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ANTEX 1. STREET OF MERENGES SECURISED STREET STREET

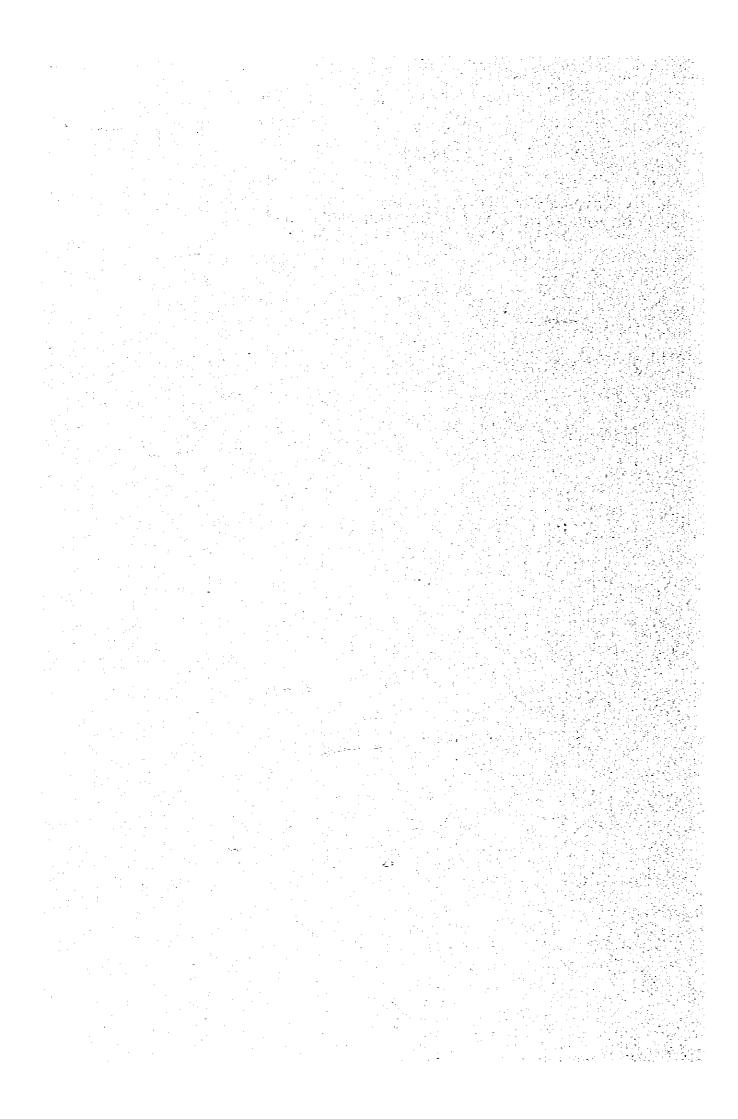
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# ANNEX-1

MINUTES OF MEETINGS ON SURVEY FOR SETTING UP OF THE PETROLEUM EXPLORATION AND PRODUCTION DATA BANK SYSTEM IN INDONESIA



#### ANNEX- 1

。 [17] · 建建筑建筑 《建国研节报记》(2012年11月 - 2012年11月 -

#### MINUTES OF MEETINGS ON SURVEY FOR SETTING UP OF THE PETROLEUM EXPLORATION AND PRODUCTION DATA BANK SYSTEM IN INDONESIA

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ATTACHMENT III THE LETTERS

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# MINUTES OF MEETINGS ON SURVEY FOR SETTING UP OF THE PETROLEUM EXPLORATION AND PRODUCTION DATA BANK SYSTEM IN INDONESIA

#### I. GENERAL

A mission from the Japan International Cooperation Agency (JICA), headed by Mr. Daishiro Kasahara, leader of the Japanese survey team for the development of the Petroleum Exploration & Production Data Bank System in Indonesia (the Data Bank Project), discussed the following matters with Mr. Trisulo, Director of Exploration and Production of the Perusahaan Pertambangan Minyak dan Gas Bumi Negara (PERTAMINA), and the Indonesian counterpart, headed by Mr. M.A. Warga Dalem, Chairman of Departmental Team, Head Sub-Directorate of Planning & Management, Directorate of General Affairs of PERTAMINA, during the period between November 21 and December 22, 1978 at the various offices concerned:

- The first stage of the Data Bank Project to be established, which is the establishment of original source data filing system.
- Collection of information related to the first stage of the Data Bank Project.

Participants of the meetings and record of activities performed by the Japanese survey team are enclosed as Attachment I and Attachment II respectively.

The objective of the Japanese survey team was to discuss the requirements and scope of the Data Bank Project and to collect the information required for preparing the master plan of the implementation of the first stage of the Project. A letter was dispatched on November 27, 1978 (Attachment III-1) from Mr. Daishiro Kasahara to Mr. Warga Dalem, officially requesting to provide the Japanese survey team with information required.

The letter was responded on December 2, 1978 (Attachment III-2) expressing the Indonesian team's complience under the condition that secrecy of the information should be guaranteed and MIGAS & PERTAMINA have the right to withhold any information irrelevant to the Data Bank Project. This letter was accepted and signed by Mr. Daishiro Kasahara.

The Japanese survey team paid visits to MIGAS Office, LEMIGAS Office, PERTAMINA Head Office all located in Jakarta, PERTAMINA Field Offices in Prabumulih and Bajubang, and collected relevant information related to the project as listed in Attachment IV.

After further discussion at PERTAMINA Head Office in Jakarta and PERTAMINA Unit II Head Office in Plaju, the team was divided into three subteams: for exploration, for engineering and for computer system respectively.

Three members of the Japanese survey team visited the field office at Bajubang and all members visited the field office at Prabumulih afterwards.

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During the discussion held in the various places stated in Attachment II, better understanding on the Data Bank Project was reached between both sides on the findings of the preliminary survey of the Energy Data Bank Project, made during the period between February 28 and March 12, 1978.

Reference is made to Attachment V "MINUTES OF DISCUSSIONS AT PLAJU".

#### II. THE DATA BANK SYSTEM FOR THE PIRST STAGE

During the survey, requirements related to the Data Bank System for the first stage have been discussed and elaborated. The Japanese survey team and their Indonesian counterpart agreed as follows:

- 1. The Data Bank System will be installed at Unit II, Head Office Plaju.
- 2. The data base for the Data Bank System should include data related to the exploration and production of PERTAMINA's operational area of Unit II. For the time being, gas and oil fields earmarked for the Data Bank System are listed in Appendix-II of Attachment-V.
- 3. Language to be utilized in the Data Bank System will be English.
- 4. The Data Bank System to be established at Unit-II Head Office should be consistant with the coding and indexing system in the Integrated Filing System within PERTAMINA.
- 5. The Data Bank System should be designed in the manner of integrating the separate satellite data filings which will be further computerized or microfilmed, independently of the Data Bank System.
- 6. Items to be stored in the data base of the Data Bank System will be properly proposed in middle of June, 1979 taking into consideration the requirements and the information discussed and collected by the Japanese survey team. However, the data base should be designed in the manner of storing as much as possible the following items as requested by the Indonesian counterpart:
  - a. Items as shown in Appendix-IV of Attachment-V.
  - Information related to specific reports, well files and periodical reports.
  - c. Input items in the application programs as shown in Appendix-V of Attachment-V.

- 7. The data base for the Data Bank System should have historical data as described in Appendix-III of Attachment-V.
- 8. The Data Bank System should be designed to function as the separate satellite module in the integrated data bank system for PERTAMINA and MIGAS as a whole, to be established in the future.
- 9. Although second priority, efforts should still be paid to incorporate the following items in Attachment IV into the data base as much as possible:
  - a. Items in "OUTPUT GEOLOGI YANG DIINGINKAN"
  - b. Input items of application programs utilized at E & P PERTAMINA Head Office.
  - c. Input items of O.A.R.S. programs owned by MIGAS.
- ....d. MIGAS Regulation.
- 10. System design study for the Data Bank System should be made, at first, with the feasibility of utilizing the Information Management System (IMS), which is currently used at the Computer Center of PERTANINA Head Office in Jakarta, and will be transferred in due time to computer Center of Unit II Head Office at Plaju.
- 11. Data flow in the computer system is confirmed by the figure in Appendix-VII of Attachment-V. Design of computer system should be made fundamentally based on the figure describe above. However, some modifications will be expected to meet the Data Bank System requirements. Modifications will depend upon the volume and type of data obtained after analysis of the information collected.
- 12. The Data Bank System should be designed so as to have versatility for modification to be expected.
- III. INDONESIAN DESIRES OTHER THAN THE DATA BANK SYSTEM

  In the course of the survey in Indonesia made by the Japanese survey team, some desires indirectly relevant to the Data

Bank System for the first stage have been indicated by their Indonesian counterpart.

Those have been recognized by the Japanese survey team as follows:

- The establishment of the Integrated Filing System of PERTAMINA.
   Data of each department at Unit EP-II Head Office are filed in different manners according to their respective
  - filed in different manners according to their respective coding and indexing system. This has prevented computerization and microfilming of the data stored in each department.
- 2. Equipment of more shopisticated application programs.
- 3. Microfilming of document and maps.
- 4. Introduction of retrieval system on microfilm data of PERTAMINA Unit-II Head Office to the Data Bank System.
- 5. Improvement of currently applied computerized system for drilling operation.
- 6. Improvement of the collecting system of data related to the Technical Department of Unit EP-II Head Office.
- 7. Standardization of monthly and yearly reports from PERTAMINA Unit-II Head Office to PERTAMINA Head Office in Jakarta.
- 8. Technology transfer of Information Nanagement System (IMS) from Computer Center of PERTAMINA Head Office in Jakarta to Computer Center of PERTAMINA Unit-II Head Office at Plaju in due time.
- 9. Introduction of data communication system between Field Office, Read Office in Area-II and Head Office in Jakarta.

#### IV. CLOSING.

Japanese survey team expressed its heartiess gratitude for full assistance and the kindest cooperation of their

Indonesian counterpart to Mr. Wijarso, Director General of Oil & Gas (MIGAS), Departemen Pertambangan, and Mr. Trisulo who had been called on by the Japanese survey team.

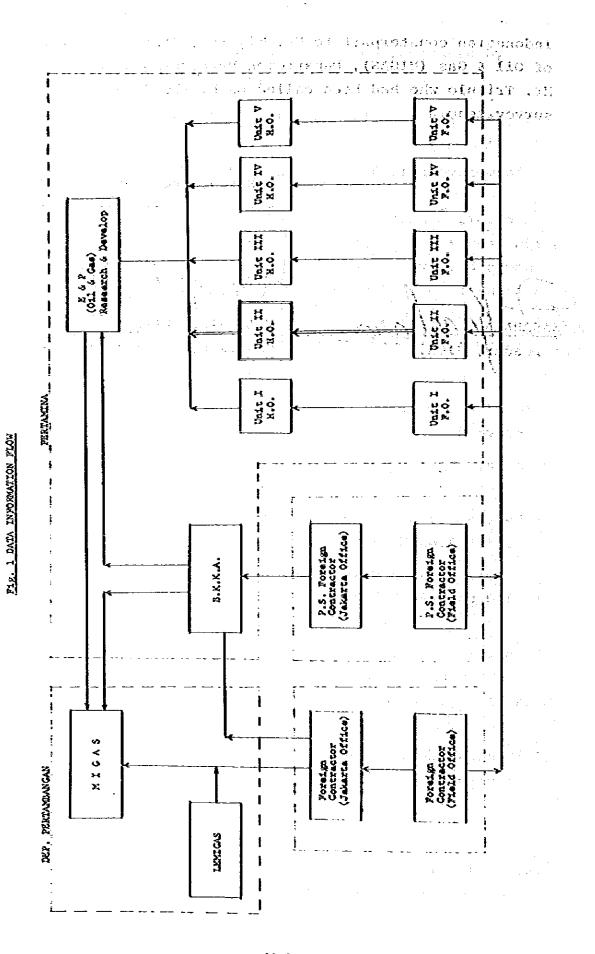
Jakarta, December 22, 1978.

OKASAHAR GAMARA

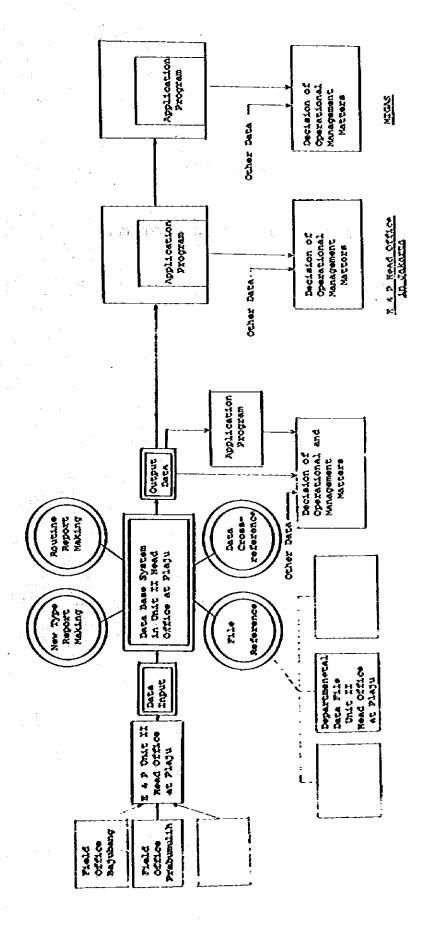
Team Leader, JICA.

M.A. WARGA DALEM

Chairman, Departmental Team.

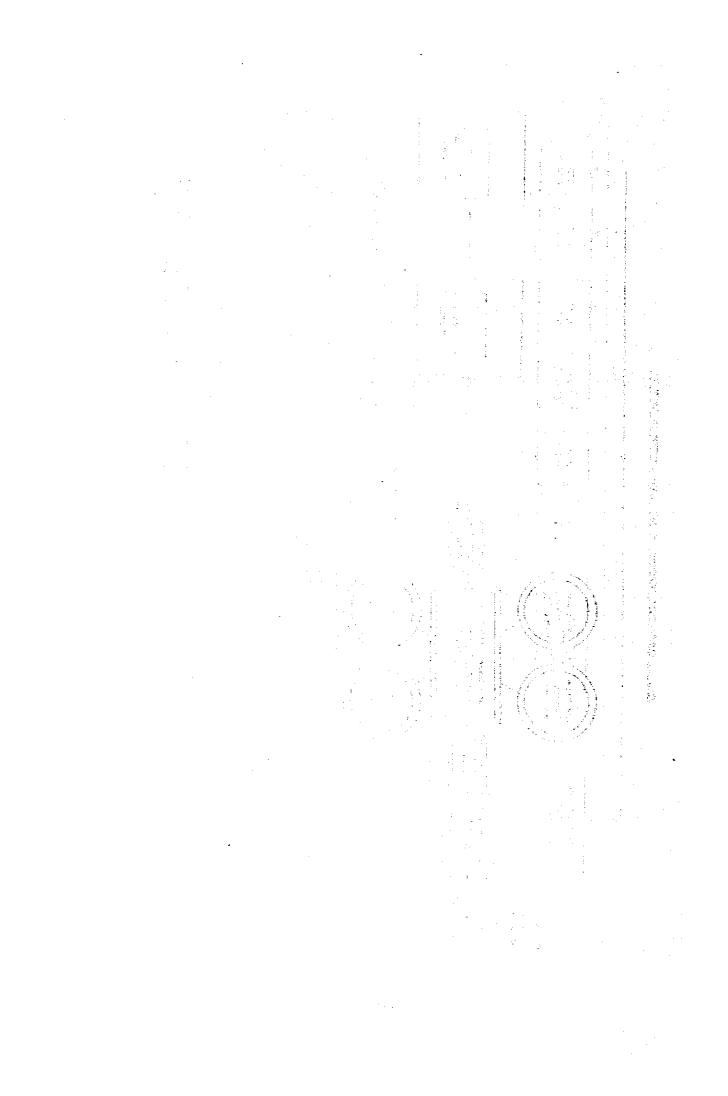


A1-8.



TO improve data transportation method between PERTAMINA Read Office E R P and Unit II Read Office and MIGAS and PERTAMINA Nead Office E R P, items to be investigated will be recommended, after conceptual design of the Data Dank Symtem.

Unit II Wood Office



# ATTACHMENT - I

ATTENDANT LIST IN INDONESIA

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#### ATTACHPENT I

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#### Attendant List in Indonesia

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		ROHALI SANI	r for the	(MIGAS)	
	٠	M. THAMRIN	Subteam Léader, Géològist	(PERTAHINA)	<b></b>
	٠.	B. SUTARSO	Geologist	(PERTAUINA)	I
		SOBPRAPTONO	Geologist	(MIGAS)	
		P. MANALU	Geologist	(MIGAS)	I
		SUBIJANTO	Geologist	(LEMIGAS)	; <b>J</b>
		- SURBINI NURUSHAN ?	Geophysicis	t (Lehigas)	. I
	.:	HEROE SOEBARKAH	ri. West	(HIGAS)	I
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		PADRULSJAH. J.	Petroleum Eng.	(LEHIGAS)	11
		ESTU BAGYO	Petroleum Eng.	(LEHIGAS)	11
		AYACE SECOND	Subteam Leader	(PERTAHINA)	111
		KUSHARTOHO	Electrical Eng.	(LEHIGAS)	III
		HULJANTO	System Analyst & Nathematici	(MIGAS) en	111
		ESTI SUGIANTO	System Analyst	(PERTAMINA)	III

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		AGUNG WITONO  B. BUDIJONO  ERNI MUTHALIB  BROERIE SUPUSEPA	Data Base Administrat	(PERTAMINA) or	III	
			System Anályst System Analyst	(PERTAMINA)	)	
				(PERTAMINA)		
			System Programmer	(PERTAMINA)	ΙΊΙ	
		HEUDRISIE SCEPRAPTO	Data Base Administrat	(PERTAMINA)	III	
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		D. KASAHARA Team Leader, Petroleum Eng.				
		H. TAKIZAWA	Geologist	1501 o 158 30938	1	
		A. SHIBUYA	Geophysicis	ten and and	1	
		M. BZOE	Mechanical	Eng.	II	
		H. KUSANO	Drilling En	ig.	II	
		T. INAMORI	Reservoir F	ing.	II	
		H. ISONO	System Anal	yst in head had	III	
		H. HASHIMOTO	Computer Ha	ardware Eng.	111	
		T. TANAKADATE	Coordinator	. F. MACSE MONE		
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#### ATTACHMENT II

Record of Activities Performed by

Japanese Survey Team in Indonesia

during the period between Nov. 20th and Dec. 23rd, 1978

	AL & REMEDATIA
Date	Subject concerning the Survey
Nov. 20th	Tokyo to Jakarta.  Internal Meeting at President Hotel.  Meeting at Japanese Embassy, Jakarta, Marian  Discussion of survey schedule in Indonesia
	<ul> <li>Plenary Meeting at PERTAMINA E &amp; P Head Office.</li> <li>Opening session of the meeting, and Introduction of the Indonesian counterpart team by Mr. Walga Daler.</li> <li>Explanation of the scope of work related to the survey by Mr. D. Kasahara.</li> <li>Introduction of the members of the Japanese Survey Team.</li> <li>Discussion of the survey schedule and survey methods.</li> </ul>
Nov. 22nd	Courtesy Call on Mr. Trisulo (Director of PERTAMINA É & P)  - Introduction of the scope of work for the survéy.  Internal Meeting at Président Hotel.  Plenary Meeting at PERTAMINA E & P Head Office, Jakarta.  - Discussion of the survey method,
	Japanese Survey Team and Indonesian counterpart team were divided into three subteams as follows:  . Subteam I : Exploration group  . Subteam II : Engineering group  . Subteam III : Computer group

# Subteam Meeting.

- Subteam I.
  - . Hearing of the organization of Exploration Department of PERTAMINA E & P.
- Hearing of main reports, reporter and report

#### - Subteam II.

- Hearing of the organization and data flow system
  - Hearing of relationship between PERTAMINA and MIGAS.

### 4" Subteam III.

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- . Discussion of survey plan.
- . Hearing of currently utilized application programs of PERTAMINA E & P and MIGAS.

Internal Meeting at President Hotel.

#### ov. 23rd Subteam Meeting at PERTAMINA E & P.

- Subteam I.
  - . Discussion of data flow system of Exploration Department.
- Listed up the main reports of Exploration Department.
  - Department.

#### - Subteam II.

- . Hearing of the organization of Production,

  Exploitation and Drilling Department of PERTAMINA

  Exploitation and Drilling Department of PERTAMINA
  - . Rearing of the contents of Well Pile.

### - Subteam III.

- . Collection of the input items of OARS.
- . Observation of computer system S/370 and S/1130.

# Internal Meeting at President Hotel.

- Subteam Meeting. Nov. 24th
  - Subteam I.
    - 等在1998年1日 10月期 1994年 Hearing of the detail contents of the periodical reports and specific reports prepared by Exploration Department.

· 可可用 (1984年) 李寶 [1985]

- Subteam II. Requested to provide with information related to the project as the first phase of the survey.
- Subteam III.
  - Collection of input data sheet of PERTAMINA application programs. Hearing of OARS System.
- a rahibahan ja Nov. 25th All the members of Japanese Survey Team Visited to MIGAS.

  - Hearing of MIGAS organization. Surveyed MIGAS's requirements for the Data Bank System.
- · 1906年 1906年 1908年 190 Nov. 26th Internal Meeting at President Hotel.
- Plenary Meeting at PERTAMINA E & P. 医基皮性缺乏 医乳腺管 Nov. 27th
  - Handed the letter, addressed to Mr. Warga Dalem from Mr. D. Kasahara, to Mr. B.S. Sitoemorang.
  - Discussion of the data, reports and information required in the letter.

# Subteam Feeting.

- Subteam II.
  - al a make tiletiyas Visited drilling department PERTAMINA B & P for discussion of related matters.

- Subteam III.
  - . Hearing of OARS System.

#### Nov. 28th Subteam Meeting.

- Subteam I.
- Hearing of the items in the specific reports.
  - Subteam II.
    - . Confirmation of the organization of Exploitation and Production Department.
  - All the members of Japanese Survey Team visited LEMIGAS.
    - Hearing of the activities and function of LEMIGAS.
    - Observation of LEMIGAS Laboratory.

#### Nov. 29th Subteam Meeting.

- Subteam I.
- . Hearing of filing system, especially new filing system of Exploration Department of Jakarta.
- Observation of the report storage of Documentation and Planning Department.
  - Subteam II.
  - Hearing of the organization of Production Department.
- Discussion of the "standard input items" which was
  - Subteam III.
    - Surveyed input items of currently utilized application program of PERTAMINA.
- PERTAMINA.

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## Nov. 30th Plenary Meeting at PERTAMINA Head Office.

- Presentation of the example standard input items to be stored in the Data Bank System.
- Mr. D. Kasahara based on the short write up memo which was distributed to the counterpart team.

Subteam Meeting. And red supporter and the

- Subteam II.

一定 机石砂铁铁矿 一点 Discussion of imput items related to Engineering group.

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Dec. 1st. - Off duty or was specient of and a feet from the property

Dec. 2nd Plenary Meeting.

- Received the letter addressed to Mr. D. Kasahara from From the Warga Dalemin Harring will be feld a bar to the The letter was signed by Mr. D. Kasahara.

and endeated hostophers has

- Settlement of Plaju survey schedule.

Subteam Meeting.

Subteam II. grange public to prisent .

- Discussion of method of data collection.
- Requested to make arrangement for data collection during Plaju surveys: whereast higher or head

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- Subteam III.

and the second

- The Control of the Co . Discussion of the application programs of which input items are related to the Data Bank System.
  - . Received the description of the computer hardware configuration of PERTAMINA.

ក ក្<sup>រុ</sup>ធិតិ ស្មា<mark>មនុស្ស</mark>្រែក ស្មាន Dec. 3rd Internal Meeting at President Hotel

AND EPPORTUGE TO SENTENCE OF THE PROPERTY OF Dec. 4th Discussion of Plaju survey plan with B.S. Sitoemorang and Mr. Aulie. AND MANAGEM

Jakarta to Palembang (All member of Japanese Survey Team).

- Discussion of the Plaju survey schedule at Palembang airport lobby with Mr. Kamili. To built is a serious

人名英格兰 医胸部 化多环烷 医药二磺胺 表征的情報 鐵樓 Internal Meeting at Sandjaja Hotel (Palembang).

Plenary Meeting at E&P Unit II Head Office. Dec. 5th - Opening session of the meeting by Mr. A. Hamid.

- Explanation of the background of the survey by Mr. B.S. Sitoemorang.
- Explanation of the purpose and progress of the survey by Mr. D. Kasahara.
  - Introduction of both members concerning the survey by Mr. A. Hamid and Mr. D. Kasahara.
- Settlement of survey schedule in PERTAMINA Area II.

#### Subteam Meeting.

- Subteam I.
- Discussion of a detail survey plan.
  - . Discussion of data and reports required Japanese Team.
  - . Rearing of the organization of Exploration Department.

#### - Subteam II.

- . Hearing of the organization of E & P Unit II Head Office.
- Surveyed reporting system related to Exploitation,
  Production, Drilling and Technical Departments of
  Unit II Head Office.

#### Subteam III.

. Discussion of a detail survey schedule concerning subteam III.

#### Dec. 6th Subteam Meeting.

## Subteam I.

- Selected the reports and data for collection.
- Required to submit the example copies of the above
  - . Hearing of the data filing system of Exploration Department.

#### Subteam II.

. Surveyed the kind of title of "Periodical Reports" related to Exploitation, Production, Drilling and Technical Departments.

- and the state of t Hearing of contents of "Monthly Report of Producing Well".
- Surveyed the coding and indexing system of E & P.

1. 2. 1 人名英格兰 医多克氏管 电电路设置器

#### Subteam III.

- and the second s Surveyed system, software and program packages of E & P Unit II
- . Surveyed hardware computer system of E & P Unit II.
- . Hearing of computer application other than E & P.

#### Dec. 7th Subteam Meeting.

- Subteam I.
  - Selected the reports and data for collection.
  - . Hearing of filing system.
  - Observation of reports and data storing condition.

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- Subteam II.
  - Surveyed contents and distribution of periodical reports and "Monthly Report of Producing Well".

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1970年,1970年,1970年,1981年,1982年

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- Subteam III.
  - Surveyed system, software and program packages.
  - Hearing of application software.

Internal Meeting at Sanjaya Hotel.

Palembang to Bajubang (Mr. D. Kasahara, Mr. M. Bzoe and Dec. 8th Mr. H. Takizawa).

> - Explanation of the purpose of visiting Bajubang Field Office at Guest House,

Subteam Meeting at Plaju.

- Subteam I.
  - . Surveyed filing system of reports and maps.

- Subteam II.
- . Discussion of the items to be stored in the Data
  - Hearing of coding system related to specific report.
    - Subteam III.
      - . Surveyed description of input item of application programs.
    - Palembang to Prabumulih (Mr. H. Isono and Mr. H. Hashimoto).

# Dec. 9th At Bajubang.

- Surveyed report preparation method and kind of reports.
- Observation of production facilities of Bajubang oil

## Subteam Meeting at Plaju.

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#### Subteam 1: State of the state of the second

- . Discussion of the filing system of Magnetic Tapes.
- Hearing of the microfilmized data filing system.
  - Subteam II.

- report.
- . Surveyed filing system.
  - Subteam III at Prabumulih.

The thirt basely set or in the egg to be a considered

- Sicres Surveyed Dispatch Center of Gas Project.
- . Observation of Gas Compressing Center and Dehydration Plant.

Prabumulih to Palembang (Mr. H. Isono and Mr. H. Hashimoto)

Dec. 10th Bajubang to Palembang (Mr. D. Kasahara, Mr. M. Ezoe and Mr. H. Takizawa).

Internal Meeting at Sanjaya Hotel, And the same

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Palembang to Prabumulih (Mr. D. Kasahara, Mr. M. Bzoe. Mr. H. Takizawa, Mr. H. Kusano, Mr. T. Inamori and Mr. A. Shibuya).

Subteam Meeting. The base of bases and the

- Subteam I.
  - Observation of field seismic survey (Mr. Kasahara and Mr. Shibuya accompanied by Mr. Basuki).

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ា នា ខ្លួនក្នុងស្មើ<mark>មួយ</mark>ប្រៀបបានប្រ

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- Subteam II.
  - Hearing of organization of Field Office.
  - . Surveyed kinds of reports including Well File.
  - Reports and data collection.
  - . Observation of rig site and production facilities.

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- Subteam III.
  - Surveyed input item of application software.

Prabumulih to Palembang (Mr. D. Kasahara, Mr. M Ezoe, Mr. H. Takizawa, Mr. H. Kusano, Mr. T. Inamori and Mr. A. Shibuya). The first could be supposed by the first of the

1971年 - 1981年 - 1986年 - 東西東京東京東京 - 東

Internal Meeting at Sanjaya Hotel

Dec. 12th Subteam Meeting.

- Subteam I.
  - Received example copies of periodical report and specific report. The stable washed only a pro-
  - . Discussion of input items to be stored in the Data Bank System.
  - . Selected input items to be stored.
- Subteam II. A service of the service of the substitution of the service of the Surveyed input items including Well File.
  - Discussion of input items to be stored in the Data Bank System.

- Subteam III.
  - . Discussion of data flow in the computer system.

# Dec. 13th Internal Meeting at Sanjaya Hotel.

Subteam Meeting.

- Subteam I.
  - . Discussion and selection of input items to be stored in the Data Bank System.

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- . Discussion of data retrieval system.
- Subteam III.
  - . Surveyed telecommunication system.

Dec. 14th Plenary Meeting at Unit II Head Office.

. Discussion the draft minutes.

Dec. 15th Plenary Meeting at Unit II Head Office.

 Singed on "Minutes of Discussion at Plaju by both teams.

Dec. 16th Internal Meeting at President Hotel.

Dec. 17th Internal Meeting at President Hotel.

Dec. 18th Subteam Meeting at PERTAMINA E & P Head Office, Jakarta

- Subteam I
   Discussion of output items related to the Data Bank
   System.
- Subteam III
  - . Hearing of computer hardware configuration of PERTAMINA and future plan of computer hardware configuration of the Head Office in Jakarta.
  - . Hearing of function of UCC-10 program package.
  - , Hearing of the telecommunication line between Jakarta and Plaju relating to data communication.

Dec. 19th Internal Meeting at President Hotel.

Dec. 20th Proposed draft Minutes
- Discussion of the draft Minutes

Dec. 21st Finalized Minutes

signed on the Minutes.

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# ATTACHMENT - 111

# THE LETTERS

ATTACHMENT-III-1 THE LETTER DISPATCHED ON NOVEMBER 27TH, 1978 FROM MR. DAISHITO KASAHARA TO MR. WARGA DALEM

ATTACHMENT-III-2 THE LETTER DATED ON DECEMBER 2ND, 1978 PROM MR. WARGA DALEM TO MR. D. KASAHARA

#### ATTACHMENT-111-1

THE LETTER DISPATCHED ON NOVEMBER 27TH, 1978
FROM MR. DAISHIRO KASAHARA TO MR. WARGA DALEM

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Dear Sir.

First of all, I extend my sincere compliments and would like to state that the data and copies of reports itemized in attached sheets herewith be requested to provide to us at your earliest convenience.

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These have been realized to be necessary for preparing a master plan for the Data Bank System by our experts after their survey carried out during the period between the 21st and the 25th, November, 1978, with cooperation of your experts as counterparts.

The following informations have been already collected by our survey team during the aforementioned survey :

#### GENERAL I.

- 1. HIGAS Organization Chart

  2. A copy of Petroleum & Natural Gas Industry of Indonesia, June, 1978.
- 3. A copy of the Government Regulation of the Republic of Indonesia Number 17 of 1974. Re. the Supervision of Oil and Natural Gas Exploration and Exploitation Activities in offshore area.

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#### II. **EXPLORATION**

- Organization of Exploration Department of PERTAMINA 1. E & P, Unit II and Field Office.
- Data flow concerning the geology and geophysics.
- Requirement for output items concerning the Data Bank System (by Kr. Thamrin)
- 4. List of main reports of Exploration Department PERTAMINA E & P,
- 5. An example copy of notification to drill. 化二甲醇二氢甲二磺基磺胺 医电影 医大手的 医抗毒素

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#### III. ENGINEERING

- 1. General information of organization.
- 2. General information of data and reports flow.
- 3. General information of well file.

#### IV. DATA FILLING SYSTEM AND APPLICATION PROGRAM

- 1. MIGAS O.A.R.S. Input Forms
- 2. Data Sheet of Application Program in PERTAMINA BPD.
- 3. A copy of brief description of the O.A.R.S system.

#### V. COMPUTER SYSTEM

- Information related to computer data input processing by diskette at BPD and seeing them.
- Information related to Standalone 1130 computer system and its operation.
- Seeing S/370 computer system at BPD.

In a process of our survey in Indonesia, it is expected for unveiled data and reports other than the above-mentioned to be disclosed and to be required to collect.

All the information will be used solely for the purpose of the data bank project and will not be released to other parties.

We hope you will give this your kindest and best consideration.

Best regards,

Team Leader

Senior Petroleum Engineer

Japan International Cooperation Agency

cc.: Mr. B.S. Sitoemorang Coordinator of Indonesian Counterparts

#### REQUIRED INFORMATIONS

#### I. General

- 1, PERTAMINA and MIGAS organization, (under request).
- 2. General conceptual map of Unit II PERTAMINA direct operation area, (under request).

ing and the transfer of the section of the section

- 3. 011 and gas fields to be stored in the Data Bank System, (under request).
  - 4. Well status reports, 1972 1977, (under request).

# II. Exploration

1. One copy of Yearly Progress Reports, 1972 - 1977, (under request).

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- 27 Example copies of Monthly and Neekly Progress Reports.
  - 3. One copy of following Specific Reports.
    - 1) Well Resume Report.
    - 2) Well (Drilling) Proposal.
- Gravity Report,
  - 4) Magnetic Report,
  - 5) Seismic Report.
  - 6) Paleontological Report, (including Foraminifera Pollen, Diatom, Mollusca and Plant).
  - Field Mapping Report or Geological Report.

- 8) Special Study Report.
  - . Log Analysis
  - . Carbonate Study
  - . Study Report, (Core Analysis).
- 4. Distribution list of Reports of PERTAMINA ESP and Unit-II Head Office (under request).

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- 5. Currently applied filling system (Exploration).
- 6. Total number of following each Specific Report.
  - 1) Well Resume.
  - 2) Well (Drilling)Proposal,
  - 3) Gravity Report.
  - 4) Magnetic Report.
  - 5) Seismic Report.
  - 6) Paleontological Report, (Foraminifera, Pollen, Diatom, Mollusca and Plant).
  - 7) Field Mapping Report or Geological Report.
  - Special Study Report.
    - . Log Analysis
    - . Carbonate Study
    - . Study Report (Core Analysis).
- 7. Key personnel and stuffs of Exploration Department of Unit II.

#### III. Engineering

 Organization of Drilling Department and Production Section and Exploitation Section of Production Department in PERTAMINA ESP.

- 2. Organization of brilling, Production and Exploitation Development of Unit II Head Office.
- Organization of Drilling, Production and Exploitation Development of Field Offices.
- 4. Data and Report Flow (Bejubang and Prabumulih Field Office to Plaju, and Plaju to Jakarta).
- 1) Example Copies of Periodical Drilling Activity Report (Daily, Weekly, Monthly and Yearly),
  - (Daily, Weekly, Monthly and Yearly).
    - 3) Example Copies of Well Files (including following information).
      - Drilling Program
  - Completion Program
  - Weekly Drilling Report
    - Completion Summary
      - Workover Summary
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      - . In Casing William , and the
      - Bit
  - and the second of the second o
    - Cote
    - Cutting
    - DST
    - PIT
    - Flow Test
    - Pressure Survey
      - Temperature Survey
      - Samoling
    - we all her Deviation Survey was a
      - Cementing

- Perforation
- Logging
- Geological Marker
- Objective Zone
- Stimulation the state of the control of
- Fluid Analysis
- Artificial Lift and the major of the
- Production Record Tribaco and America
- Others
- ng a mga katang lating ang lating ang lating lating ang lating ang lating ang lating ang lating ang lating ang Tanggan ang lating ang 4) Example Copies of Specific Reservoir Data Book.
- Example Copies of Specific Engineering Report 5) (including following Information);
  - Reserves Estimate
  - Production Forecast
  - Reservoir Evaluation
- Example Copies of Specific Geological Report. 6)
- Example Copies of Periodical Production Report 7) (Daily, Weekly, Honthly and Yearly).
- Example Copies of Production Activity Report 8) (Daily, Weekly, Monthly and Yearly).
- Example Copies of Specific Engineering Report 9) (including following Information);
  - Artificial Lifting Study
  - Production Allocation Study
- 10) Example Copies of Production Program.
- 11) Example Copy of Monthly Production Summary by Fields.
- 12) Example Copy of Monthly Gas Production and Utilization.

- 13) Example Copy of Monthly Gas Delivery to Pusri professional designation for the second section of the second sec
- 14) Example Copy of Monthly E & P Progress Report Jambi (Bejubang field office)
- + S. Sumatra (Prabumulih field office)
- 15) Example Copy of Drilling & Workover Program. ogga gasa sāsbirāti
- 16) Example Copy of Monthly Calculation of Oil Plow.
  - 17) Example Copy of Monthly Calculation of Gas Plow.
  - 1 18) Example Copy of Monthly Report Producing Well.
    - 19) Example Copy of Final Well Report.
    - 5. Currently Applied Data Filling System
    - 1) Code (Under reques).
      - Unit Code (Unit II)
      - Field Office Code
      - · Field Code

  - evilde segot som en en evilde i i ferfer i inn ivo Well Code
  - Statistics of Report Circulation. 2) Statistics of Report
    - 3) Distribution Chart (Distributor) Related to the Data and Reports described in Items 4 and 5.
    - 6. Information Related to Process Flow and Equipment.
  - 1) Organization for maintenance and construction at E & P, Unit II and Pield Office.
  - 2) Job content for each above-mentioned section.
  - 3、高 \$P\$ \$P\$ \$P\$ [1] \$P\$ 4. 3) Data flow about maintenance and construction information.
    - 4) Data and report for each data flow.
      - All facility plot plans in Unit II
  - All process flow sheets in Unit II
    - Name, frequency and format of each data and report.
    - Process equipment information including :

- Each format of process equipment specification

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- Meaning of process equipment Tag No.
- Some examples of process equipment history and equipment inventory
- Number of main process equipment in Unit II
- Future plan and requirement for data bank system 5}
  - Required infromation to be stored in data bank (1997年) 1916年 1916年 1918年 1918 system
  - Storing period of each data and resort to be 另外的最高的最高的最高的最高的最高的。 第二十二章

### Data Filing System and Application Program IV.

- Data Filing System 1.
  - Coding System.
  - 2) Estimate data volume related to each data item concerning Unit II PERTAMINA direct operation area.
  - Storing location of each data which is filled 3) according to coding system.

### 2.

- Application Program Information of Key Items of input data for the 1} programs in Oil Activity & Revenue System.
- Data sheet for application programs in PERTAMINA 2) Head Office, of which some have been received on November 24, 1978, (Under request).
- Information of Key Items of input data for the 3) programs in PERTAMINA Head Office.
- Data sheet for application programs in PERTAMINA 4) Field Office.  $\label{eq:controller} \mathcal{C} = \mathcal{C} \cdot \mathcal{C} + \mathcal{C} \cdot \mathcal{C} \cdot \mathcal{C} + \mathcal{C} + \mathcal{C} \cdot \mathcal{C} + \mathcal{C} +$

- 3. Software Related to Computer System in PERTAMINA Head Office and Unit II (under request).
- 1) Operating system.
  - 2) Computer language.
- 3) Program products, packages and utilities,
  - 4) Other software.
  - 4. Future Plan of Software.
- 1) Policy and plan related to Data Base Management system in PERTAMINA.

### v. Computer System

The next items are under request.

- 1. Hardware Configuration.
- The next information of the locations at BPD (Computer Center) and each Unit (I V).
  - 1) Type, speed, capacity, using number, unit number and their relation as shown in the attached sheet.
    - Central Processing Unit (CPU), Console printer keyboard
      - Disk storage and control
         Card reader and punch
    - Line printer

- Diskette reader
- Teleprocessing equipments
  Communication controller,
  Data terminal
  - Others

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Local terminals, type and relation

2) Computer room layout and electric power.

- Layout and the state of the same of the
- Store house : MT, Disk pack
- Electric power: voltage, Helz, capacity

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- 3) Future Plan and Requirements.
  - Hardware configuration
  - Terminal allocation
- 2. Data Input System at BPD and Unitall company of the second of the sec
  - 1) Data input equipments: type, using number and allocation
    - Diskette
    - Data terminal
    - Card
    - Others
  - 2) Operators
    - Number
    - Speed: touch/day on data and character input (average)

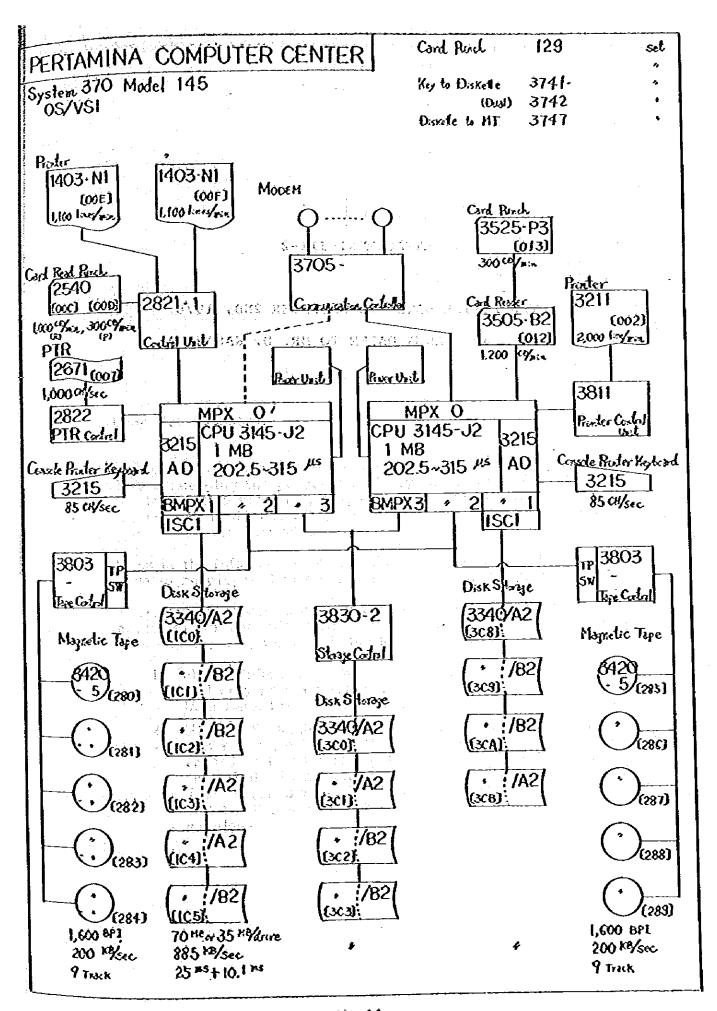
- Training
- 3) Data Input Job Flow
  - Transportation or communication
- 4) Future Plan and Requirements
  - Hardware
  - Operators
  - Terminal allocation
- 3. Data Output System at BPD and Unit II.
  - 1) Volume of Periodic Report.
    - Number of forms, volume/form
    - Total volume (Total sheets on the period (frequency).

- 2) Data check system : organization responsibility,
- 3) Future plan and requirements.
  - Hardware
  - Location
- 4. Data Communication at BPD and Unit II.
  - 1) Communication Line.
    - Organization which treats communication
      - Available data communication line and type area, route and quality
      - Technical standards or laws
      - Brecking procedure
      - Time required to erect
      - Available terminals (MODEM, NCU etc),
      - Erection cost and running cost
    - 2) Data terminals at BPD and Unit II.
      - Available data términals
    - -3) Computer System of data communication.
      - Hardware configuration (controller and terminals)
      - communication access method, communication type application system in S/370 (OS and others)
      - 4) Puture Plan and Requirements,
        - Communication line
        - Data terminals
    - Computer system
- 5. Operation and Maintenance at BPD and Unit II.
  - 1) Turn around time,

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- 2) Computer operation.
  - Working hour and computer load
  - Outline of types and volume of computer work

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		- Types and frequency of the past computer
		failure to the second of the s
		- Maintenance: number of engineers
		repairing time of the past troubles
	4)	Hardware Purchase. Said midasinusco) (1
	71	- Rental or purchase
		Buying route or procedure
		- Technical standard or guide-line
		- Tax.
		ও্ডটাল্ডিড্রেড্র কর্মান্ত্রণ -
	5)	Future Plan and Requirements.
		- Computer operation attract of delibera -
		- Maintenance Sympus Daw Jeon nortoons -
		anization of Data Processing Divisions  Processing Divisions  Professional State of the Sections of the next sections of the sections.
		RPD (Computer Contain)
• .	V - 4.7	BPD (Computer Center)  Data processing area in each UNIT
. 1 ()		Data base group in MIGAS
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		Others Sail nordeningerou -
	1)	Staffs significant significant
		System analyst, programmer; computer system
		operator, data input operators, maintenance staff
	,	(of computer section and hardware vendors)
	2)	Organization continue (1
		- Divisions and supervisors
		- Role and relations to other divisions
	3)	Future Plan and organization.



### ATTACHMENT-111-2

THE RESIDENCE AMENDED A

THE LETTER DATED ON DECEMBER 2ND, 1978

FROM MR. WARGA DALEM TO MR. D. KASAHARA



### REPUBAHAAN PERTAMBANGAN MINYAK & GAS BUMI NEGARA (AMINIATER (PERTAMINA)

HEAD OFFICE: JAKARTA (INDONESIA)

P.O. BOX 12 / JAKARTA

ELE ADDRESS : PERTAMINA"

PHONE: 5531 - 553400

JÁKARTA, 2 - 6, JL. PERWIRA

MESSRS

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or ref. to the block of relative to Mr. D. Kasahara Team Leader Data Bank System Japan International Cooperation Agency

ACLOSURES :

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Phy Widdor Ceneral Migas.

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Dear Mr. Kasahara, Yeurs sincerely,

I received with great pleasure your letter of November 27, 1978 concerning the progress made by the Team in collecting the information needed in preparation for the establishment of the Data Bank System within the Department of Mines & Energy c.q. Migas and Pertamina.

Calling Wager Good Some of the information are readily available, while others have to be prepared in the format as required by your Team.

Therefore, in order to comply with your request for further access to our data file, with some of their containing unveiled data and reports, we would like to restress the followings:

- 1. all the information obtained by any Member of the Team will only be used solely for the purpose of the Indonesian Data Bank Project and will not be released to other parties
- Migas & Pertamina have the right to with hold any information requested by any Member of your Team which they regard as being irrelevant to the Data Bank Project. Any refusal should not effect the outcome of the findings of the Team regarding the feasibility of the Data Bank Project and will be discussed between both parties to find alternate solutions.

2. .....



### PERUBAHAAN PERTAMBANGAN MINYAK & GAS BUMI NEGAR

-2-

I trust this is acceptable to you, and if you do, I would appreciate your signing copies of this letter in 3-fold, to be distributed as follows:

Original Copy

- Japanese Team Data Bank System

Second Copy

Indonesian Team Data Bank System

Third Copy

- File Director-General Migas.

Agreed

Team Leader

Yours sincerely,

M.A. Warga Dalem

रक्ता एकेट हैक के कई हुए

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Chairman, Departemental Team

## ATTACHMENT - IV

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## LIST OF DATA COPY OBTAINED DURING THE SURVEY

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### ATTACHMENT IV

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- 1. MIGAS Organization Chart. Chart.
- 2. Petroleum & Natural Gas Industry of Indonesia, June, 1978.

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- 3. The Government Regulation of the Republic of Indonesia Number 17, 1974, re the Supervision of Oil and Natural Gas Exploration and Exploitation Activities in Offshore Area.
- Rancangan Peraturan Menteri PERTAMBANGAN, No. /P/M/ Pertamb/19.. tentang Pemberitahuan Pendirian Instalasi PERTAMBANGAN Minyak dan Gas Bumi Didaerah Lepas Pantai (Page 1 and 2) (Bab II, Pasal 17).
- 5. Rancangan Peraturan Menteri PERTAMBANGAN, No. /P/M/Pertamb/19.. tentang Pemberitahuan Pemasangan Pipa Penyalur untuk Eksplorasi dan Eksploitasi Minyak dan Gas Bumi Didaerah Lepas Pantai (Page 1, 2) (Bab VI pasal 22).
- 6. Rancangan Peraturan Menteri PERTAMBANGAN, NO. /P/M/ Pertamb/19.. tentang Pemberitahuan, Laporan dan Data Penyedilikan Geologis dan Penyelidikan Dasar Lainnya Mengenai Minyak dan Gas Bumi Didaerah Lepas Pantai (Page 1 to 4) (Bab IV Pasal-Pasal 25 s/d 27).
- 7. Rancangan Peraturan Menteri PERTAMBANGAN, No. /P/M/ Pertamb/19.. tentang Pemberitahuan, Laporan dan Data Penyelidikan Geofisik dan Penyelidikan Lainnya Mengenai Minyak dan Gas Bumi Didaerah Lepas Pantai (Page 1 to 5) (Bab V Pasal-Pasal 28 s/d 32).

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  Pasal 39 ayat (1), Pasal 41 ayat (3), Pasal 43 ayat
  (1), Pasal 45)
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- 14. 52) TRACTEP 142 Commence Commence
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- 10. Brief Description of the O.A.R.S. System
- 11. Input Data Sheet for the following Application Program in MIGAS O.A.R.S.
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### B. PERTAMINA Head Office

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- 2. Organization Chart of Exploration Department of PERTAMINA Exp
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- 17. Followings in Final Report on Gravity Survey in Lagan area Djambi and Indragiri Hilir area Riau Eastern part Sumatera, Indonesia by J. Rainir Dhadar Budijarto, Ministry of Mines, Directorate General of Hines, Geological Survey of Indonesia, Bandung, March 1, 1971 (Laporan Ekspor No. 31179)
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- 49. Recompletion Report (Format Only) of Anticopy to Face
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- 71. CALCOMP Plotter and Digitizer Hardware Configuration.
- 72. WANG 2200 B machine Configuration.
- 73. Memo on the Items 2, 3 and 5 in Chapter V of the Letter dated on November 27, 1978 addressed to Mr. Warga Dalem from Mr. D. Kasahara.
- 74. Computer system configuration at PERTAMINA JAKARTA July 1980.
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76. IMPORTANT UCL TEN FEATURES

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C. PERTAMINA Area II
Refer to APPENDIX VIII of ATTACHMENT V.

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### ATTACHMENT V

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### MINUTES OF DISCUSSIONS AT PLAJU

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- 2. PINDINGS OTHER THAN THE DATA BANK SYSTEM FOR THE FIRST STAGE

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APPENDIX-II LIST OF OIL AND GAS PIELD CONCERNED

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APPENDIX-111 HISTORICAL DATA TO BE STORED IN DATA

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### HINUTES OF DISCUSSIONS AT PLAJU

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Subject : The Petroleum Exploration & Production Data Bank System

Development Project, Republic of Indonesia.

: December 5 through December 15, 1978,

Place at : PERTAKINA UNIT-II Head Office.

Attendants : As in Appendix I.

Date on

The Plenary Meeting has been opened with the introduction of Indonesian counter part team organized by PERTAMINA Unit II Head Office made by Mr. Azir Hamid, Kanager Unit Exploration & Production-II PERTAMINA Areas and followed by the general explanation of the background of the project made by Mr. B. S. Sitoeworang, Team Leader of Indonesian Team in Jakarts,

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Following the opening session of the Meeting, Japanese survey team, head by Mr. Daishiro Kasahara, team leader of Japanese survey team, discussed their survey schedule in Plaju with the counterpart team, headed by Mr. Z. A. Kamili, team leader of Indonesian counterpart team, Head Exploration PERTAMINA Unit EP-II. The discussion and survey have been performed on the Petroleum Exploration and Froduction Data Bank System Development Project, Republic of Indonesia during the period between December 5 and December 15, 1978 by Japanese survey team with the cooperation of the Indonesian counterpart team in separating into three subteams as shown in Appendix-I.

During the survey, three members of Japanese survey team visited field office at Bajubang, where they discussed the matter related to the Proximit Nr. Sunarto R.S., Secretary of Field Superintendent, Nr. Hassanal Feringgayuda, Head Exploitation and Nr. Darmadi, Head Production PERIMPULL Unit EF-II Bajubang. All the member of Japanese survey team had visited field office at Frabunulih accompanied by Nr. Basuki Puspoputro, Geophysicist PERIANINA Unit NP-II and Nr. Susito N., Production Engineer

PENTAMINA Unit EP-II and Mr. Heroe S., MIGAS, where they collected the information and discussued the matter related to the project with Mr. H. S. Soekadis, Field Superintendent PERTAMINA Unit EP-II Frabumulih and his staffs.

The followings are major aspects of findings and understanding made at the survey.

1. Pindings Related to the Data Bank System for First Stage:

- 1). The Data Bank System should have the geological and production information related to the gas and oil fields as in Appendix-II for the time being.
  - 2). The Data Base should have historical data as described in Appendix-III.
  - 3). Language to he utilized in Data Bank System should be English.
  - 4). The Data Bank System to be established at Unit-II Head Office should be consisting with the coding and indexing system for the integrated data filing system which will be decided by FERTAMINA until about middle of June 1979.
    - 5). The Data Bank System should be designed in the manner of integrating the seperated satellite data filings which will be furtherly computerized or microfilmized independently of the Data Bank System.
      - 6). Items to be stored in the Data Base will be properly proposed at the middle of June, 1979 taking consideration into the requirements and the information discussed and collected by Japanese survey team, however following items requested by Indonesian counterpart team as much as possible.

til græger flygger i griger og ere flyggerige og fill og filler

- a). Items as shown in Appendix-IV.

  Discussion were made on the detail items and their formats
  by both experts respectively and as a result a common
  understanding has been reached.
- b). Informations related to specific reports, well files and periodical reports.
- o). Input items in the application programs of which title is shown in Appendix-V.
- 7). The Data Bank System should be designed in the manner of preparing new type reports by cross reference of information in the Data Base. Output reports as shown in Appendix-VI was requested to produce in addition to currently available four kinds of reports related to production statistics.
- 8). Pata flow in the computer system is confirmed by the figure in Appendix-VII. Design of the computer system should be made fundamentally based on the figure described in Appendix-VII, however some modification will be expected to require for meeting the Data Bank System, Hodification will depend upon the volume and kinds of data found after analysis of the collected information.
- 2. Findings ather than the Data Bank System for the First Stage.

  In the course of the survey, some desires to improve system related to data filing other than the Data Bank System for the first stage have come out from Indonesian counterpart team.

  Those have been recognized by Japanese survey team as follows:
  - 1). The establishment of the integrated data filing system with a coding and indexing system for whole PERTAGINA.

    Data of each department in Unit EP-II Head Office are filed in different manner according to their respective coding and indexing system. This has prevented computerization and microfilmization of the data stored in each department.

- 2). Equipment of more sophisticated application programs.
- 3). Microfilmization of documentations and maps being stored in each department.
- 4). Introduction of retrieval system on microfilmized data to the Data Bank System.
- 5). Improvement of currently applied computerized system for drilling operation.
- 6). Improvement of the gathering system of the data related to Technical Department of Unit 19-11 Read Office.
- 7). Standardization of technical conthly and yearly reports to PIRTA-HINA Head Office in Jakarta to minimize report preparation work.
- 8). Exprovement of data entry system and peripherals to computer system in PERTANDIA AREA-II.
- 9). Introduction of data communication system between Field Office, licad Office in Area-II and Head Office in Jakarta.

During the survey, the information related to the project has been provided to Japanese survey team by the Indonesian counter part team and the list of the information is attached herewith as in Appendix-VIII. Japanese survey team expresses its heartiest gratitude for the Kindest cooperation of Hr. Azir Hamid and his staffs at the moment of closing the survey in Plaju.

Plaju, Decuper 16, 1978.

KASALARA

Kingger Unit iP-II.

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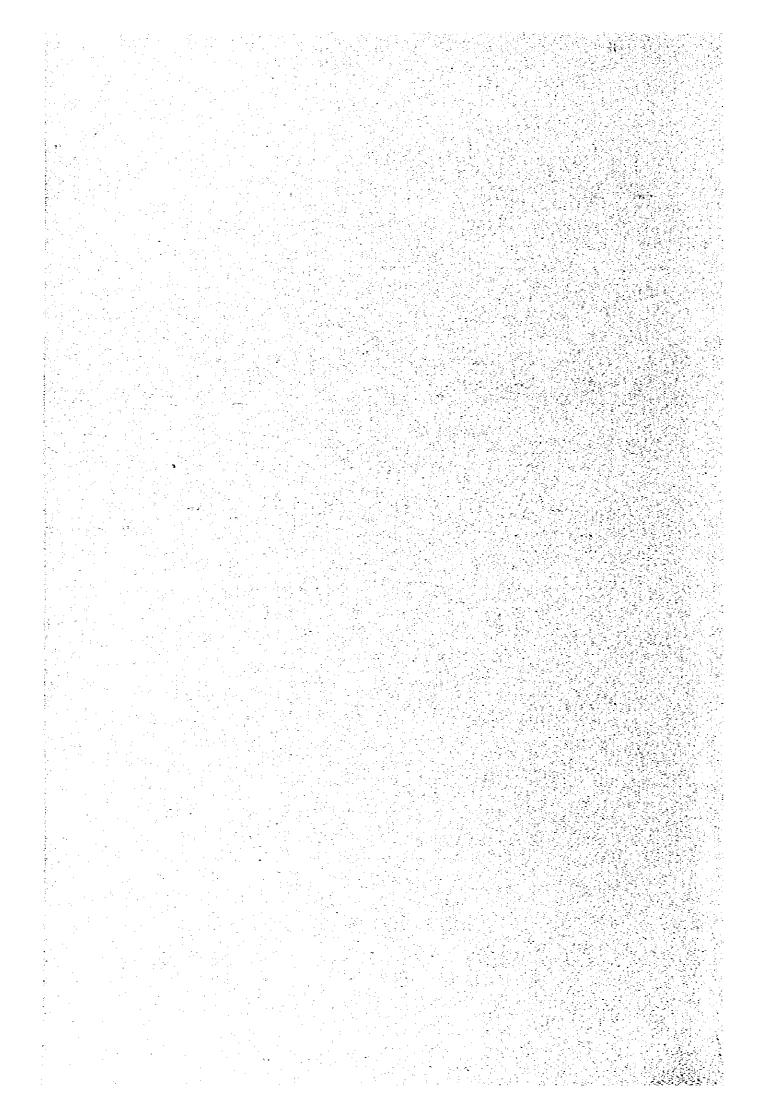
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		현실과 내려를 보았다. 그리고		
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		<u> 경기를 막기하는 하는 것으로 됐다.</u>		
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			회원들은 다른 그는 원인들이 된다.	
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			출시하시 전 등은 하기 있습니다	
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			백화 등의 문화회를 하게 살았다.	
		보기를 보다는 모든 기를 보고		
		실루스템 (British 1914년 1917년)	교육 역사 기계 성급을 고양했다	
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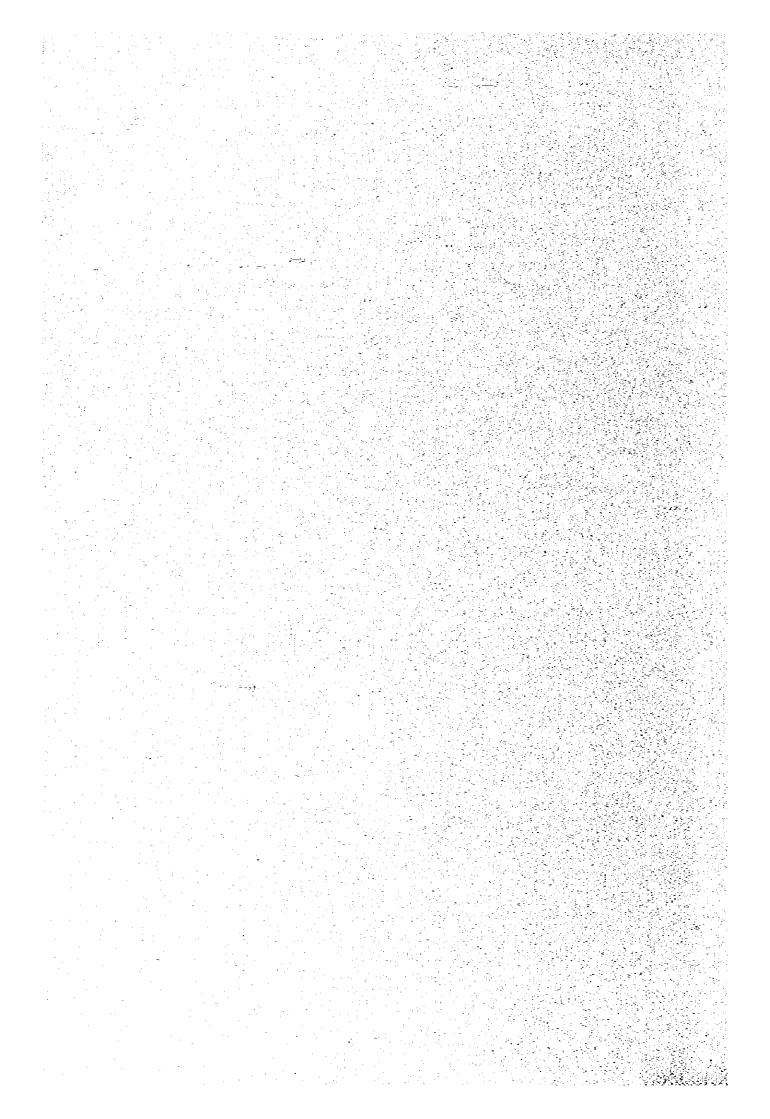
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	Hasan dasri	- G. Affair Dept. Head.	•
	edi sukoto	- Production Dept. Head.	
	SURONO	- Gas Dept. Head.	
	ANTRARTO	Drilling Dept. Read.	
	Z.A. KARILI	- Exploration Dept. Head.	1
	BASUKI PUSPCPUTRO	- Geophysicist.	· I
	AZZAX	- Ass. Paleontologist.	1
	DALUSA JATUES	- Geologist	
	ANUNG INTOIC	- Geophysicist.	1
•	SUKOKO	- Exploitation Eng	11
	505140 K.	- Production Eng.	11
	PARUT SULYATIO	- Drilling Eng.	11
	TUGIONO	- Technical Eng.	II, III
[ ]	DJUF.ERO	- Exploitation Eng.	111
•	INUR RUSLAN	- Data Processing Eng.	III
: t	LILY HAIBALI	- Data Processing Eng.	111
	ANNAR	- Telecom Dept. Head	111
	Baigang sulistyo	- Radiotel Dept. Sect.Head	111
•	(2) UNIT EP-II - BAJUB		
	Sukarto RS	- Secretary of P. Superintend	lent.
	HASSANAL P.	- K, EL	-
•	DAR-ADI	- Ka. Sub.Bid.Produkei.	

	(3) UNIT EP-II - PRABUM	Kulih.	i
	H.S. SOEKADIS	- Field Superintendent.	•
	HARYOLO K	- Head of Exploitation.	
	ISNORO SURARNO	- Petroleum ling.	
	ERIR LUBIS	- Geophysicist.	
	UKTOLSEJA AGUS	- Technical Eng.	
	JUSRI DAHAR	Production Eng. Harris Lynn	
	ISMAIL I.	Gas Dept. Head.	
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5.	JaPan Side.	ter en	
é	D. KASAHARA	- Team Leader	
	H. TAKIZAVA	- Geologist	
	A. SHIBUYA	- Geophysicist 1	
	II. EZÓE	- Kechanical Eng. 114	
	H. KUSARO	- Drilling Eng. II	
	T. ISAVORI	- Reservoir Eng.	
	11. 19010	- System Eng.	
	H. HASHIKOTO	- System Eng.	

- 이 집 보고 그 시간 문식 경우를 통해 부스를 잃었다. 그들은 말로는 경우를 통한 물리 되어 되었다. 그는 그 그 이 하는 그 같은 이 그리고 	
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는 문제는 사람들로 대한 취임적으로 불통한 경험 경험에 대한 물건을 보지 않는 것이 되었다. 그리는 사이를 되었다고 하는 것이 되었다. 그는 물건이 그렇게 되었다. 	
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그러는 이 그는 사이를 가득하면 취약 전략을 가는 물을 하는데, 그들은 장이 그림에 되었다고 그는 것으로 있다면 이 이 그리고 있다. 이 이 사람이 있다. 그렇게 그 이 이 이 이 이 이 이 사람들은 물로 들었다면 살아 있는데, 그리고 있는데 이 이 그를 보고 있다.	
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#### APPENDIX-II

#### LIST OF OIL AND CAS FIELD CONCERNED WITH THE DATA BANK SYSTEM

#### I. Palembang Complex.

#### 1. South Palembang Complex.

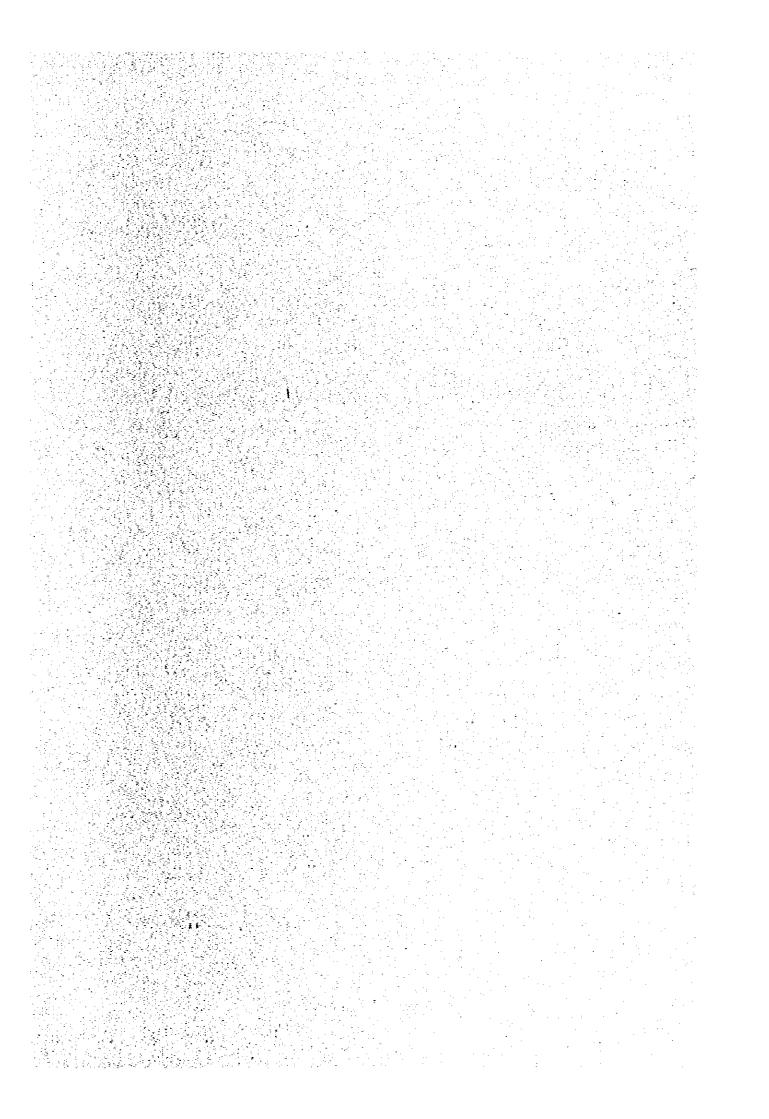
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- Prabumulih west.
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- Payakabung.
- Talang Jimar.
- Tanjung Tiga West.
- Tanjung Tiga East.
- Tanjung Miring West.
- Tanjung Miring East.
- Cunung Kemala.
- Benuang.
- East Benakat.
- Limau East-HC.
- Limau liest-54.
- Belimbing.
- Tanjung Lontar.
- Suban Jeriji.
- Batu Keras.
- Sungai Tahan.
- -Kuang.
- -Tasim.
- Pagardewa.
- Prabusenang.
- Meraksa.
- -Kikin.
- Ogan Block.
- Lubuk Rukan,
- Karangan.
- Beringin.
- Sukacinta.
- -Betung.
- Kedaton.
- Husi.

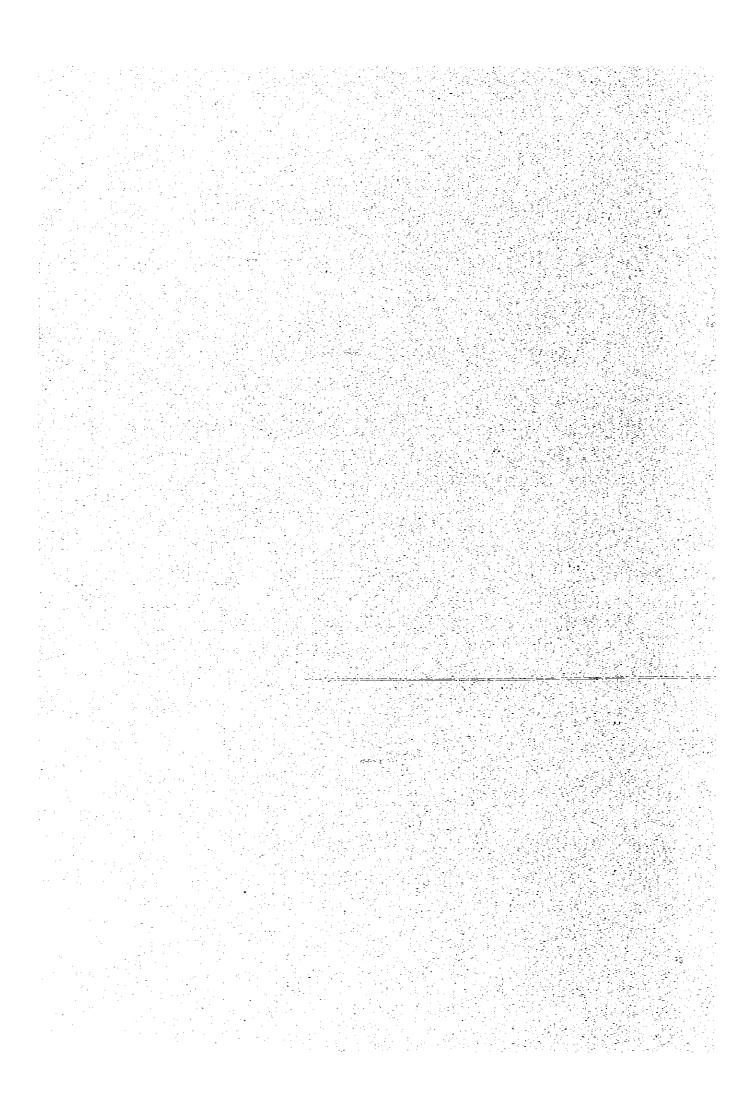
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#### APPEIDIX III

#### Historial Rate to be stored in Data Base

	Renarks
1). Geological & Geophysical Data	Since 1966
2). Well File	All the well file
3). Production Statistics	Since 1966 (only monthly figures)
4). Froduction Facility	Existing Status only

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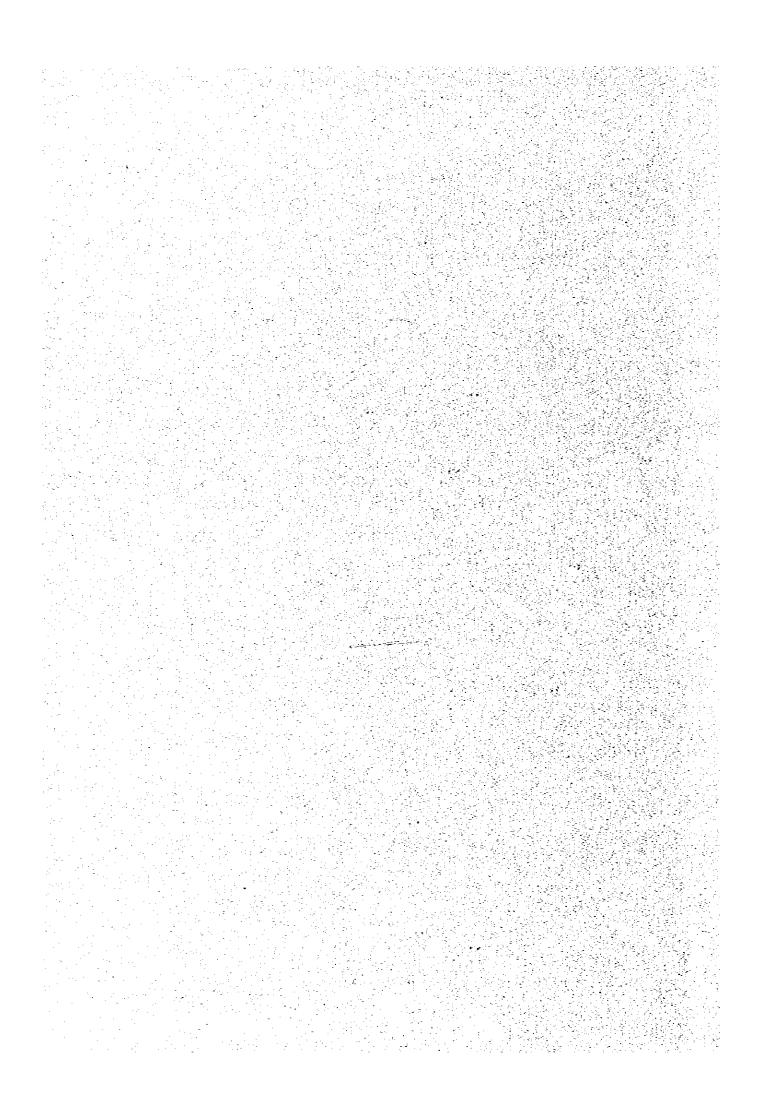
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> ्राम्परीतिक प्रतिकार के प् स्थान

교통을 통하는 기업으로 함께 하는 것이다. 불러 프로마스 이번 사고 있는 기계를 하는 것이다.
면 휴가의 문학자는 이번 제상으로 보는 전문이 있다. 그리고 있다. 



#### APPENDIX IV

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#### Ttens to be stored in the Data Bank System.

## 1. OTOPHYSTCAL.

- 1). Seissio Survey.
  - િસ્ટોન (સુનાઇ) હાલ્<u>લુક લેવોલ</u>ો કરો છે. જેવા છે છે.
  - a). List of Survey.
    b). Seismic Section.
  - c). Naps. The same of the same
  - d). Well Shooting Data.

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- San Carket Horsel
- 2). Lagnetic Survey.
  - a). List of Survey.
- b). liagnetto Records
  - c). Paps.
  - d). Reports.
  - 3). Gravity Survey.
    - a). List of Survey.
      - b). Gravity Record.
    - o), laps,
      - d). Reports.
  - 1-6: 111 4). Other Survey.
  - a). Kinds of Survey.
  - b) Kinds of Record.
  - Section adjusted (5
  - d). herorts.
  - 5). Production Efficiency and economy.
    - a). Operation Cost.
    - b). Frocessing Cost.
    - c). Interpretation Cost.
    - d). Total Cost.

6). Others. a). Tape Storage. b). Explosive Balance. c). Kan Power. • ছিল্লামান করিছেরটার । <sub>ইয়া</sub> GEOLOGICAL ভাষার পাহালির জিলা জানুর হিন্দু <u>বি</u> i). General Geological Information. BRIDE STORES LEGI á). Geological Field Survey. b). Photogeological Information. c). Leases Concession Information. d). Exploration Hell Information. sysvalv bloom ti 2). Analysis Data Inforcation. 医乳腺素 化建二氯磺基氯亚二 a). Core analysis. b). Source-Rock Analysis. c). Paleontological inalysis. d). Petrographical analysis. e). Fluid Analysis. Property Burger Space f). Other Analysis. Conferences that the conference of the PART STATE OF STATE 3). Study Results Information. o en per esta en de la companya della companya della companya de la companya della companya dell a). Paps. b). Geological Cross Section. c). Correlation. ARAN KABUPATAN d). Restored Section. e). Reports. សំពីស្រី ដើម្បី ការ រដ្ឋ ទី ។ 3. HELL DATA. 4年17日(1911年) i). Well Informations, a). Hell and Drilling Informations. b). Geological Informations. o). Testing Informations. d). Other Informations.

- 2). Hork Over Informations.
  - a). Work Over Informations.
  - b). Testing Informations.
  - o). Other Informations.
- 3). Artificial Lifting.
  - a). Rod Pumping.
  - b). Submergible Centrifugal Pumping.
  - o). Gas Lifting.

#### 4. PRESSURE AND PRODUCTION DATA.

- 1). Production Data.
- 2). Injection Data.
- 3). Pressure Production Data.

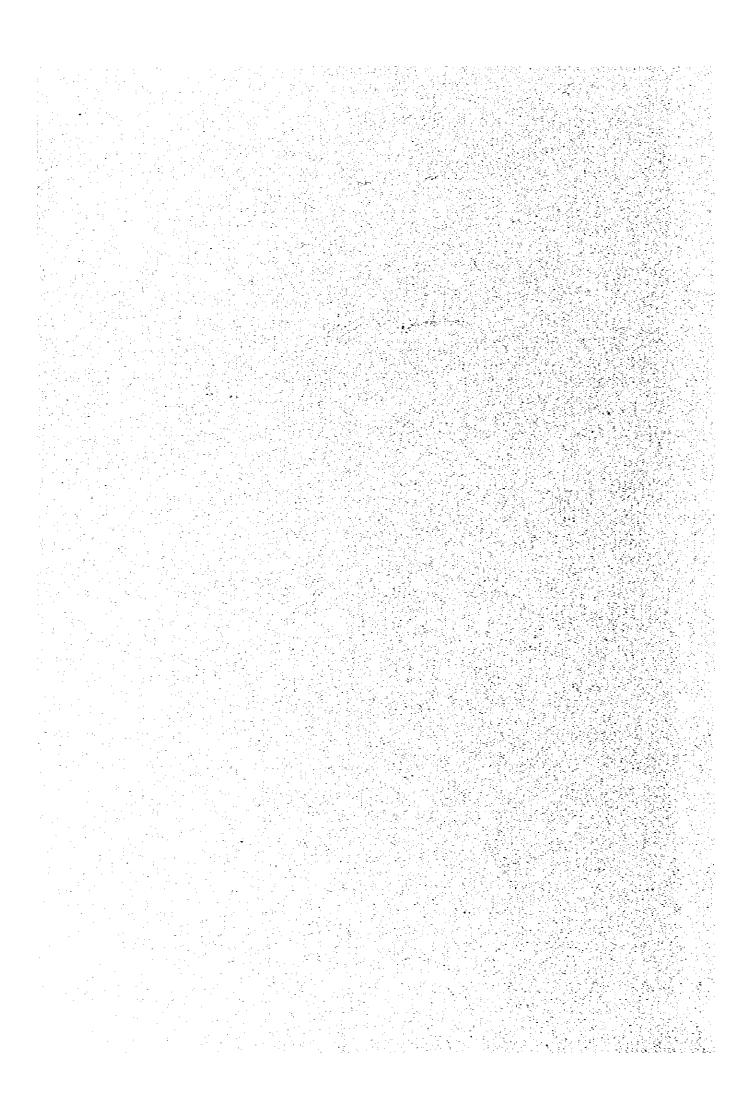
#### 5. FLUID ANALYSIS DATA.

- 1). Oil Amalysis.
- 2). Cas Analysis.
- 3). Hater Analysis.

#### 6. OPERATION DATA FOR PRODUCTION FACILITY.

#### 7. PRODUCTION BUILDING & PIPELINE.

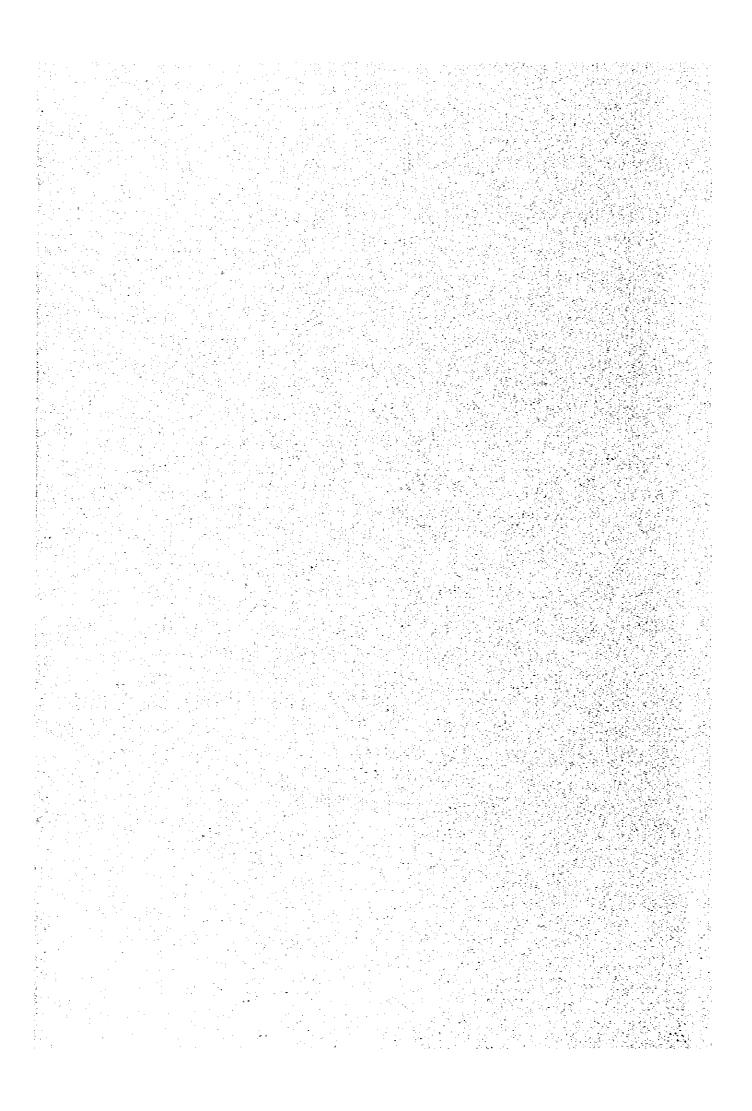
- 1). Scheme of Plant.
- 2). Pipeline.
- 3). Vessel.
- 4). Heat Exchanger & Boiler.
- 5). Rotary Lachine.
- 6). Driver & Cenerator.
- 7). Others.



#### APPENDIX-Y

#### Application Program in unit II Head Office

- 1). M.R.P.W (Monthly Report Production Vell).
- 2). P.D.R. (Production Data per Reservoir).
- 3). Block Station OIL.
- 4). Block Station GAS.
- 5). Reserve OIL & CONDENSATE.
- 6). Ploying Botton Hole Pressure.
- 7). Static Bottom Hole Pressure.
- 8). Shilthuis Katerial Balance.
- 9). Gas Deliverybility & Economic Evaluation.
- 10). Tarnet Kethod Katerial Balance.
- 11). Decline Production.
- 12). Pactor.



#### APPENDIX VI

#### Output Reports required by Subteam 2 of Indonesian Counter part team

- 1. Konthly Report of Producing Well.
  - (1) By Well ( Currently available Output Report ).
  - (2) By Reservoir ( Currently Available Output Report ).
  - (3) By Block Station ( Per Station ) ( Currently Available Output Report ).
  - (4) By Block Station ( Gas Per Station ) ( Currently Available Output Report).

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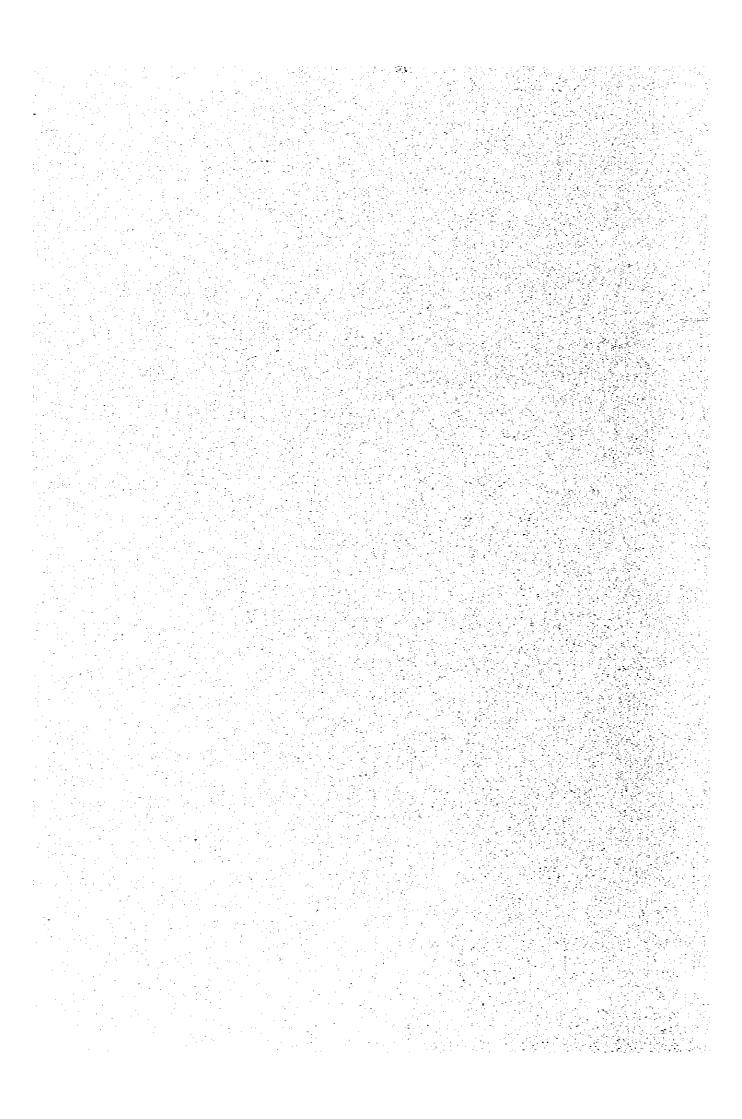
TYPER CONTRACTOR OF THE STATE O

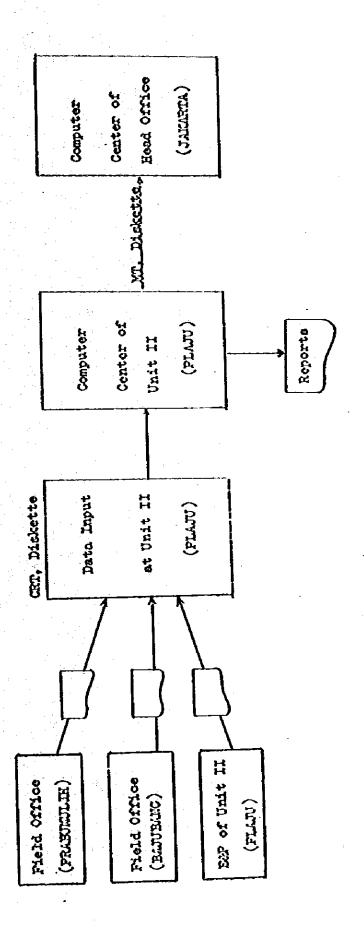
- (5) By Field.
- 2. Fonthly Report of Producing Well Producing Well only
  - (1) By Hell.
  - (2) By Reservoir.
  - (3) By Block Station ( Per Station ).
  - (4) By Block Station ( Gas Per Station ).
  - (5) By Field.
- 3. Fonthly Report of Producing Hell Natural Flowing Hell only
  - (1) By Hell.
  - (2) By Reservoir.
  - (3) By Block Station ( Per Station ).
  - (4) By Block Station ( Gas Per Station ).
  - (5) by rield.
- 4. Konthly Report of Producing Hell Gas Lift Hell only
  - (1) By Kell.
  - (2) By Reservoir.
  - (3) By Block Station ( Per Station ).
  - (4) By Block Station ( Gas Per Station ).
  - (5) By Field.

and the second second second

	国集 - <b>法外担任的关键表</b> - 1997年(1997年) - 1997年(1997年) - 1997年(1997年)
5•	Ponthly Report of Producing Well - Pumping Well only
	(1) By Well: 1 with notice here to 8 in which of long theor attention in the
	(2) By Reservoir.
	(3) By Block Station ( Per Station ). The gradulers to income visiting
	(4) By Block Station (Goo Pan Station)
	(5) By Field.
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6.	Konthly Report of Producing Well - Shut-in Hell only of the design of the
	(1) By Hell.
	(2) By Block Station ( Per Station ).
	(3) By Block Station ( Gas Per Station ).
	The state of the s
7•	Konthly Report of Producing Rell - Abandonment Well only investigation
	(1) By Well.
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	(3) By Block Station (Gas Per Station).
8.	Fonthly Report of Producing Well - High Water Cut Well only (gore than 50)
	(1) Rv Val)
	(2) By Block Station ( Par Station ).
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	· - 한 - 한 한
9.	Konthly Report of Producing Hell - High GOR Hell only (wire than 300 K3/K)
	(1) By Well.
	(2) By Block Station ( Per Station ).
	(3) By Block Station ( Gas Per Station ).
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•	ক্তি আন্তান কৰা প্ৰায়ে কিন্তু কৰি কৰি কৰা কৰিছে কৰি চুক্তি নিৰ্দেশ সূত্ৰ নিৰ্দেশ কৰিছে কৰিছে কৰিছে কৰিছে কৰিছে

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도 있는 그는 그 그리고 있는 경험에 가장 함께 함께 함께 보았다. 그 사람들이 보았다. 그는 그는 그를 보고 있는 것이다. 그렇게 그런 그는 그를 보고 말았다. 그를 보고 있는 것이 되었다. 그를 보고 있는 것이 되었다.	
그리 기사들은 사람들은 하는 사람들이 되었다면 하다 하는 것이다.	
- 이 기타 등 기타 등록하는 경우를 받았다면 보고 있습니다. 이 기타 이 기타 이 기타	
이번 전통 시간 바다를 가득 할 것 같아 하는 것이다. 이 이 나는 다음이다.	
- Banda (1987년 1일) 1일	유명 이 그리가 보고 되고를 된다.
그 사람이 가득하는 물을 하지 않는데 걸려지 않는데 하는데 하는데 다른데 다른데 되었다.	
	: 물리: 이 보고 회장 크리티스 클로스티
	"생님도 주는 이렇게 나타살이 없다겠다".
- 회사 기사 중국 중국 경험 등 기관 등 기관 기관 (1982년 - 1982년 - - 1982년 - 1982	일이 얼마 이렇는 그는 얼마를 가게 하셨습니?
그리는 가는 사람들은 살림을 받는 것이 되었다.	
	(B) : [1] -
그는 내용 사람들의 불통 기존을 통하는 것이 되었다. 그는 이 사람들은 다른 사람들이 되었다.	
그리시 그리 시즌 경기를 하게 되었다. 그리지 그리고 하는데 그리고 있다.	
그 이번 등로 회사를 즐겁는 것이 모든 등을 하는데 있는데 그리고 있다.	사이들일 보다님님하는 등 보호되었을 모임
그리고 있다. 그렇게 얼마를 보는 것이 되는 것이 없는 사람이 없다.	이상 없이 작업을 내려가 되었다고 있을까?
	오늘 아이가 얼마나 얼마나 나를 먹는다.
- TO THE SERVICE SERV	
그는 그런 요즘 하루를 들었다. 그는	마리 등에 다 보는 다른 경찰 때에 다른 것이다.
- 1. 이 등 이는데 불통하는 경찰에는 하는 것 같아. 이 등 경찰 (1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
	그리아 사회로 돌아 가는 그리네네요.
그는 그 목록하는 경찰 등록 등록 등록 하는 것 같아. 그는 그 것 같아.	
그님, 그런 그렇게 화가족하게 하면 하루 무슨 이 것을 만든 것이 없다.	
	[2] - 그 이렇게 나는 얼굴하는 얼굴 말했다.
그 아이지 한다 동물 중국 중국 경험에 가장하는 그들이 하는데 하다.	
- Barton Barton (1985) - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1 - Barton Barton (1985) - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1	
아니 하는 경찰 화장을 가는 경우를 하나 하나 있다. [ ] 하는	
그 일반 : 불통화결과 환경 경우 하는 것이 있는 그 같은 그 없는 그 없는 그 없는 것이 없는 것이 없는 것이다.	생생님 한 돈 보고 하는 아들에게 한 밤하네요.
그 그는 지원 경화를 살았습니다. 그리고 그는 사람이 되었다고 있는다.	
는 사람들이 되었다. 그는 사람들은 사람들이 가는 물을 하는 것들이 되었다. 그는 사람들이 되었다. 그는 사람들이 되었다. 그는 사람들이 되었다. 그들은 사람들이 발표를 들었다. 그는 사람들이 되었다. 그는 사람들이 되었다. 그는 사람들이 되었다.	
그 이 항 환경 바로 바로 보고 하는 것이 되었다.	
그 사회 보이 그는 그는 사이 전화된 회의 점에 작용되었다. 사이 생활하고 하실되었다. 그는 사이 가지 않는 그는 사이를 받는 것이 되었다.	
그러움이다. 전 시설문이들의 다른 경우 등이 아니라 모든 그는 것이 되는 것이다.	





				기가 있다면 하는데 사람이 있는데 그렇게 되었다. 기가 있는데 기가 있는데 기가 있는데 이 기가 있다.	
				로 시스템 기능을 다른 생각으로 시간을 받는 것으로 하고 있다. 12. 15:16 - 15:15 등 15:15	- 24
	병명 이 방법 발표			요즘 가는 사용하는 것이 되었다. 그는 소프로 보이라고 말하고 말하는 것이 되었다.	
그는 가는 얼룩한 경우					
그 그러워 하는 사람이 물이		일이 하기 같아서 아무슨 글로만 된다. 그리아 아무리는 그는 그 글로만 하게 된다.			
					Artus III. Valenta
나타보다 이 얼굴을 잃었다.					
					4,35
				가 되었다. 학자는 생각 전에 가장 보고 있었다. 그리고 있다. 19 1일 : 10 10 10 10 10 10 10 10 10 10 10 10 10	
				사람들의 등 하는 것이 말 보면 하는 것으로 되었다. - 사람들은 그런 사람들이 되고 있습니다.	
			보기되었다는 아이들의 그리고를 잃다.		

#### APPENDIX-VIII

List of Data Copy Obtained During the Survey at PERTAMINA Area-II.

#### 1. General to be described in 1941 time to

- 1). POLICYING ORGANIZATION CHART.
  - a. Direktorat Eksplorasi & Produkci.

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- b. Koordinator Wilayah.
  - c. Unit Eksplorasi & Produksi.
    - d. Bidang Eksplorasi.
  - f. Bidang Eksploitasi.
  - g. Bidang Bor,
    - h. Bagian Bor Lapangan.
  - i. Bidang Cas.
  - j. Technical Dep. (rade by free hand).
  - k. Organigram & Establisment Bidang Eksplorasi UEP-II.
  - 1. Manning Wilayah-II Plaju.
    - 2). INDEXING UNTUK HICROPILM SYSTEM.
    - 3). STUDI & PERENCANAN. SISTIM ADMINISTRASI KEARSIPAN PERTAMINA PERPADU 1978.
- 4). PROCHAN PELAKSAHAAN KICROPILM SYSTEM 1974.
  - 5). POLLOWING MAPS.
    - a. Wilayah Kerja Pertambangan (WKP) Wil. II
    - b. Untuk Kinyak Vil.II

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c. South Sumatra Gas Project - Pusri III
Gathering & Transmission Gas Pipeline.

#### 2. Exploration.

- 1). Periodical Report.
  - a. Weekly Geological Report (Blank Sheet).
  - b. Honthly Geological Report (Blank Sheet).
- c. Daily Traverse Report (Blank Sheet).
  - d. Paleontological Laboratory, Datly Report (Blank Sheet).
  - e. Paleontological Laboratory, Daily Report (Blank Sheet).

- f: Paleantological laboratory, Monthly Report (Blank Sheet).
- g. Well Daily Report with DST Report (Blank Sheet).
- h. PENTAUINA UNIT EP II PLAJU 1589 H. D. ... LAPORAN BILANAN BIDANO EXSPLORASI, ACUSTUS-1978.
- i. Pirtamina unit ep-îlîplâjudê darûdeyê şeredakê je. LAPORAN HULANAN BIDANO EXSPLORASI, SEPTEMBER-1978.
- 3. LAPORAN TAHUHAN, TH. 1973 BUHAGIAN EKSPLORASI UNIT EP-II.
- k. PERTAUINA UNIT EP-II PLAJU Serobiasi dani LAPORAN BULANAN BACIAN EXSPLORASI, DESERBER-1974.
- 1. RINGKASAN LAPORAN TAHUNAN KINIATAN EKSPLORASI TH. 1976
- D. LAPORAN TANUNCE UNIT EXSPLORAST & PRODUKSI-II 1977.

#### 2). Geophysics.

a. Following in Kenorandus EXS No. 160 Studi Penyelidikan Seisnio Daerah Pagar Gunung + Suban Jerli Swatra Selatan. Another the Sage Stranger and the

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- List of Contents.
- List of Kaps. The Contract the Market Market
- b. Pollowings in Final Report, North Laspung Seissic Project for PERTABINA - Unit II (May 1974).

त्मार करिए के पर है । इस्वर्ग अहिंद्रा **११** है

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- heading of Location Kap of Suspected Reet Growth.
- Heading of Time Contour Kap, Horizon-B
- Heading of Isochron, A-B.
- lieading of Seissic Section Line L-30A.
- Heading of Shot Point Hap, North Laspung.
- Heading of Vertical and Horizontal Loop Closure Hap, 医子解乳腺组织物腺外腺瘤 ء North Laspung.
- licading of lioise Analysis, North Lappung.

c. Followings in P. N. PERTALINA Unit-II, Ogan Penait, Sixth Report, Pagar Gunung Survey (1971 - 1972).

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- Heading of Location Kap (PL. 1a).
- Heading of Location Hap (PL. tb).
- Heading of Time Contour Map, Horizon 5 (PL. 11).
- . Heading of Time Section, Line TX-3 (PL. 13).
- Heading of Time Contour Hap, Horizon 5 (PL. 17b).
- Heading of Time Contour Rap, Horizon 2 (PL. 18a).
- Heading of Time Contour Kap, Horizon 2 (PL. 18b).
- Heading of Time Contour Hap, Horizon 1 (PL. 19).
- Heading of Time Contour Hap, Horizon 4 (PL.20).
- Heading of Time Contour Map, Horizon 6 (PL.21).
- Heading of Time Interval Contour Hap (PL. 22a).
- Heading of Time Interval Contour Nap (PL. 22b).
- Wheading of Time Interval Contour Map (PL.23).
- d. Followings (in Air Borne Hacheronetric Survey South East Shiatra PALINBANG AREA, NOVEMBER - DECIMBER 1972.
  - Cover.
  - 4 Table of Contents.
  - List of Plates.

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- List of Figures.
- Janes Carlos Company - Heading of Residual Field Intersity Contour Hap (Map Number 1).

- Heading of Residual Field Intensity Contour Hap (Hap Kumber 2).
- Heading of Residual Field Intensity Contour Hap (Hap Humber 3).
- Heading of Residual Field Intensity Contour Kap (Hap Number 4).
- Heading of Residual Field Intensity Contour Hap (Hap Humber 5).
- Heading of Residual Field Intensity Contour Hap (Hap Number 6).
  - Heading of Residual Field Intensity Contour Hap (Map Number 7).

Water Carlotte Contract

- Heading of Typical Magnetic Zones (Man Mumber 8).
- m licading of Comportson of Interpreted Aeromagnetic C,
  - Line 19-519 with Seismic Protile BAI (Hap Humber 9).
  - Reading of Interpretation Kap (Map Midder 10).

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  - Cover.
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  - RIPERINTIE HARDEN BASISPUNTEN EN KIKOPPUNTEN.
- 化铁铁矿 医毒素 医脑髓髓管 电管电影点 计选择数值的 化 f. A Table of Statistical Report for November 1978 (CSI Party 1814). The state of the specific of t
- g. A Seismio Line Hap (Komplek Palembang Selatan, Peta Kenajuan Kerja Penyelidikan Seissik, 1978 - 1979). 经证据 经国际经济 医肾髓管 医皮肤炎
- h. Statistik Kemajuan Harian Penembakan (Format Only).
- And the first the control of the property for the property of i. Ringkasan Laporan Pemboran, Penembakan & Dinamit (Format Only).

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·1、大线线路翻译的设施过程。

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#### 3). Geology.

a. Followings in LAPORAN PHYDAINIUMN SURFLY GEOLOGI DAERAH GURAI SUMATRA SELATAN, HHIO EKS-206. ARRIVER TO BEFORE A

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- Covering Letter (HEHORANIUM).
- List of Contents (ISI). British bloom accompany to gother at a
- List of DAFTAR CAMBAR. For what because to be an the gold hope in
- List of DAFTAR LAMPTRAN. Add fines fautiqued to will and a
- The test being francising to graduoll's b. Following in SEDEJENTOLOGICAL STUDIES ON THE TALANG AKAR FOUNTION IN THE LEMATANG BLOCK - SOUTH SUMATRA - INDONESIA, Report Ho.647.
  - List of Contents.
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- c. Following in the Basylen's Complouration of the North And South JAUBI AREA, RIMO EKS PL. RO. 207
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- d. Pollowings in PHERIKSAAN MICROPALLOPHOLOGI SURUR BENJAHG-10 HERORAHUH EKS 110.208.
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- e. Pollowing in USUL PENBORAH TANJUNG MICHES TOWN LOKASI-C.
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- h. Pollowing in P. H. PERTAUINA UNIT-II OCAN PAGNIT Sixth Report PAGARCUNUNG SURVEY 1971 - 1972.
  - List of Contents.
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# 4). Others

- a. Table of the total number of specific report PENTAURA UNIT EP-II
  EXPLORATION DEPARTMENT status Revender 1978.
- b. Distribution List of Report of PERTERIN EXP and UNIT-II
  Head Office.
- c. Exploration Filing System.

**建筑物的设施技术**的公司的主题工作

d. Organization and Hembers-List of Exploration Department of Pistamina Unit-11. (基础),要2000年的12000年。

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e. SHELL Standard Legend for EMP 1976. While date in the

#### 3. Engineering.

- 1). Periodical Report.
  - a. Following in Laporan Tahunan Bidang Produksi Unit EP-II tahun 1977.
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  - b. Followings in Laporan Bulanin Bidang Produkci September-1973.
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    - Laporan Efficiency Servicing Unit Bulant September 1978 Lampiran2 (Format Only). 1.没有能力的数数数。
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    - Rell Status Crude Oil Production, Lonth Augustus 1978 (Format Only). of the source of the and parameters
  - c. Followings in Laporan Sezester I-1978 Bidang Produksi.
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  - d. Followings in Laporan Bulanan Singkat, Unit EP-II Earet 1978 Plaju, April 1978. · 10 图形的对象 特殊的政策的方式
    - Cover.
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  - e. Followings in PERTABLICA Unit LP-II Laporan Bulanan Bahagian Eksploitasi Komplek Palembang Selatan, January 1978.

- Distribustion Chart.

  - LBBE-XPS, January 1978 Daftar Isi.
- f. Pollowings in Laporan Bulan April 1973.
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- g. Pollowings in Laporan Tahunan Bidang Cas Unit PP-II Tahun 1977. Cover

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- h. Following in Laporan Bulanan Singkat Unit LP-II Augustus 1978.
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  - Laporan Bulanan Singkat Unit E2-11 August 1978 (page 1 and 2) (Format Only)
  - Produksi Hinyak Th. 1978 Unit EP-II BBL/H (Format Only).
- i. Followings in Laporan Tahunan Produksi Pertamina Unit II 1972.
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  - Juniah Hari Yang Hilang Pegawai PATAMINA Unit-II Lapangan Janbi dan Pegawai Pemborong, akibat kecelakaan dalam th. 1972 (Format Only).
  - Table Pengirinan dan Penerinaan minyak/gas lapangan2 PIRTAUNU Unit-II tahun 1972 (I-III) (Forust Only).
- j. Followings in Bean Performance For Gas Well No.PL-1515

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- Cover.
- Hellhead Deliverability Test Analysis (page 9) (Format Only).

- k. Followings in Laporan Bulanan Bagian Produksi Jambi September 1978.
  - Cover.
  - Daftar Isi.
  - Well Status Versus Crude Oil Production September 1978 (Format Only).

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- Laporan Efficiency Well Servicing Units Bulan September 1978 Lapangan Jambi (Format Only).
- Perincian Jan Kerja Hilang (PBH-20,72,78,88,93) (Format Only).
- Perincian Jan Perbaikan Mekanik dari Hell Servicing Unit (PBH-77, 78, 88, 93) (Format Only).
- 1. Followings in Laporan Tahunan 1977, bidang Eksploitasi PERTANINA Unit 19-II Plaju.
  - Distribution Chart.
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  - Perbandingan Rencana Dan Pelaksanaan Pemboran Dalem Tahun 1977 Lampiran No. IIA-22. (Pormat Only)
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  - Produksi sebelum dan sesudah kerja ulang KPS Th. 1977
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  - Produksi sebelum & sesudah Kerja Ulang Jambi Th. 1977 1944 Lampiran No. 11A-3 (Format Only).
  - Produksi sebelum & sesudah Pengasanan 1977 KPS \ Configuration Ro. IIA-3d (Format Only).
  - Kajian Produksi Ninyak Unit HP-II Thi. 1977 (1960) Produksi Ninyak Unit HP-II Thi. 1977
  - Kajian Produksi Ninyak KPS Tahun 1977 A Self const (1-116) Lampiran No. IIB-16 (Format Only).
  - Kajian Produksi Kinyak Janbi Talem 1977

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  - Produksi Gas Harian Tekanan Tingci KPS-1977 (INSCR) (Format Only)
  - Produksi Gas Bulanan Tekanan Tinggi KPS-1977 (IBISCHI).(Format Only)

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- Produksi Gas Harian Tekanan Rendah LPS-1977 (X13C/b) (Yomat Only).
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- Produkei Harian Gas Tekanan Tinggi dari Compressor KPS (FISCHD)-1977 (Format Only).
  - Produksi Bulanan Gas Tekanan Tinggi dari Compressor KPS (IMSCFM)-1977 (Format Only):
  - Produksi Cas Harian Tekanan Tinggi Jambi-1977 (FMSCFD) (Format Only).
  - Produksi Cas Bulanan Tekanan Tinggi Janbi-1977 (ISISCHI)
    (Format Only).
  - Produksi Harian Gas Tekanan Kenengan Jambi-1977 (MISCHD)
    (Nomat Only).
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  - Froduksi Harian Cas Tekanan Rendah Jambi-1977 (HISCFD)
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  - Produksi Bulanan Gas Tekanan Rendah Jambi-1977 (MISCFM)
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- Penakaian Gas Harian Tekanan Tinggi IMSCFD/FBTU-1977
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- Pengiriman & Penerimaan Gas Harian Tekanan Tinggi ke & di Pusri 1938CFD/1977 (Format Only).
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  - Pemakaian Harian Cas lift KPS-1977 (1818CFD) (Format Only).
  - Penakaian Bulanan Gas Lift MPS-1977 (MESAN) (Pornat Only).
  - Penyediaan Gas/Feeding Untuk Compressor (1218CFD)-1977 (Format Only).
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  (Format Only).

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- Kajian Produksi Kinyak Unit EP-II Januari - Juni 1978 (Format Only).
- Kajian Produksi Ninyak KPS

  Januari Juni 1978 (Pormat Only).
- Kajian Produksi Kinyak Jambi and had a salah kaji Januari Juni 1978 (Format Only), Kajiah Januari)
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   MSCFD-1973 (Format Unly).
- Produksi Gas Tekanon Tinggi No.11c-12-2
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- Produksi Gas Tekanan Henengah Ho.110-12-3 - 1745CFD-1975 (Format Only).
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- Produksi Gas Tekanan Lendah Ro.110-1a-5
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- Produksi Gas Tekanan Kendah No.116-18-6 12:SCP:1-1978 (Poreat Only).
- Pengiriman & Penerimaan Gas Ke/Di Pusri (Pormat Only)
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- n. Following Itans in Laporan Bulanan Eksploitasi Oktober 1978.
  - Distribution Chart.
  - Cover.
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- o. Following Items in "Laporen Tahunan Bidang Pengeboran Th. 1977".

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  - Cover.
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    - Produksi Minyak Th. 1978 Unit MP-II BBL/H Lampiran Ro. 1 (Format Only).
    - q. Pollowings in Laporan Bulanan exsploitasi oktober 1978.
      - Pengukuran Tekahan Dasar (October 1978).
      - Hasil Uji Přodoksi & Hte SO-5.
      - Sumur Penghasil dan Produksi bulan Oktober 1978.
  - Produksi & Penakaian Gas-Janbi 1313 Bulan Oktober 1978 (Format Only).
    - Penbagian Produksi Zone dan Lapantan Bulan Oktober 1976.
    - Log Evaluation Sheet.
    - Persiapan Lokasi Pemboran sampai alhir Oktober 1978.
- The Persedican Dan Penakaian Bahan Kimia dan senen bor Hall BulaniOktober 1978. Election
  - in the sign of the graph of the contract of r. Followings in Laporan Tahunan-1977 Bidang Eksploitasi PERTAIINA Unit EP-II Plaju.
    - Renorandum
    - s. Following Items in "Laporan Tahunan Bidang Pengeboran Th. 1977"
      - Cover.
      - . 4 Daftar Isi.
      - Kegiatan Kerja Ulang Pertamina Unit 19-II, Lampiran No.2
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t. Pollowing Items in "Laporan Bulanan Bidang Pengeboran Unit Pollowing Bulan Hei 1978.

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- Cover.
- Status Angkutan Berat.
- Kegiatan Instalasi & Pengian Hanbatan2, Bulan Hei 1978.
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- Grafik Aktivitas Angkutan Berat,
- Daftar Rig Wilayah.
- u. Following Items in "Field Cas Honthly Reped".
  - Perakaian/Pengiriman Gas ke Pusri II, III, IV Bulan Kopember 1978
  - Perhitungan Gas ke Pusri dari PTSI (Field BN).
  - Laporan Bulanan Pengiriman Cas PENTARDA ke Pusri II, III, IV Bulan Ropember 1970.
  - Feunkaian/Fengiriaan Gas ke Pusri II, III, IV Balan Ropember 1978.
- v. Pollowing Items in "Monthly Gas Report Prepered" by Unit-II E.0
  - Ferhitungan Justah Cas yang dipakai oleh Pusri II, III, IV tanggal 1 31 Oktober 1978.
- w. Following Items in "Laporan Tahunun-1977 Bidang Eksploitasi Pertamina Unit EP-II Plaju".
  - Cover.
  - Daftar Isi.
- x. Laporan Bulanan Bahagian Produksi Kis (Format Only).
- y. Pollowing Items in "Laporan Bulanan Eksploitasi Oktober 1975".
  - Cover Latter.
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- 21. Seekly Production Report, 17 Hovember 1978.
- 22. Kingguan Eksploitasi, 21 Oktober 1973.
- 23. Lagoran Harian Unit iP-II, tgl.25 Nopomber 1978.

- 2). Following Items in Well File.
  - Programa Pemboran Lokasi ZVX-1 Limau Iliru.
  - Laporan Akhir Pemboran Benuang BH-13.
  - Daftar Ukuran Tubing Benuang BH-13 2 7/8"HJ J-55.
  - Keterangan Penyimpangan Benuang Bl-13.
  - Laporan Hingguan Pemboran Benuang bl:-13.
  - Dreaser Hagcobar D.A.T.A. Horning Report Bil-13,
  - Hasil Analisa Contoh Cairan Dari HKs, Test
    Benuang BN-13 3/3/1978
  - Daftar Keterungan Tentang Pahat Benuang Bl-13.
    - Laporan Penyemenan Benuang Bi!-13 13 3/8".
  - Perubahan keadaan Susur Bil-13, 3 Haret 1978.
  - Daftar selubung (casing) Benuing Bli-13 13 3/8" 24.1.1978.
  - Laporan Penzukuran BJ Adonan Sesen Wi-13 25/1/78 13 3/3".
  - Hasil Uji Kandungan Lapisan LBBE-KPS 1973 BH-13 22 April 1978 Lampiran Ho.5
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  - Lanoran Penyenenan Desak (Format).
  - Laporan Harian Hell Cneker (Format).
  - Laporan Harian Pengeboran (Format).
  - Penggunaan Bahan2 Kimia Disusur (Ponast).
  - Laporan Pengasanan No. (Forcat).
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  - Laporum Uji Kandungan Lapisan (Porust).
  - Daftar Keterangan Tiap Sumur Sanli Lapangan 100, Sumur 014.A Okt. 78
  - Programa Pengukuran Tekanan Dasar Supur (Format).
  - Laporan Pengukuran Tekanan Susur (Porust).
  - Tekanan Dasar Sumur (Poimat),
  - Oil Analysis, Laboratory report No. 16/75
  - Cas Analysis, Latoratory report 16, 17/75
  - Laboratorius Eksploitasi Analisa Air (Ponsat).

- POSIPIUT Bindraport No. 1 Pladju T. Tiga, 10 Rop. 1955
- Laporan Pengukuran Tekanan Sumur Timur E3-3 9-10-1975.
- Spuiter, Caslift of Casboiler 22 Jan 1951 38 Castaget a Bindraport No. 1 put No. 31 T. Jimar: 1402 person to 122 and 1865 and 1
- Laporan Pengasasan No. II EB-3 Tanggal 19-10-1975
- Sumur No. EB-3 Lapisan-H & 9-10-1975. or the weelf the stope is
- Laporan Reparasi/Pembaharuan Limau 51-22 9-8-1977 1 page.
- Analisa Air Prabunulih SPP 17-9-1973 FER garage
- Drill Stor Test Report P.H.PERTAIDIS Djambi, Pagar Deva Well No.1, No.6 Date 19-6-1968.
- Hasil Pengetesan Kapasitas Produksi Sumur Explorasi Benakat Timur EB-3 12-1-1973.
- Kesiringan Lubang Dan Penyimpangan Mendatar Dan Kedalaman Sebenarnya Sumur 18-3 5 Mei 1973.
- Cutting Report P.M.PERTAUDI of the continuous and an additional of the Djambi, Pagar Deka 1 No.9 For the continuous and t
- Laporan Contoh Inti-Samping
  Dide Wall Sample Report
  Plaju, Frabumulih, EB 1 page from 1401 m = 1376,5 m.
- Core Report Djanbi Pagar Dewa 13-5-58 1836 m 1837, 70 1 page.
- 3). Enventarisasi Drilling Equipment Rig (Format).
- 4). Keadaan Sumur Pada Akhir December 1977
  Tanjung Miring Barat/Timur.
- 5). Data Perhitungan Volumetris Lapangan (Pormat).
- 6. Cadengan Hinyak Lapangan (Format).
  - 7). Laporan Harian Kinyak dan Gas (Pomat).

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8). Laporan Bulanan Sumuré Penghasil (AL-29)
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LAPANGAN 213.

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- 9). Laporum Data2 Produksi Per Reservoir

  PENTUJINA MILAYAH-II

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- 10). Laporan Bulanan Sumur? Penghasil Per Station Pengumpul
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- 11). Laporan Bulanan Sumur? Penghasil Gas ver Station Penguapul Pikrailila UNIT EP-II DULANAN - OKTOBER 1978. LAFRGAN 100.
- 12). List of Reservoir Data Book Content.
- 13). Kode Reservoir.
- 14). Floring Items of Daftar Buku2 Dan Laporan di Perpustakaan Bahagian Production Engineering dan Reservoir Engineering PENTANIKA MILAYAH-II PLANU.
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- 15). Hell Status Versus Crude Oil Production
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16). Pollowing Items in "Dafter Laporan? Exeptorasi dan Buku2/Hadjallah di PERUSTAKAAN BEHAGIAH EXEPTORASI P.N.FESTINA UNIT-II PLAJU"
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#### 17). Technical Information.

a. HEKORANIUH 046/INP/76
LAPORAN HASIL PENERIKSAAN EUIKHENT DI TEST UNIT KSUJI-LANGUE

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- b. Laporan peneriksaan bejana 019/INP/75
- c. Laforan Percepesan Pipa no.015/1119/75
- d. HEIORANDUM Arsp 057/INF/75.
- e. HIKORANIUH Arsip 053/UPP/1977.
- f. HEIORANUM Arsip 059/UPY/1977.
- g. Pormat of Permohonan Otorisasi.
  - Penakaian Anggaran Kapital.
  - Pormat of Permohonan Anggaran Biaya Kapital.
  - Penjelasan Dari Usul Anggarani
- h. Example of Daftar Perkiraan.
  - Example of Bill of Haterial.
- i. Example of "Equipment Inventary" Production Fasilities Page 4,7,8,16,20,22,32,37,41,43.
- j. Example of "Equipment Inventory" DATA ALAT PRODUKSI One page example per each equipment (total 33 pages).
- k. LAPORAN MINCOUAN LAPANGANZ LOKASI, Prabumulih 14-10-1978.
- 1. LAPORAN NINGGUAN KEADAAN & PENSAPATAN ALATE BERAT B. JARAN Prabusulih 10-11-1978.
- D. EXPLES OF Haterial and Equipment Standard Code "Cocks & Valves" 75, 37, 45 354/362 75, 37, 43 312/828

n. ALAT PROD BOR PERLENCKAPAN

(Example of output sheet for material and equipment code)

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o. General Index to M.E.S.C.

- Cover
  - Table for SI conversions
  - Introduction to the general index to KESC

- List of groups

2 pages

- Clossary of Abbreviations

9 pages

- Clossary of SI Units for use by

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Group Companies

#### 4. Computer System.

- i). Information of Input item for the Polloving Application Programs.
  - a. HRPV + PDR.
  - b. RESERVE OIL & CONDENSATE.
  - c. LOCGING.
  - d. FLOWING BOTTOM HOLE PRESSURE.
  - e. STATIC.
    - f. SHILTHUIS MATERIAL BALANCE.
    - g. GAS DELIVERABILITY & ECONOMIC EVALUATION.
    - h, TRANER METHOD MATERIAL BALANCE.
    - i. DECLINE PRODUCTION.
    - J. FACTOR.
    - k. CASING DESIGN.
    - 1. GEOGRAPIC POLYEDER CONVERSION.
    - B. DRILLING MATERIAL.
    - n. DRILLING COST.
  - 2). Flow of Document.
  - 3). PDE Utilities name.
  - 4). VSI Standard and Optional Peatures.
  - 5). Hardware configuration.

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