. Also F. W. naptha rerun still

Cracking Facilities: Two Wolf-Carburol crackers for gas oil and a Winkler Koch cracker for residuum.

Lube Facilities: A Lummus designed benzol-acetone dewaxer. Also acid treating plant for lubes.

Tankage Capacity in metric tons: 150,000 accepted since Rev. Petrolif. showed 176,700 cubic meters plus working tankage. Other figures 140,000 (aa) and 110,000 (y)

Damage and Demolition: Reported completely destroyed. Confirmed by photos.

Remarks: It is assumed that this plant has passed into history and that any future refinery rising from its ashes would bear it no resemblance. Reconnaissance in July '43 shows it to have been partially dismantled after the severe bombing damage of 1941.

Common Name of the Refinery: Courcheletties

Name of Company: Societe Generale des Huiles de Petrole

Address of Company: 21, rue de la Bienfaisance, Paris (VIII)

Affiliations of Company: Anglo-Persian Oil Co., Ltd.

Location of Refinery: Courcheletties, near Douai. The refinery is on the canal at Courcheletties.

Capacity in metric tons per year: 300,000 accepted since Kellogg supplied the equipment, rated at 6000 B/D of crude. Other figures are: 320,000 (a), 250,000 (b), 240,000 (q), 300,000 (z).

Distillation Facilities: Eleven shell stills, seven under vacuum, plus a Kellogg atmospheric pipe still. A naphtha steam still, etc. Alco designed a vacuum pipe still for 1500 B/D reduced crude.

Cracking Facilities: A Kellogg cracking coil, rated 2000 B/D

Lube Facilities: Edeleanu (SO_2-benzol) lube treating plant (55 T/D) Sharples and filter press dewaxing units; clay treating plant. Alco designed a clay treater for 1000 B/D lube distillate.

Tankage Capacity in metric tons: 75,000 accepted although Rev. Petrol. shows 100,000. Another figure is 65,000 (aa).

Damage and Demolition: Tankage destroyed, equipment reported partially dismantled.

Remarks:

96 Cie. Francaise de Raff. Gonfreville (Le Havre), France

Common Name of the Refinery: Gonfreville

Name of Company: Compagnie Francaise de Raffinage

Address of Company: 9, Square de Messine, Paris (VIII).

Affiliations of Company:

Location of Refinery: Gonfreville l'Orcher on the Tancarville canal about 5 miles E. of Le Havre.

Capacity in metric tons per year: 1,600,000 accepted based on 30,000 B/D installed crude capacity. Other figures 1,600,000 (a), 1,800,000 (b), 1,200,000 (q), 1,500,000 (z).

Distillation Facilities: 20,000 B/D F.F. topper and stabilizer; 15,000 B/D Kellogg pipe still; 2-7500 B/D McKee pipe stills; naphtha rerun, etc.

Cracking Facilities: Three Kellogg cracking or reforming units with stabilizers.

Lube Facilities: Edeleanu plant built for kerosine but available for lubes with changes. Wax plant to handle 250 T/D of paraffine distillate.

Tankage Capacity in metric tons: 400,000 according to (aa)

Damage and Demolition: Tanks destroyed in large part. Some crude distillation equipment reported dismantled and removed.

Remarks: This is the largest plant in France. Photos available. Dutch prospectus of the company in 1939 showed 1,520,144 tons of crude treated in 1938.

Common Name of the Refinery: Port Jerome

Name of Company: Standard Française des Petroles

Address of Company: 22 Avenue des Champs Elysees, Paris

Affiliations of Company: Standard Oil Co. (N.J.) Atlantic Refining Co.
Gulf Oil Corp.

Location of Refinery: On right bank of the Seine River at a spot called Port Jerome a few miles from Notre Dame de Gravenchon (S.I.) and directly across the river from Quillebeuf. The refinery is contiguous to the smaller Vacuum Oil refinery.

Capacity in metric tons per year: 1,250,000 accepted based on records of crude thruput. 1,300,000 tons handled in 1939. Other figures 1,250,000(a), 1,260,000(b), 1,100,000(z).

Distillation Facilities: Two-2-stage pipe stills @ 10,000 B/D each. Lube rerun pipe still. Naphtha rerun still. Asphalt shell stills.

Cracking Facilities: Three 1000/ Bellows units @4-15,000 B/D each.

Lube Facilities: Phenol solvent extraction plant for about 3000 B/D. Solvent dewaxing plant (2 Nobel centrifuges) for about 1000 B/D. Clay treating plant for about 1900 B/D.

Tankage Capacity in metric tons: 240,000 accepted. Other figures 240,000 (a), 300,000(aa), 489,000(ee), 307,000(gg)

Damage and Demolition: Tanks destroyed completely. Some dismantling. Two cracking coils removed. (Intelligence says all three)

Remarks: This had the second largest crude capacity, and was one of the most complete refineries in France. Worked in conjunction with the white oil refinery upstream at La Mailleraye.

Common Name of the refinery: Vacuum

Name of Company: Raffineries de la Vacuum Oil Co. S.a.F.

Address of Company: 46, rue de Courcelles, Paris

Affiliation of Company: Socony Vacuum Oil Co. New York

Location of Refinery: On right bank of Seine river near village of Notre Dame de Gravenchon (s.I.) and across the river from Philleheuf (Eure). The refinery is contiguous and to the East of the larger Standard refinery of Port Jerome.

Capacity in metric tons per year: 300,000 accepted. Other figures 210,000 (a), 300,000 (b), 250,000 (s).

Distillation Facilities: Two-2stage F. ; pipe stills of 3000 B/D. each.

Cracking Facilities: Kellog unit for 3,500 B/D.

Lube Facilities: Duosol solvent extraction unit for 960 B/D.

Tankage Capacity in metric tons: 80,000 according to (aa), 199,000 (ee)

Damage and Demolition: Tanks destroyed except for 2,000 M^3 capacity. Compounding and barrelling plant destroyed. Some dismantling.

Remarks: This refinery lies against the Standard refinery in a great expance of open fields. The two units are separated only by a wire fence and from the air would look like a single plant except for the separate docks.

99 Standard Francaise — La Mailleraye, France

Common Name of the Refinery: La Mailleraye

Name of Company: Standard Francaise des Petroles

Address of Company: 30 avenue des Champs Elysees, Paris

Affiliation of Company: Standard Oil Co. (N.J.)
Atlantic Refining Co.
Gulf Oil Corporation.

Location of Refinery: On right bank of Seine River at Le Trait downriver from Rouen about 15 miles.

Capacity in metric tons per year: 30,000(?) tons crude.

Distillation Facilities: None

Cracking Facilities: None

Lube Facilities: White oil treating facilities.

Lube Capacity in metric tons: 30,000 (?)

Damage and Demolition: Damage destroyed completely.

Remarks: This is simply a white oil plant working on distillates from Jersey.

Common Name of the Refinery: Petit Couronne

Name of Company: Jupiter S.A. des Petroles

Address of Company: 42, rue Washington, Paris (VIII)

Affiliations of Company: Shell Oil Co.

Location of Refinery: Petit Couronne is six miles down stream from Rouen on the left bank of the Seine.

Capacity in metric tons per year: 750,000 is the figure given by (a) (b) and (c). Other figures are 700,000 (h) and 800,000 (z).

Distillation Facilities: Two topping units good for 1300-1500 T/D each. Naphtha rerun, kero and asphalt vacuum stills, etc.

Cracking Facilities: Unit's cracker for 700 T/D and reformer for 300 T/D. Cracking and reforming capacity 300,000 T/yr (ff).

Lube Facilities: Old sulfuric clay treating units for 125 T/D and furfural solvent extraction unit for 100 T/D.

Tankage Capacity in metric tons: 210,000 the accepted figure, may be low. Other figures are 305 M^3 (c), 230 M^3 (h), 300 (z), 417 (ee), 335 M^3 (ff).

Damage and Demolition: Plant destroyed in large part. Some dismantling reported.

Remarks:

Common Name of the Refinery: Consommateurs

Name of Company: Les Consommateurs de Petrole

Address of Company: 9, Avenue Percier, Paris (VIII)

Affiliations of Company: Independent

Location of Refinery: On N. bank of Loire river in the outskirts of the village of Donges which is upstream about 10 miles from St. Nazaire. Alongside the larger Pechelbronn-Ouest refinery.

Capacity in metric tons per year: 130,000 accepted. Other figures are 130,000(c), 175,000(b), 100,000(q), 140,000(z).

Distillation Facilities: Two Foster Wheeler pipe stills for 1500 B/D each.

Cracking Facilities: None

Lube Facilities: R.R. grease plant.

Tankage Capacity in metric tons: 45,000 accepted although Rev. Petrolif. shows 55,000. Other figures: 45,000(aa), 50,000(ae).

Damage and Demolition: Bombed in 1940.

Remarks: This refinery and its tankage is so close to the corresponding equipment of the Pechelbronn-Ouest refinery that they would appear to merge into one unit.

102 Pechelbronn Ouest. Donges (St. Nazaire), France.

Common Name of the Refinery: Pechelbronn Ouest

Name of Company: Pechelbronn-Ouest S.A.

Address of Company: 4, rue Roussel, Paris.

Affiliations of Company: "Pechelbronn" S.A. d'Exploitations Minières.

Location of Refinery: On N. bank of Loire river in the outskirts of the village of Donges which is upstream about 10 miles from St. Nazaire. Alongside the smaller Consortiurs refinery.

Capacity in metric tons per year: 250,000 accepted. Other figures: 220,000 250,000(b), 240,000(q), 180,000(z). The builder, Winkler-Koch, states the actual crude capacity at 4500 B/D.

Distillation Facilities: Combined Skimming, cracking and reforming Winkler-Koch unit.

Cracking Facilities: Two heating coils in about unit, one for light and other for heavy gas oil.

Lube Facilities: None

Tankage Capacity in metric tons: 60,000 according to (aa), 54(ee).

Damage and Demolition: Bombed in 1940.

Remarks: Completely new refinery, construction starting in 1934. See letter from Winkler-Koch.

Common Name of the Refinery: Pauillac

Name of Company: Jupiter Cie des Petroles

Address of Company: 42, rue Washington, Paris (VIII)

Affiliations of Company: Shell Oil Co.

Location of Refinery: On the left bank of the Gironde river about 10 miles downstream from the confluence of the Garonne and Dordogne rivers. About 30 miles NW of Bordeaux, between the villages of Mousset and Trompeloup at 2 miles distance from Pauillac.

Capacity in metric tons per year: 500,000 used, as given by (a), (b) and (h). Other figures: 600,000(c), 550,000 600,000(ff).

Distillation Facilities: Hulse crude pipe still for 1800 B/D.

Cracking Facilities: Dubb's two stage cracker for 600 T/D
reformer for 300 T/D
Cracking and reforming capacity 300,000 T/yr(ff)

Lube Facilities: None

Tankage Capacity in metric tons: 120,000 is the figure used and may be low. Other figures: 280,000(c), 200,000(a), 255,000 M^3 (h), 215,000(ee), 220,000 M^3 (ff

Damage and Demolition: Part of tankage destroyed

Remarks: This is a simple refinery without facilities for numerous product other than gasolin , gas oil and fuel oil.

Common Name of the Refinery: Bec d'Ambes

Name of Company: Societe des Raffineries de Petrole de la Gironde

Address of Company: Paris.

Affiliations of Company: Texas Company, New York

Location of Refinery: Downstream end : bout 10 miles from Bordeaux on th point of land at the confluence of the Gironde and Dordogne rivers.

Capacity in metric tons per year: 750,000 based on 550,000( ), 315,000(b) 250,000(c).

Distillation Facilities: Kellogg topping unit, 6500 B/D

Cracking Facilities: Kellogg and Dubbs cracking units, 2500 B/D and 2000 B/D respectively.

Lube Facilities: None

Tankage Capacity in metric tons: 120,000 reported. Rev. Petrol. shows 160,000M³, other figure 115,000(c), 144,000(c).

Damage and Demolition: Considerable portion of tankage destroyed by bombi

Remarks: This refinery is confined to gasoline, gas oil and fuel oil manufacture. Only 36,500 M³ tankage left of original 160,000M³(y), besides 4,800M³ lube storage of original 10,000M³.

105 C.I.P. Socony-Vacuum — Frontignan (Sete), France

Common Name of the Refinery: Frontignan

Name of Company: Compagnie Industrielle des Petroles

Address of Company: 54, rue de Londres, Paris

Affiliations of Company: Socony-Vacuum Oil Co., New York

Location of Refinery: Near Frontignan, 4 miles N.E. of Sete. The refinery is just S. of Frontignan and along the W. side of the railroad tracks, partly on filled ground.

Capacity in metric tons per year: 300,000. Other figures 200,000 (a), 300,000 (b), 250,000 (x)

Distillation Facilities: F.W. pipe still for 6000 B/D. Kellogg rerun still for 1800 B/D

Cracking Facilities: 3500 B/D Kellogg cracker and reformer

Lube Facilities: Dewaxing facilities transferred from Gravenchon

Tankage Capacity in metric tons: 106,000 as reported by Soc. Vac. Other figures: 100,000 (x), 70,000 (aa), 103,000 (ee), 118,000 (hh)

Damage and Demolition: None

Remarks: Simple skimming and cracking plant. Now supposed to be running 1300 T/mo. of shale oil distillates from Autun (y).

106 Compagnie Francais de Raff. Martigues (Marseille), France

Common Name of the Refinery: Martigues

Name of Company: Compagnie Francaise de Raffinage

Address of Company: 9, Square de Messine, Paris (VIII)

Affiliations of Company: French Government.

Location of Refinery: Near Martigues which is 25 miles W N W of Marseilles on the south shore of the Etang de Berre. The refinery is actually at La Mede, 3 miles E. of Martigues and just N. of the Highway.

Capacity in metric tons per year: 650,000 accepted based on equipment manufacturers statement. Other figures: 600,000(·), 1000,000(b), 650,000(q), c-1200,000(x), 900,000(z).

Distillation Facilities: 7,000 B/D P.W. topper. 800 T/D McKee crude pipe still. 500 T/D McKee rerun unit.

Cracking Facilities: 12,000 B/D Kellogg cracker and reformer. 2,800 B/D reformer.

Lube Facilities: None

Tankage Capacity in metric tons: 150,000 was the figure in 1937. Other figures: 250(x), 300 (AA), 171 (··).

Damage and Demolition: Very slight damage by bombing.

Remarks:

1.7 Raffinerie de Berre — Berre (Marseille), France.

Common Name of the Refinery: Berre

Name of Company: Compagnie des Produits Chimiques et Raffineries de Berre.

Address of Company: 76, rue de Prony, Paris (XVII)

Affiliations of Company: Societes des Manufactures de Glace et Produits Chimiques de Saint Gobain, Chauny et Cirey.
Societe des Petroles Tonolino.

Location of Refinery: Near Berre which is 20 miles NW of Marseilles on the north shore of the Etang de Berre. The refinery is about 1½ miles N.E. of the town of Berre, on the S. side of the road 39.

Capacity in metric tons per year: 550,000 based on 580,000(a), 550,000(b). 550,000(q), 600,000(x), 500,000(z).

Distillation Facilities: Braun Konigsfeld pipe still

Cracking Facilities: Kellogg cracker for 7500 B/D.
Houdry unit partly completed in 1942.

Lube Facilities: Acid treating and dewaxing.

Tankage Capacity in metric tons: 170,000 based on 172,000, 250,000(x), 170,000(aa), 150,000(cc).

Dockage and Demolition: None.

Remarks: Plot composed of most modern type equipment. Partly dismantled for shipment East.

Common Name of the Refinery: L'Avera

Name of Company: Société Générale des Huiles de Pétrole

Address of Company: 19, rue de la Bienfaisance.

Affiliations of Company: Anglo-Iranian Oil Co., Ltd. London

Location of Refinery: L'Avera, near Berre, which is 20 miles NW of Marseilles on north shore of the Etang de Berre. The refinery is on the N. side of the canal just W. of where the railroad crosses it, halfway between Martigues and Port de Bouc.

Capacity in metric tons per year: 400,000 probably low based on 470,000(a), 400,000(b), 380,000(q), 400,000(x), 550,000(z).

Distillation Facilities: 12,500 B/D Kellogg topper and primary cracker. 2100 B/D 2-stage rerun unit. Also built vacuum pipe still for 4500 B/D reduced crude.

Cracking Facilities: As above plus 1500 B/D high pressure Kellogg cracker. and 4000 B/D Kellogg reformer. and 1500 B/D catalytic reformer.

Lube Facilities: None

Tankage Capacity in metric tons: 150,000 in 1937. Other figures: 222,000(x), 130,000(r), 211,000(s).

Dredging and Demolition: None

Remarks: Dutch prospectus showed 458,254 tons of crude treated in 1936.

Common Name of the Refinery: Autun

Name of Company: Societe Lyonnaise des Schistes Bitumineux.

Address of Company: 3, rue de Messine, Paris (VIII)

Affiliations of Company: Independent

Location of Refinery: At Les Thelots, 5 miles N of Autun (Saone et Loire) and not far from the steel works of Le Creusot. The refinery in two parts: retorts in the south, oil refinery in north part.

Capacity in metric tons per year: 15,000 is the figure used, based on the limited amount of shale produced, although Belge claims to have installed a shale oil pipe still good for 350 T/D. Other figure: 40,000(z),

Distillation Facilities: Belge pipe still for 350 T/D to produce cracked gasoline from shale oil.

Cracking Facilities: 2000 B/D Dubbs heater installed by Foster-Wheeler.

Lube Facilities:

Tankage Capacity in metric tons: 11,000(y)

Damage and Demolition: None

Remarks: There are three batteries of 40 Pumpherston retorts each, handling about 1000 T/yr each of shale running 8% oil, or 10,000 T/yr oil.

Common Name of the Refinery: Pechelbronn

Name of Company: "Pechelbronn" S... d'Exploitations Minieres.

Address of Company: 32, Allee de la Robertsau, Strasbourg

Affiliations of Company: Independent. Has control of P.L.N., Brest, Petrolier, Soc. des Huiles Antar, etc.

Location of Refinery: Pechelbronn (Bas Rhin) near Merkwiller.

Capacity in metric tons per year: 130,000 based on 130,000(a), 135,000(b), 110,000(q), 130,000(z).

Distillation Facilities: Eight shell stills, 6 under vacuum, plus coke still for bottoms and vacuum lube rerun stills.

Cracking Facilities: Wolf Carburol cracker for 35,000 T/yr.

Lube Facilities: Acid and clay treating. Solvent centrifuge dewaxing (Sharples) and 32 filter presses.

Tankage Capacity in metric tons: 60,000. Other figures 80,000(a), 80,000(b)

Damage and Demolition: None

Remarks: Drilling is mostly around Holschloch. The plant is 3 sections: Lampertschloch, containing the cracking, crude dehydration, naphtha distillation and crude oil storage; Merkwiller, containing the power plant, lube distillation, dewaxing and intermediate tankage; Katzenhausen, containing the crude distillation and covered tanks.

111 Rodeventza — Antwerp-Kiel, Belgium

Common Name of the Refinery: Rodeventza

Name of Company: "Rodeventza" S.A. Belge pour le Raffinage de Petrole

Address of Company: Antwerp-Kiel

Affiliations of Company: Rumanian

Location of Refinery: Antwerp-Kiel on the Scheldt river

Capacity in metric tons per year: 130,000, 130,000 (a), 150,000 (b), 140,000 (q), 130,000 (s), 130,000 (z).

Distillation Facilities: Foster-Wheeler pipe still

Cracking Facilities: None

Lube Facilities: No Lubes

Tankage Capacity in metric tons: 46,000 (s)

Damage and Demolition: Partly destroyed, tanks damaged.

Remarks:

Common Name of the Refinery: Atlas

Name of Company: Compagnie Industrielle "Atlas" S...

Address of Company: Antwerp

Affiliations of Company: SOCONJ

Location of Refinery: Antwerp-Hoboken

Capacity in metric tons per year: 100,000, 100,000 (a), 75,000 (b), 100,000 (z)

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons: 15,000

Damage and Demolition: May have been damaged

Remarks:

113 Raf. & Dist. Aversoises "Radian" ------ Antwerp-Kiel, Belgium

Common Name of the Refinery: Radian

Name of Company: Raffineries et Distilleries Aversoises S.A. "Radian".

Address of Company: Antwerp

Affiliations of Company:

Location of Refinery: Antwerp-Kiel

Capacity in metric tons per year: 50,000, 50,000 (a), 100,000 (s), 70,000 (c) 30,000 (s), 50,000 (z).

Distillation Facilities: Pipe still

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons: 200,000 (s)

Damage and Demolition:

Remarks: Connected with D and F bulk station

114 Belgo Petroleum — Ghent-Terdonck, Belgium

Common Name of the Refinery: Belgo Petroleum

Name of Company: Belgo Petroleum S.A.

Address of Company: Brussels

Affiliations of Company:

Location of Refinery: Terdonck

Capacity in metric tons per year: 65,000, 100,000 (a), 60,000 (b), 50,000 (c)

Distillation Facilities: None

Cracking Facilities: Jenkins unit for about 100,000 T/yr.

Lube Facilities:

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks:

115 Lianosoff-Koff. Belge — Antwerp, Belgium

Common Name of the Refinery: Raffinerie Belge

Name of Company: Raffinerie Belge de Petroles

Address of Company: Antwerp

Affiliations of Company: British Lianosoff Co.

Location of Refinery: Antwerp

Capacity in metric tons per year: 130,000, 130,000 (s), 150,000 (z)

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons: 70,000 (s)

Damage and Demolition:

Remarks: Asphalt refinery

Common Name of the Refinery: Belgian Shell

Name of Company: Belgian Shell Co.

Address of Company: Ghent

Location of Refinery: Ghent-Wondelgem

Capacity in metric tons per year: 130,000, 130,000(a), 130,000(b), 130,000(c), 60,000(s), 65,000(z), 85,000(dd), 130,000 (ff)

Distillation Facilities: Shell stills
Vacuum pipe still

Cracking Facilities:

Lube Facilities: Grease manufacturing facilities

Tankage Capacity in metric tons: 46,000(c) and (ff)

Storage and Demolition:

Remarks: Equipment brought in from Rouen refinery for original construction.
Supposed to supply U-boats on French coast.

Common Name of the Refinery: Belgian Cracking

Name of Company: Belgian Cracking Co. S.A.

Address of Company: Brussels

Affiliations of Company: --

Location of Refinery: Ghent-Langerbrugge

Capacity in metric tons per year: 20,000; 20,000(a), 25,000(b), 60,000(q), 20,000(z).

Distillation Facilities: None

Cracking Facilities: Dubbs unit for about 17,000 T/yr.

Lube Facilities:

Tankage Capacity in metric tons:

Damage and Demolition:

Remarks:

Common Name of the Refinery: Batavfsche-Pernis

Name of Company: NV de Batavfsche Petroleum Maatschappij

Address of Company: The Hague

Affiliations of Company: Shell

Location of Refinery: Pernis, about 7 miles "W" of Rotterdam

Capacity in metric tons per year: 1,100,000; 900,000(a), 750,000(b), 1,100(c), 660,000(z), 660,000(dd), 1100(ff).

Distillation Facilities: Pipe still, atmospheric and vacuum

Cracking Facilities: Dubbs units for 550,000 T/yr. (ff)

Lube Facilities:

Tankage Capacity in metric tons: 800,000, 698,000(e), 567 M^3(ff)

Damage and Demolition: Partly destroyed

Remarks: Lummus cracking furnace. Iso-octane facilities. Asphalt plant. Repaired to some extent after Allied raids. Regenerating used lubes at about 400 T/mo in 1943

119 Vlissingsche Asphalt — Flushing, Netherlands

Common Name of the Refinery: Flushing

Name of Company: N.V. Vlissingsche Mineraliën en Asphalt Raffinaderij

Address of Company: Flushing

Affiliations of Company:

Location of Refinery: Flushing

Capacity in metric tons per year: 40,000; 12-56,000( )

Distillation Facilities: Shell stills

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons: 80,000

Damage and Demolition: May have been destroyed

Remarks: Good aerial photos, June '43.

Common Name of the Refinery: Vallo

Name of Company: Norsk Amerikansk Mineraloljo compani A.S.

Address of Company: Vallo

Affiliations of Company: SOCONY

Location of Refinery: Vallo

Capacity in metric tons per year: 50,000; 50,000(a), 43,000(b), 41,000(z).

Distillation Facilities: Shell stills, atmospheric and vacuum

Cracking Facilities: None

Lube Facilities: Lube and grease making equipment

Tankage Capacity in metric tons: 25,000

Damage and Demolition: Has been damaged.

Remarks: Asphalt manufacturing facilities:

121 Kalundborg-SOCONY — Kalundborg, Denmark

Common Name of the Refinery: Kalundborg

Name of Company: A/S Olieraffinaderi

Address of Company: Kalundborg, Denmark

Affiliations of Company: SOCONY

Location of Refinery: Kalundborg

Capacity in metric tons per year: 80,000, 90,000(a), 14,000(b),

Distillation Facilities: Steam still

Cracking Facilities: None

Lube Facilities:

Tankage Capacity in metric tons: 6900 (c)

Pollution and Pollution:

Remarks: