

WEEKLY SURVEY OF AXIS EUROPE
OIL PRODUCTION

No. 25 - 29th December, 1944

NOTE: This survey summarizes the conclusions of the Working Committee (Oil Production) of the Combined Strategic Targets Committee upon the current status of Axis oil production. The assessments are based on ground intelligence and deductions from air cover; the forecast of future output takes into account the enemy's potential repair performance, but makes no allowance for additional damage in further attacks. The present report includes the known results of all attacks up to and including December 25th.

I. ATTACKS AND RECONNAISSANCE.

In the following list of attacks that were made since our last report, it will be noted that the U.S. 15th Air Force has continued its attacks on the Silesian synthetic plants and BRUX, while R.A.F. Bomber Command have carried out a successful attack upon POLITZ. A further achievement during the past week has been the success of the Photo Reconnaissance Units in obtaining photographs of all plants that are of major importance.

<u>Date</u>	<u>Location</u>	<u>Company</u>
18.12	BLECHHAMMER SOUTH	I.G. Farben
	BLECHHAMMER NORTH	I.G. Farben
	BESCHOWITZ (ODERVAL)	Schaffgotsch Benzin
	OSWIECIM	I.G. Farben
	VIENNA FLORIDSDOF	Shell
	MORAVSKA OSTRAVA	Privozer Mineral
19.12	BLECHHAMMER SOUTH	I.G. Farben
	BLECHHAMMER NORTH	I.G. Farben
	MORAVSKA OSTRAVA	Privozer Mineral
20.12	BRUX	Brabag
21.12	POLITZ	Hydrierwerke Politz
25.12	BRUX	Brabag

II. EFFECTS ON PRODUCTION.

Revised estimates of monthly production are given in Table I and are summarized below. The December figures are not now likely to undergo any substantial revision.

	<u>Metric tons per month</u>
Pre-rail normal output of finished products	1,344,000 (100%)
Estimated production in 1944	
September	311,000 (23%)
October	396,000 (29%)
November	432,000 (32%)
December	409,000 (30%)
1945	
January (Maximum)	502,000 (37%)

/Revised estimates

Revised estimates of the output of the principal refined products in December and January are given below:-

	Estimated output December	January
Gasoline	27%	33%
Gasoline	14%	16%
Distillate Oils	42%	40%
Fuel Oils	37%	47%
Base Oils	21%	24%
TOTAL	30%	37%

III. GENERAL SUPPLY SITUATION IN MOTOR & AVIATION FUEL.

During the months of October and November, it is probable that the intensity of the fronts enabled the combined Army and G.A.F. gasoline consumption to be kept below 100,000 tons per month. As production was running at 150,000/170,000 tons per month, it is probable that a tactical reserve was accumulated, and this may have amounted to 50,000/100,000 tons. With the opening of the counter-offensive in Belgium the rate of Army and G.A.F. consumption may have increased to 120,000 tons per month or more. Concurrently gasoline output in December fell to an estimated figure of 145,000 tons and allowing for the damage inflicted in the latter part of the month is probably not now running at a rate of more than 125,000 tons per month. Of this total, as much as 75,000 tons per month is thought to emanate from six synthetic plants.

IV. CONDITION OF THE PRODUCING PLANTS.

(a) Synthetic Plants.

The output from synthetic plants has fallen from 170,000 tons in November to 160,000 tons in December. The current rate of synthetic output, however, is less than 100,000 tons per month and is being obtained almost wholly from six plants (SCHOLVEN, ZEITZ, BOMLEN, LUTZENDORF, MAGNENBURG & EISENBERG). Even allowing for the maximum potential recovery of damaged plants and in the absence of further successful attacks production in January is not likely to exceed 210,000 tons. Having regard to the severely damaged condition of some of the inactive plants, therefore, synthetic oil production as a whole is in a more fragile condition than ever before.

The active Bergius plants comprise the following:

MAGNENBURG	75%
BOMLEN	75%
LUTZENDORF	75%
ZEITZ	50%
SCHOLVEN	25%

The old section of SCHOLVEN had resumed activity and the output of this part of the plant is estimated at 50% capacity; the new section may have been abandoned.

Cover of EISENBERG shows substantial damage to two of the three injector-houses as well as in other sections of the plant. This damage was probably inflicted in the attacks of December 6 and 7 and the plant has probably been inactive since. Good progress has however been made with repairs and production may be resumed early

/in

in January. But it is thought that the nature of the damage will prevent operation at more than 25% of capacity for many weeks.

ERUX is inactive, probably as a result of the attack of December 20th. Damage is not severe and should not prevent resumption in two weeks. However, the plant was again attacked on December 25th and further damage may have been inflicted.

FOLITZ was put out of action by the attack of December 21, the principal damage being to the main boiler house. Although steam collection was down from many points in the plant when covered a few days after the attack, this is thought to have been in connection with the testing of pipe-lines for fractures and there was no sign of productive activity. The duration of stoppage may not, however, exceed two weeks.

Preliminary reports of cover of HENCKELMANN SOUTH, indicate minor additional damage and no productive activity. Since the plant was inactive when covered at the beginning of December and was attacked again on December 17, 18 and 19, it is unlikely to have been in production at all during December.

Damage to HENCKELMANN NORTH resulting from the attacks of December 17, 18 and 19 is reported as heavy. Subject to further information it seems unlikely that this plant, which was active during the first part of December, will produce again for some weeks.

The Bergius plant at LUDWIGSHAFEN remains inoperable. The synthetic lubricant plant in the OPAU section received slight damage in the attack of December 16 but is not likely to be stopped for more than a few days. The refinery which is situated between the LUDWIGSHAFEN and OPAU sections appears to be intact and it is now seen that this incorporates an iso-octane plant; if ground reports on the subject are to be credited, this plant is an important source of dope for G.A.F. aviation spirit.

NORDSTERN remains inactive and there is no external evidence of repair.

Similarly BOTTROP-ALLENHAIN remains in an inoperable condition and will be out of action for many weeks, if not months.

At WESSELING, the dismantling of the plant continues and there is no sign of productive activity.

OSWILDM received scattered damage in the attack of December 18; it is not yet clear whether it was in production at the time.

In regard to the Fischer-Tropsch plants, the three in Central & Eastern Germany are on a high level of production, with RUHLAND and LUDWIGSHAFEN both operating at 75%; DESCHOWITZ (GERMAN) appears to have suffered no significant fresh damage in the attacks of December 17 and 18 and is reported to have been still active on December 21. It may well be working nearly at full capacity. The position in regard to the remaining plants may be summarised as follows:-

HOMBURG and STEINRADE-ROBERT remain inactive and show no signs of repair.

CASTROP RAUXEL, WERNE NICKEL and DORMUND are under repair but progress is slow and there is no immediate prospect of the resumption of production.

/s/ KAMEN

At KAMEN repairs to the damage inflicted in September have proceeded very slowly and the plant is not likely to become operational again for several weeks yet.

(b) German Refineries.

New photographs show that both HARBURG (Rhenania) and MISBURG are back in production on a substantial scale. HEIDE-HEMMINGSTEDT was already known to be active.

HARBURG (Ebano) on the other hand was still inactive when covered last week though it is a potential producer in January.

Several of the smaller Hamburg refineries have resumed operations and the list of minor plants which are currently active is now as follows:-

MONHEIM
ROBITZ
OSLEBSHAUSEN
HAMBURG-GRASEBROOK (Rhenania)
HAMBURG-WILHELMSBURG (Schliemann)
HAMBURG-GRASEBROOK (Albrecht & Schliemann)
HAMBURG-WILHELMSBURG (DPAG & Rhenania)
REISHOLZ
DOLLEBERGEN
DORTMUND (Schmits)

In addition, the SCHULAU refinery is now seen to be under repair (the damage was inflicted at the beginning of August).

(c) Austrian Refineries.

VIENNA-FLORIDSDORF, which was active at the time, was attacked on December 18 with unknown results. The results of the attack on MOOSBIRBAUM of December 11 are still unknown.

Apart from the above plants, VIENNA-KACRAN, VIENNA-VOSENDORF, and KORNEUBERG were active when last covered. VIENNA-SCHWEDOLAT was inactive in the first week of December but may now have resumed. VIENNA-LOBAU on the other hand, is not likely to resume production before the New Year.

(d) Czecho-Slovakia: Refineries.

The MORAVSKA OSTRAVA refinery has been a target of opportunity for small forces on two occasions; the results are not yet known. Otherwise there is no change in the situation, the active plants being:-

PARDUBICE
KOLIN
Probably KRALUPY
and possibly DUBOVA

(e) Hungary: Refineries.

There has been no change in the situation. The oilfields remain in German hands and there have been no further captures of refineries a minority of which may maintain limited activity.

(f) Poland: Refineries.

The TRZEBINIA and CZECHOWICE (DZIEDITZ) refineries are presumed active.

/(g) Benzol Plants.

(g) Benzol Plants.

Now cover has established that recent attacks have inflicted some damage to, and limited operations by, the PROSPER and METELICH plants. On the other hand some damaged plants have returned to normal operation. Out of the 25 principal plants, 8 are probably fully active, 3 are partly active, 3 are inactive and the status of the remaining 4 is unknown.

ECONOMIC ADVISORY BRANCH
(E.O. and M.E.W.)
29th December, 1944.

Table I.

ESTIMATED OUTPUT OF ARMS OIL FROM
 REFINERIES AVAILABLE TO THE DEPARTMENT FROM 1944.
 (All figures in thousands of metric tons per month)

	Normal Availability Crude	Estimated output of finished products			
		Oct.	Nov.	Dec.	Jan.
<u>SYNTHETIC PLANTS</u>					
1. Bergius Hydrogenation	368	87	142	128	163
2. Fischer Tropsch	112.5	25	26	36	45
Total from Synthetic plants	480.5	112	170	169	208
Percentage of Pre-raid Total	100%	23%	35%	33%	43%
<u>REFINERIES: Normal</u>					
	<u>Availability</u>				
	<u>Finished</u>				
	<u>Products</u>				
	<u>Output (b)</u>				
4. Germany	149 (From	78	46	39	69
5. France	260 avail-	0	0	0	0
6. Belgium	42 able	0	0	0	0
7. Holland	52 crude	0	0	0	0
8. Czechoslovakia	40 note (C).)	8(A)	20(A)	23(A)	25(A)
9. Poland	73	4	8	10	10
10. Austria	54	12	17	22	42
11. Hungary	60	9	11	8	0
12. Italy	30	0	0	0	0
13. Yugoslavia	21	0	0	0	0
14. Albania	2	0	0	0	0
15. Rumania	740	0	0	0	0
	1586	697.5	109	102	144
Percentage of pre-raid total	100%	16%	15%	14%	20%
<u>GRAND TOTALS:</u>					
(i) Synthetic Plants	480.5	112	170	169	208
(ii) Crude Oil	697.5	109	102	100	144
(iii) Other Sources (D)	166	175	100	150	150
<u>TOTAL</u>	1344	396	372	409	502
Percentage of pre-raid total	100%	29%	28%	30%	37%

NOTE: (A) Assumes imports of crude to extent of available capacity.

(b) Crude oil refinery capacity less 10% for refining loss.

(c) Figures for normal finished products output from available crude by individual countries not indicated. Total figure is used for comparative purposes.

(D) From sources comprising benzol, alcohol, tar oils, etc., and including unrefined oils used as liquid fuels.

15.12.44.

SECRET

TABLE II

ESTIMATED OUTPUT OF PRINCIPAL PETROLEUM OIL PRODUCTS

(All figures in thousands of metric tons)

	<u>GASOLINE</u>	<u>KEROSENE</u>	<u>GAS/DIESEL OIL</u>	<u>FUEL OIL</u>	<u>LUBE OILS</u> ^{XX}	<u>TOTAL</u>
<u>Normal pre-war</u> <u>Monthly Output</u>	532	100	234	280	148	1544
<u>Estimated Output in December</u>						
<u>From:</u> German Plants	74	-	45	-	4	123
Fincher Proposh	22	2	8	2	2	36
Refining of Mineral Oils	19	12	38	18	13	100
Other Sources	28	-	25	65	12	150
Total Resources	143	14	116	105	31	409
Percentage of pre-war						
Total	27	14	42	37	21	30
<u>Estimated Output in January</u>						
<u>From:</u> German Plants	107	-	51	-	5	163
Fincher Proposh	30	2	9	2	2	45
Refining of Mineral Oils	11	16	33	44	16	141
Other Sources	28	-	25	85	12	150
Total Resources	176	18	140	131	35	500
Percentage of pre-war	33	18	40	47	24	37

^{XX} NOTE: The figures shown for lubricating oil output are largely theoretical.

26.12.41.

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TABLE III : CURRENT PRODUCTION STATUS OF PRINCIPAL OIL PLANTS. 26th December 1944.
(Figures in brackets denote normal monthly output of motor fuel in thousands of metric tons)

PRODUCTION STATUS	23 SYNTHETIC PLANTS	22 GERMAN REFINERIES	23 OTHER REFINERIES	23 BENZOL PLANTS
<u>Category 1</u>				
IN FULL PRODUCTION	DESCHOWITZ (ODERTAL) (4.0)			EMMID-PORTSBUTZUNG (0.6) ROBERT MUSER (0.6) GHEISSER (0.5) MINISTER STEIN (0.5) SALEGITTER (0.8) VOLKILINGEN (0.6) CASTROL PRUKEL TAR (1.0) KORINSKI OSTRAVA TAR (0.6)

Category 2

IN PARTIAL PRODUCTION (Continued by air cover)	SCHOLVEN (30.0) ZUTZ (12.5) BOHLEN (12.5) LUTERENDORF (13.0) KAGDEBURG (10.5) RUHLAND (8.5)	ELBERG (14.0) (Rheinland) KESSEL (10.0) REIDS-LEMMING-STEIN (0.8) ROHEIN (Nil) ROSTZ (Nil) GELLESBERG (Nil) HAMBURG- (Nil) GRISBROCK (Rhenania) (Nil) HAMBURG- (Nil) WILHELMISBURG (Schliemann) (Nil) HAMBURG- (Nil) GRISBROCK (Albrecht & Schliemann) (Nil) HAMBURG-WILHELMISBURG (Ditt & Rhenania) (Nil) RHEIN (Nil) DOLLBERG (Nil) DORTMUND (Schmitz) (Nil)	VIERA-LECKEN (0.2) KORALBERG (0.1) VIERA- (0.1) VOSMENDORF (0.1) PARDUBICE (0.5) KOLIN (0.3)	NORDSTERN BENZOL (1.0) FLISA (1.0) CAROLINEN GLOCK (1.0) PROSLER (0.9) REIDELICH BENZOL (0.9) SCHOLVEN BENZOL (0.7) CO. SOLIDATION 1/6 (0.5) ALMA PLUTO (0.5)
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Category 3/

PRODUCTION STATUS	25 SYNTHETIC PLANTS	22 GERMAN REFINERIES	23 OTHER REFINERIES	25 BENZOL PLANTS
<u>Category 3.</u>		PEINE	(Nil) DUDOVA (0.3) KRALUPY (0.1) TRZEBNIA (1.3) CZECHOVICE (1.5) (DELDITZ) ALMAZUEITO (2.5) SZONY (2.5)	
PROBABLY IN PARTIAL PRODUCTION (Confirmation by air cover lacking)				
<u>Category 4.</u>	BRUX (28.0) POLITZ (45.0) LEUNA (28.0) BLECHHAMMER SOUTH (31.5) BLECHHAMMER NORTH (28.0) WANDER EICKEL (5.5)	HAMBURG (Munich) (2.0) SALZBURGEN (Nil)	VIENNA-LOBAU (0.9) VIENNA-SCHWECHAT (0.3)	KAISERSTUHL (0.8) VICTOR (0.6) MEIDERICH TAR (0.5)
PRODUCTION TEMPORARILY SUSPENDED - (Damage to non-vital installations)				
<u>Category 5.</u>	NORDSTERN (30.0) CASTROP RAUXEL (4.5) KAMEN (5.0) DORTMUND (4.0)	SCHNEAU (Nil)		
PRODUCTION SUSPENDED (Waiting repair of vital installations)				
<u>Category 6.</u>	WASSLING (3.5) BOETROP-NEUMEN (7.2) LUDWIGSHAFEN (7.2) OSWIECIM (1.8) MONTBERG (8.5) STARKRADE HOLZEN (5.0)	WARTBERG (Czechoslovak) (15.0) OSTERBOOR (0.7) HAMBURG-NEUMEN (Schindler) (Nil) EMMERICH (Nil) FRIDAL (Nil)	BRATISLAVA (4.0) NOVY BOHUMIN (1.6) BUDAPEST-OSLIP (0.8) BUDAPEST (Magyar) (2.2) BUDAPEST (Fests) (1.5) PITBURD (2.5) BUDAPEST (Kozal) (1.5)	
PRODUCTION SUSPENDED + INDEFINITELY (Inoperable no repairs)				

+ Bergius plant inoperable; synthetic keroil plant (OPRAD) temporarily inactive; iso-octane plant intact.

* has probably not yet commenced production of synthetic oil.

IN COMPLETION OF WORK	27. 27. 1954	28. 28. 1954	29. 29. 1954	30. 30. 1954
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Category 1.
 PRODUCTION STATUS
 (most-mild cover
 avoided)

VIENNA-	(0.3)	LITHIUM BEN	(1.0)
HILFEDER	(0.3)	LITHIUM BEN	(0.3)
HOUSSTELM	(?)	LITHIUM BEN	(0.6)
HOFERER	(1.2)	LITHIUM	(0.6)

... this plant inoperable; synthetic lubric plant (GIRU) temporarily inactive; isocyanate plant active.
 ... has probably not yet commenced production of synthetic oil.