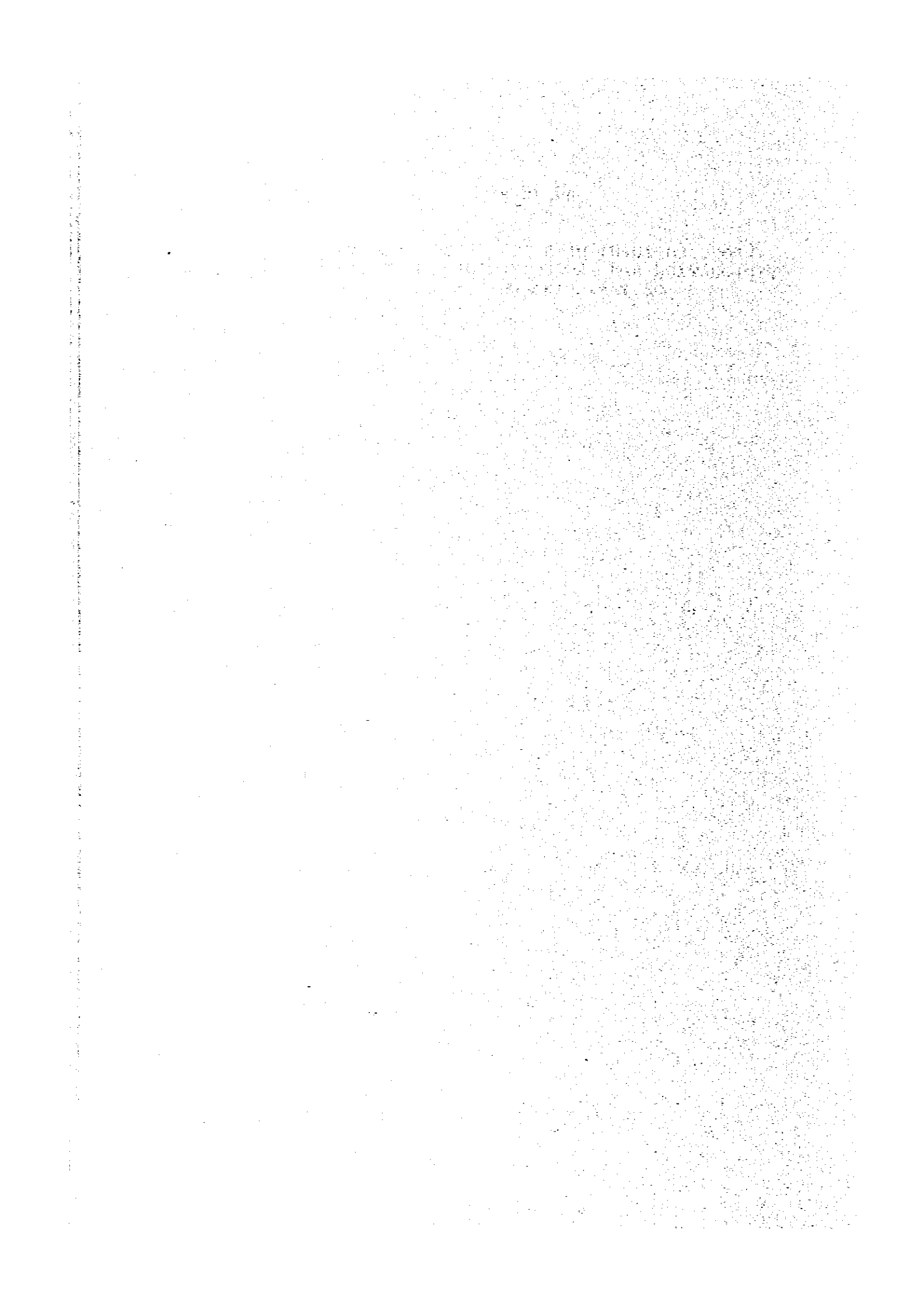


**ANNEX-2**

**PROPOSED INPUT DATA ITEM FOR PETROLEUM  
EXPLORATION AND PRODUCTION DATA BANK SYSTEM  
OF PERTAMINA UNIT EP-II**



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  - . 3 Gravity survey information
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OPERATION AREA INFORMATION

- 0 Common identification item
- 1 Unit name
- 2 Province name (Jambi, S. Sumatra, W. Sumatra, Riau, Bengkulu, or Lampung)
- 3 Area name
- 4 Field office name (Daerah or Prabumulih)
- 5 Field name (see Attachment II)
- 6 Date
- Prepared or revised date
- Date of contract
- 1 Topographic information
- 1 Kind of map (Elevation contour map or bathymetric map)
- 2 Map identification
- 3 Map title
- 4 East and west longitude
- 5 North and south latitude
- 6 Scale
- 7 Contour interval
- 8 Author and organization to which author belongs
- 9 Title, date and identification of report to which map is attached
- 2 Contract information
- 1 Title and identification of contract agreement
- 2 Kind of contract
- 3 Contractor
- 4 Period of contract
- 5 Title and identification of map drawn original map size under contract

Item No.	Input Data Item
A 2 6	Size of original contract area (Km <sup>2</sup> )
. . .	History of relinquishment
. . .	- Relinquished date
. . .	- Relinquished area size (Km <sup>2</sup> )
. . .	- Title, date and identification of map for updated area after each relinquishment

GEOPHYSICAL DATA INFORMATION

- 1 . . . . . Seismic survey information
- 0 . . . . . Common identification item
- 1 . . . . . Unit name
- 2 . . . . . Province name (Jambi, S.Sumatra, W.Sumatra, Riau, Bengkulu or Lampung)
- 3 . . . . . Area name
- 4 . . . . . Period
  - Period for field operation
  - Period for processing
  - Period for interpretation
  - Period for operation of well shooting

Field operation information

- 1 . . . . . General information
- 1 . . . . . Survey name
- 2 . . . . . Title, date and identification of order document
- 3 . . . . . Title, date and identification of final report
- 4 . . . . . Title, date and identification of invoice concerned
- 5 . . . . . Surveyor and organization to which surveyor belongs
- 2 . . . . . Summarized survey information
- 1 . . . . . Site Description
  - 1 . . . . . Classification of site description (see Attachment F)
  - 2 . . . . . Line cutting (Km)
  - 3 . . . . . Bridging (Km)
  - 4 . . . . . Land survey (Km)
  - 5 . . . . . Explosives
    - Primer (pcw)
    - Detonator (Kg or lbs)

Input Data Item

Item No.

- B 1 1 2 1 5 - Main charge (kg or lbs)
- . . . . 6 Drilling
- . . . . . - Number of drilling holes
- . . . . . - Total drilling depth (m)
- . . . . 2 Survey method
- . . . . . - Reflection or refraction
- . . . . . - Name of recording instrument
- . . . . . - Geophone type or name of streamer
- . . . . . - Group interval
- . . . . . - Geophone interval
- . . . . . - Number of geophone per group
- . . . . . - Shooting pattern (split, in-line, T, L, offset or end-on spread)
- . . . . . - Offset
- . . . . . - Length between centers of first group and last group, or length of streamer cable
- . . . . . - Source of energy
- . . . . . - Pattern of shot hole (single or multiple)
- . . . . . - Charge size
- . . . . . - Recording system (digital or analogue)
- . . . . . - Subsurface coverage
- . . . . . - Number of groups
- . . . . . - Number of auxiliary channel (if available)
- . . . . . - Sampling rate
- . . . . . - Recording filter
- . . . . . - Positioning method
- . . . . 3 Summarized results
- . . . . . 1 Shot point map information
- . . . . . - Title, date and identification of map
- . . . . . - Number of shot points



- 1 - Total length
- 2 - Distance between shot points
- 3 - Line interval
- 4 - Scale
- 5 - Author and organization to which author belongs
- 6 - Title, date and identification of report to which map is attached
- 7 Report information
  - 8 - Title, date and identification of report
  - 9 - Main contents
  - 10 - Main plates and enclosures
  - 11 - Author and organization to which author belongs
- 12 Magnetic tape information
  - 13 - Kind of tape (before processing or after processing)
  - 14 - Tape number (start and end)
  - 15 - Storage place
- 16 Operation cost information
  - 17 - Following items are properly tabulated
  - 18 - Total operation cost (U.S.\$ & Rp.)
  - 19 - Operation cost per month (U.S.\$ & Rp.)
  - 20 - Total length surveyed (Km)
  - 21 - Total shot point
  - 22 - Unit cost (U.S.\$ & Rp./Km & shot point)
  - 23 - Man power cost (U.S.\$ & Rp.)
  - 24 - Minor break down information of total operation cost according to a format of invoice
- 25 Processing information
- 26 General information
  - 27 - Survey name

Item No.	Input Data Item
B 1	Title, date and identification of order document
2	Title, date and identification of final report
3	Title, date and identification of invoice concerned
4	Location for processing
5	Contractor's name
6	Summarized processing information
1	Processing method
1	- Original processing or reprocessing
1	- Number of folds for recording
1	- Number of folds for processing
1	- Sampling rate
1	- Kind of section (unmigrated time section, unmigrated depth section, migrated time section or migrated depth section)
1	- Application of deconvolution (done before stack and/or done after stack)
2	Summarized results
1	Processed line number and shot point number (start and end)
2	Report information
1	- Title, date and identification of report
1	- Main contents
1	- Main plates and enclosures
1	- Author and organization to which author belongs
3	Magnetic tape information
1	Reference is made to information in B-1-1-2-3-3
4	Processing cost information
1	Following items are properly tabulated
1	- Total processing cost (U.S.\$ & Rp.)
1	- Total length processed (Km)
1	- Total shot points

- 1 2 2 4 - Unit cost (U.S. \$ & Rp./Km. & shot point)
- 2 2 2 4 - Minor break down information of total processing cost according to a format of invoice
- 3 1 1 1 Interpretation information
- 4 1 1 1 General information
- 5 1 1 1 Survey name
- 6 2 2 2 Title, date and identification of order document
- 7 3 3 3 Title, date and identification of final report
- 8 4 4 4 Title, date and identification of invoice concerned
- 9 5 5 5 Location for interpretation
- 10 6 6 6 Interpreter and organization to which interpreter belongs
- 11 2 2 2 Summarized interpretation information
- 12 1 1 1 Seismic section for interpretation (line number)
- 13 2 2 2 Summarized results
- 14 1 1 1 Time contour map information
  - Title, date and identification of map
  - Identification of shot point map related to the survey
  - Migrated or unmigrated
  - Structure or prospect name
  - Horizon name
  - Contour interval
  - Scale
  - Author and organization to which author belongs
  - Title, date and identification of report to which map is attached
- 15 2 2 2 Time difference map information
  - Title, date and identification of map
  - Identification of shot point map related to the survey

Item No. Input Data Item

- B 1 3 2 2 2 - Migrated or unmigrated
- . . . . . - Structure of prospect name
- . . . . . - Horizon name
- . . . . . - Contour interval
- . . . . . - Scale
- . . . . . - Author and organization to which author belongs
- . . . . . - Title, date and identification of report to which map is attached
- . . . . . 3 Depth contour map
- . . . . . - Title, date and identification of map
- . . . . . - Identification of shot point map related to the survey
- . . . . . - Migrated or unmigrated
- . . . . . - Structure or prospect name
- . . . . . - Horizon name
- . . . . . - Contour interval
- . . . . . - Scale
- . . . . . - Author and organization to which author belongs
- . . . . . - Title, date and identification of report to which map is attached
- . . . . . 4 Isopach map information
- . . . . . - Title, date and identification of map
- . . . . . - Identification of shot point map related to the survey
- . . . . . - Migrated or unmigrated
- . . . . . - Structure or prospect name
- . . . . . - Horizon name
- . . . . . - Contour interval
- . . . . . - Scale
- . . . . . - Author and organization to which author belongs
- . . . . . - Title, date and identification of report to which map is attached

Item No.	Input Data Item
5	Other map information
2	- Title, date and identification of map
2	- Identification of shot point map related to the survey
2	- Structure or prospect name
2	- Horizon name
2	- Consecut interval
2	- Scale
2	- Author and organization to which author belongs
2	- Title, date and identification of report to which map is attached
6	Report information
2	- Title, date and identification of report
2	- Main contents
2	- Main plates and enclosures
2	- Author and organization to which author belongs
7	Interpretation cost information
	Following items are properly tabulated
2	- Total interpretation cost (U.S.\$ & Rp.)
2	- Total length interpreted (Km)
2	- Total shot point
2	- Unit cost (U.S.\$ & Rp./Km & shot point)
	Minor break down information of total interpretation cost according to a format of invoice
4	Supplemental information
1	Well shooting information
1	General information
1	Survey name
2	Title, date and identification of order document

Item No.	Input Data Item
8	1 4 1 1 3 Title, date and identification of final report
.	. . . . 4 Title, date and identification of invoice concerned
.	. . . . 5 Surveyor and organization to which surveyor belongs
.	. . . . 2 Summarized survey information
.	. . . . 1 Summarized results
.	. . . . . Following items are properly tabulated
.	. . . . . - Well name
.	. . . . . - Datum level
.	. . . . . - Source of energy
.	. . . . . - Vertical depth from datum level to geophone
.	. . . . . - Travel time corrected to the vertical (from datum level to geophone)
.	. . . . . - Average velocity
.	. . . . . - Interval velocity
.	. . . . . 2 Magnetic tape information
.	. . . . . - Tape number (start and end)
.	. . . . . - Storage place
.	. . . . . 3 Report information
.	. . . . . - Title, date and identification of report
.	. . . . . - Main contents
.	. . . . . - Main plates and enclosures
.	. . . . . - Author and organization to which author belongs
.	. . . . . 4 Total cost of survey (U.S.\$ & Rp.)
.	. . . . . 2 Other survey information (relating to the seismic survey, if available)
.	. . . . . 1 General information
.	. . . . . 1 Survey name
.	. . . . . 2 Title, date and identification of order document
.	. . . . . 3 Title, date and identification of reports

Input Data Item

Item No.

- 4 Title, date and identification of invoice concerned
- 5 Surveyor and organization to which surveyor belongs
- Summarized survey information
- 1 Summarized results
- 2 Magnetic tape information
  - Tape number (start and end)
  - Tape storage
- 3 Report information
  - Title, date and identification of report
  - Main contents
  - Main plates and enclosures
  - Author and organization to which author belongs
- 4 Total cost of survey (U.S. \$ & Rp.)

Magnetic survey information

Common identification item

- Unit name
- Province name (Jambi, S. Sumatra, W. Sumatra, Riau, Bengkulu or Lampung)
- Area name
- Period
  - Period for field operation
  - Period for processing
  - Period for interpretation

Field operation information

General information

- Survey name
- Title, date and identification of order document
- Title, date and identification of final report

Item No.

Input Data Item

- B 2 1 1 4 Title, date and identification of invoice concerned
- . . . 5 Surveyor and organization to which surveyor belongs
- . . . 2 Summarized survey information
- . . . 1 Site description
- . . . 1 Classification of site description (see Attachment I)
- . . . 2 Line cutting (Km)
- . . . 3 Land survey (Km)
- . . . 2 Survey method
  - Airborne or land
  - Flight high
  - Name of magnetometer
  - Accuracy of magnetometer
  - Name of magnetometer for diurnal correction
  - Accuracy of magnetometer for diurnal correction
  - Recording system (digital or analogue)
  - Sampling rate
  - Name of recording instrument
  - Positioning method
- . . . 3 Summarized results
- . . . 1 Location map information
  - Title, date and identification of map
  - Number of stations
  - Total length
  - Line interval
  - Distance between stations
  - Scale
  - Author and organization to which author belongs
  - Title, date and identification of report to which map is attached



- 2 2 1 2 3 Report information
- Title, date and identification of report
- Main contents
- Main plates and enclosures
- Author and organization to which author belongs
- 3 Magnetic tape information
- Kind of tape (before processing or after processing)
- Tape number (start and end)
- Storage place
- 4 Operation cost information
- Following items are properly tabulated
- Total operation cost (U.S.\$ & Rp.)
- Operation cost per month (U.S.\$ & Rp.)
- Total length surveyed (Km)
- Total stations
- Unit cost (U.S.\$ & Rp./Km & station)
- Man power cost (U.S.\$ & Rp.)

Minor break down information of total operation cost according to a format of invoice

- 2 Processing information
- 1 General information
- 1 Survey name
- 2 Title, date and identification of order document
- 3 Title, date and identification of final report
- 4 Title, date and identification of invoice concerned
- 5 Location for processing
- 6 Contractor's name
- 2 Summarized processing information
- 1 Processing procedure

Item No.	Input Data Item
B 2 2 2 1	- Original processing or reprocessing
.	- Sampling point for processing
.	- International Geomagnetic Reference Field (I.G.R.F.) used for correction
.	- Filtration
.	Summarized results
.	1 Processed line number and station number (start and end)
.	2 Report information
.	- Title, date and identification of report
.	- Main contents
.	- Main plates and enclosures
.	- Author and organization to which author belongs
.	Magnetic tape information
.	3 Reference is made to information in B-2-1-2-3-3
.	4 Processing cost information
.	Following items are properly tabulated
.	- Total processing cost (U.S.\$ & Rp.)
.	- Total length processed (km)
.	- Total stations
.	- Unit cost (U.S.\$ & Rp./Km. & station)
.	Minor break-down information of total processing cost according to a format of invoice
.	Interpretation information
.	General information
.	1 Survey name
.	2 Title, date and identification of order document
.	3 Title, date and identification of final report
.	4 Title, date and identification of invoice generated

Item No.	Input Data Item
3	Location for interpretation
2	Interpreter and organization to which interpreter belongs
1	Summarized interpretation information
2	Magnetic record for interpretation (line number)
1	Summarized results
2	Residual field intensity map information
1	- Title, date and identification of map
1	- Identification of location map related to the survey
1	- Structure or prospect name
1	- Contour interval
1	- Scale
1	- Author and organization to which author belongs
1	- Title, date and identification of report to which map is attached
2	Interpretation map information
1	- Title, date and identification of map
1	- Identification of location map related to the survey
1	- Structure or prospect name
1	- Contour interval
1	- Scale
1	- Author and organization to which author belongs
1	- Title, date and identification of report to which map is attached
3	Other map information
1	- Title, date and identification of map
1	- Identification of location map related to the survey
1	- Structure or prospect name
1	- Contour interval
1	- Scale

Item No.	Input Data Item
B 2 3 2 2 3	<ul style="list-style-type: none"> <li>- Author and organization to which author belongs</li> <li>- title, date and identification of report to which map is attached</li> </ul>
. . . . .	4 Report information
. . . . .	- Title, date and identification of report
. . . . .	- Main contents
. . . . .	- Main plates and enclosures
. . . . .	- Author and organization to which author belongs
. . . . .	5 Interpretation cost information
. . . . .	Following items are properly tabulated
. . . . .	- Total interpretation cost (U.S.S & Rp.)
. . . . .	- Total length interpreted (Km)
. . . . .	- Total stations
. . . . .	- Unit cost (U.S.S & Rp./Km. & station)
. . . . .	Minor break down information of total interpretation cost according to a format of invoice
. . . . .	Gravity survey
. . . . .	Common identification item
. . . . .	Unit name
. . . . .	Province name (Jambi, S-Sumatra, W-Sumatra, Riau, Bengkulu or Lampung)
. . . . .	Area name
. . . . .	Period
. . . . .	- Period for field operation
. . . . .	- Period for processing
. . . . .	- Period for interpretation
. . . . .	Field operation information
. . . . .	General information

B	1	1	1	1	Survey name
.	.	.	.	2	Title, date and identification of order document
.	.	.	.	3	Title, date and identification of final report
.	.	.	.	4	Title, date and identification of invoice concerned
.	.	.	.	5	Surveyor and organization to which surveyor belongs
.	.	.	.	2	Summarized survey information
.	.	.	.	1	Site description
.	.	.	.	1	Classification of site description (see Attachment 1)
.	.	.	.	2	Line cutting (Km)
.	.	.	.	3	Land survey (Km)
.	.	.	.	2	Survey method
.	.	.	.	.	- Name of gravimeter
.	.	.	.	.	- Accuracy of gravimeter
.	.	.	.	.	- Recording system (digital or analogue)
.	.	.	.	.	- Name of recording instrument
.	.	.	.	.	- Positioning method
.	.	.	.	3	Summarized results
.	.	.	.	1	Location map information
.	.	.	.	.	- Title, date and identification of map
.	.	.	.	.	- Number of stations
.	.	.	.	.	- Total length
.	.	.	.	.	- Line interval
.	.	.	.	.	- Distance between stations
.	.	.	.	.	- Scale
.	.	.	.	.	- Author and organization to which author belongs
.	.	.	.	.	- Title, date and identification of report to which map is attached
.	.	.	.	2	Report information
.	.	.	.	.	- Title, date and identification of report

Item No. Input Data Item

- B 3 1 2 3 2 - Main contents
- Main plates and enclosures
- Author and organization to which author belongs
- 3 Magnetic tape information
- Kind of tape (before processing or after processing)
- Tape number (start and end)
- Storage place
- 4 Operation cost information
- Following items are properly tabulated
- Total operation cost (U.S.\$ & Rp.)
- Operation cost per month (U.S.\$ & Rp.)
- Total length surveyed (Km)
- Total stations
- Unit cost (U.S.\$ & Rp./Km & station)
- Man power cost (U.S.\$ & Rp.)

Minor break down information of total operation cost according to a format of invoice

- 2 Processing information
- 1 General information
- 1 Survey name
- 2 Title date and identification of order document
- 3 Title, date and identification of final report
- 4 Title, date and identification of invoice concerned
- 5 Location for processing
- 6 Contractor's name
- 2 Summarized processing information
- 1 Processing procedure
- Original processing or reprocessing
- Book density applied to processing (for bouguer correction)

Input Data Item

Item No.

B	3	2	1	- Filtration
.	.	2	2	Summarized results
.	.	.	1	Processed line number and station number (start and end)
.	.	.	2	Report information
.	.	.	.	- Title, date and identification of report
.	.	.	.	- Main contents
.	.	.	.	- Main plates and enclosures
.	.	.	.	- Author and organization to which author belongs
.	.	.	3	Magnetic tape information
.	.	.	.	Reference is made to information in B-3-1-2-3-3
.	.	.	4	Processing cost information
.	.	.	.	Following items are properly tabulated
.	.	.	.	- Total processing cost (U.S.\$ & Rp.)
.	.	.	.	- Total length processed (Km)
.	.	.	.	- Total stations
.	.	.	.	- Unit cost (U.S.\$ & Rp./Km & station)
.	.	.	.	Minor break down information of total processing cost
.	.	.	.	according to a format of invoice
.	.	.	.	Interpretation information
.	.	.	.	General information
.	.	.	1	Survey name
.	.	.	2	Title, date and identification of order document
.	.	.	3	Title, date and identification of final report
.	.	.	4	Title, date and identification of invoice concerned
.	.	.	5	Location for interpretation
.	.	.	6	Interpreter and organization to which interpreter belongs
.	.	.	.	Summarized interpretation information
.	.	.	2	Gravity record for interpretation (line number)
.	.	.	.	
.	.	.	1	

Item No.	Input Data Item
B 3 3 2 2	Summarized results
. . . . 1	Gravity map (bouguer anomaly map) information
. . . . .	- Title, date and identification of map
. . . . .	- Identification of location map related to the survey
. . . . .	- Structure or prospect name
. . . . .	- Contour interval
. . . . .	- Scale
. . . . .	- Author and organization to which author belongs
. . . . .	- Title, date and identification of report to which map is attached
. . . . . 2	Residual gravity map information
. . . . .	- Title, date and identification of map
. . . . .	- Identification of location map related to the survey
. . . . .	- Structure or prospect name
. . . . .	- Contour interval
. . . . .	- Scale
. . . . .	- Author and organization to which author belongs
. . . . .	- Title, date and identification of report to which map is attached
. . . . . 3	Other map information
. . . . .	- Title, date and identification of map
. . . . .	- Identification of location map related to the survey
. . . . .	- Structure or prospect name
. . . . .	- Contour interval
. . . . .	- Scale
. . . . .	- Author and organization to which author belongs
. . . . .	- Title, date and identification of report to which map is attached
. . . . . 4	Reports information



Exam No.	Index Data Item
3	1
3	2
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Item No. Input Data Item

- 3 4 1 1 5 Objective
- Surveyor and organization to which surveyor belongs
- 6 Summarized survey information
- 1 Site description
- 1 Classification of site description (see Attachment I)
- 2 Line cutting (Km)
- 3 Land survey (Km)
- 2 Survey method
- Source of energy
- Name of measuring instruments
- Recording system (digital or analogue)
- Name of recording instrument
- Positioning method
- 3 Summarized results
- 1 Location map information
- Title, date and identification of map
- Number of stations
- Total length
- Line interval
- Distance between stations
- Scale
- Author and organization to which author belongs
- Title, date and identification of report to which map is attached
- 2 Report information
- Title, date and identification of report
- Main contents
- Main plates and enclosures
- Author and organization to which author belongs

- 3 Magnetic tape information
- 3 - Kind of tape (before processing or after processing)
- 3 - Tape number (start and end)
- 3 - Storage place
- 4 Operation cost information
- 4 Following items are properly tabulated
  - Total operation cost (U.S.\$ & Rp.)
  - Operation cost per month (U.S.\$ & Rp.)
  - Total length surveyed (km)
  - Total stations
  - Unit cost (U.S.\$ & Rp./km & station)
  - Man power cost (U.S.\$ & Rp.)

Minor break down information of total operation cost according to a format of invoice

Processing information

General information

- 1 Survey name
- 2 Title, date and identification of order document
- 3 Title, date and identification of final report
- 4 Title, date and identification of invoice concerned
- 5 Location for processing
- 6 Contractor's name
- 2 Summarized processing information
- 1 Processing procedure (if necessary)
  - Original processing or reprocessing
  - Filtration
- 2 Summarized results
- 1 Processed line number and station number (start and end)
- 2 Report information

Item No.	Input Data Item
B 4 2 2 2 2 2	- Title, date and identification of report
.	- Main contents
.	- Main plates and enclosures
.	- Author and organization to which author belongs
.	3 Magnetic tape information
.	Reference is made to information in B-4-1-2-3-3
.	4 Processing cost information
.	Following items are properly tabulated
.	- Total processing cost (U.S.\$ & Rp.)
.	- Total length processed (Km)
.	- Total stations
.	- Unit cost (U.S.\$ & Rp./Km & station)
.	Minor break down information of total processing cost according to a format of invoice
3	Interpretation information
1	General information
1	Survey name
2	Title, date and identification of order document
3	Title, date and identification of final report
4	Title, date and identification of invoice concerned
5	Location for interpretation
6	Interpreter and organization to which interpreter belongs
2	Summarized interpretation information
1	Survey record for interpretation (line number)
2	Summarized results
1	Map information
.	- Title, date and identification of map
.	- Identification of location map released to the survey

Item No.	Input Data Item
B 1	- Structure or prospect name
2	- Contour interval
3	- Scale
4	- Author and organization to which author belongs
5	- Title, date and identification of report to which map is attached
6	Report information
7	- Title, date and identification of report
8	- Main contents
9	- Main plates and enclosures
10	- Author and organization to which author belongs
11	Interpretation cost information
12	Following items are properly tabulated
13	- Total interpretation cost (U.S.\$ & Rp.)
14	- Total length interpreted (Km)
15	- Total stations
16	- Unit cost (U.S.\$ & Rp./Km & station)
17	Minor break down information of total interpretation cost according to a format of invoice

Item No. Input Data Item

C GEOLOGICAL DATA INFORMATION

- . 1 Geological survey information
- . 0 Common identification item
- . 1 Unit name
- . 2 Province name (Jambi, S.Sumatra, W.Sumatra, Riau, Bengkulu, or Lampung)
- . 3 Area name
- . 4 Field office name (Bajubang or Prabumulih)
- . 5 Survey period
- . 1 Geological field survey information
- . 1 Survey identification
- . 2 Surveyor
  - Leader's name
  - Name of organization to which leader belongs
- . 3 Title and identification of the surveyed area map
- . 4 Title, date and identification of main map and figure prepared by survey team
- . 5 Title, date and identification of survey report
- . 6 Title, date and identification of invoice concerned
- . 7 Summarized survey information
  - Following items are properly tabulated
  - Total travers length (Km)
  - Approximate geologically compiled area size (Km<sup>2</sup>)
  - Cost information

Unit cost, U.S.S & Rp./Km<sup>2</sup>  
 Total cost, U.S.S & Rp.

Photogeological survey information  
 Survey identification

- C 1 2 2 Surveyor name
- Leader's name
- Name of organization to which leader belongs
- 3 Title and identification of the surveyed area map
- 4 Title, date and identification of main map and figure prepared by survey team
- 5 Title, date and identification of survey report
- 6 Title, date and identification of invoice concerned
- 7 Summarized survey information
  - Following items are properly tabulated
  - Approximate surveyed area size (km<sup>2</sup>)
  - Cost information
    - Unit cost, U.S.\$ & Rp./km<sup>2</sup>
    - Total cost, U.S.\$ & Rp.
- 3 Other geological survey information
- 1 Survey identification
- 2 Surveyor name
  - Leader's name
  - Name of organization to which leader belongs
  - Title and identification of the surveyed area map
  - Title, date and identification of main map and figure prepared by survey team
- 5 Title, date and identification of survey report
- 6 Title, date and identification of invoice concerned
- 7 Summarized survey information
  - Following items are properly tabulated
  - Approximate surveyed area size (km<sup>2</sup>)
  - Cost information
    - Unit cost, U.S.\$ & Rp./km<sup>2</sup>
    - Total cost, U.S.\$ & Rp.

Input Data Item

Item No.

- C 2 Geological Analysis Information
- . . 0 Common identification item
- . . . 1 Unit name
- . . . 2 Province name (Jambi, S.Sumatra, W.Sumatra, Riau, Bengkulu or Lampung)
- . . . 3 Area name
- . . . 4 Field office name (Bejubang or Prabumulih)
- . . . 5 Field name (see Attachment II)
- . . . 6 Well name (if necessary, see Attachment III)
- . . . 7 Formation name (see Attachment IV)
- . . . 8 Reservoir name (see Attachment V)

A11-30

- . . . 1 Source rock analysis
- . . . 1 Analysis identification
- . . . 2 Title, date and identification of order document
- . . . 3 Title, date and identification of sample analysis report
- . . . 4 Title, date and identification of invoice concerned
- . . . 5 Reporter and organization to which reporter belongs
- . . . 6 Location of laboratory
- . . . 7 Summarized analysis information

Following items are properly tabulated

- . . . - Sample identification
- . . . - Sampling date
- . . . - Sampling depth
- . . . - Number of sample
- . . . - Unit cost, U.S.S./kg./analysis/sample
- . . . - Kind of analysis performed
- . . . - Organic carbon analysis
- . . . - Hydrocarbon analysis
- . . . - Vitrinite reflectance
- . . . XRF (Electron Spin Resonance)
- . . . above carbonization



- C 2 1 7 Thermal alteration index (kerogen colour)
- Coal rank
- VM % measurement (part of volatile matter)
- Kerogen C-H-O method (Infrared spectrum) and etc.
- 2 Paleontological analysis information
- 1 Foraminifera analysis information
- 1 Analysis identification
- 2 Title, date and identification of order document (if available)
- 3 Title, date and identification of sample analysis report
- 4 Title, date and identification of invoice concerned
- 5 Reporter and organization to which reporter belongs
- 6 Location of laboratory
- 7 Summarized sample analysis information
  - Following items are properly tabulated
  - Sample identification
  - Kind of sample (cuttings, subsurface core or surface rock)
  - Sampling date
  - Sampling depth
  - Number of sample
  - Unit cost U.S.\$ & Rp./analysis/sample
  - Total cost U.S.\$ & Rp.
- 2 Pollen analysis information
- 1 Analysis identification
- 2 Title, date and identification of order document (if available)
- 3 Title, date and identification of sample analysis report
- 4 Title, date and identification of invoice concerned
- 5 Reporter and organization to which reporter belongs
- 6 Location of laboratory

Item No.	Input Data Item
6	Summarized sample analysis information
7	Following items are properly tabulated
1	- Sample identification
2	- Kind of sample (cuttings, subsurface or surface rock)
3	- Sampling date
4	- Sampling depth
5	- Number of sample
6	- Unit cost U.S.\$ & Rp./analysis/sample
8	Total cost U.S.\$ & Rp.
3	Diatom analysis information
1	Analysis identification
2	Title, date and identification of order document (if available)
3	Title, date and identification of sample analysis report
4	Title, date and identification of invoice concerned
5	Reporter and organization to which reporter belongs
6	Location of laboratory
7	Summarized sample analysis information
8	Following items are properly tabulated
1	- Sample identification
2	- Kind of sample (cuttings, subsurface core or surface rock)
3	- Sampling date
4	- Sampling depth
5	- Number of sample
6	- Unit cost, U.S.\$ & Rp./analysis/sample
8	Total cost, U.S.\$ & Rp.
4	Other analysis information
1	Analysis identification (analysis name)
2	Title, date and identification of order document (if available)
3	Title, date and identification of sample analysis reports

- C 2 2 4 Title, date and identification of invoice concerned
- Reporter and organization to which reporter belongs
- Location of laboratory
- Summarized sample analysis information
- Following items are properly tabulated
  - Sample identification
  - Kind of sample (cuttings, subsurface core or surface rock)
  - Sampling date
  - Sampling depth
  - Number of sample
  - Unit cost, U.S.\$ & Rp./analysis/sample
  - Total cost, U.S.\$ & Rp.
- C 2 3 Petrographical analysis information
- Carbonate rock analysis information
- Analysis identification
- 1 Title, date and identification of order document (if available)
- 2 Title, date and identification of sample analysis report
- 3 Title, date and identification of invoice concerned
- 4 Reporter and organization to which reporter belongs
- 5 Location of laboratory
- 6 Summarized sample analysis information
- 7 Following items are properly tabulated
  - Sample identification
  - Kind of sample (cuttings, subsurface core or surface rock)
  - Sampling depth (in case of well sample)
  - Number of sample
  - Performed kind of analysis
    - Microscopic analysis,
    - Electron microscopic analysis,
    - Chemical analysis,
    - X-ray analysis,

Item No.	Input Data Item
C 2 3 1 7	Heavy mineral analysis, Clay mineral analysis, and etc.
. . . . .	- Unit cost, U.S.S & Rp./analysis/sample
. . . . .	Total cost, U.S.S & Rp.
. . . . .	Clastic rock analysis
. . . . .	Analysis identification
. . . . .	Title, date and identification of order document (if available)
. . . . .	Title, date and identification of sample analysis report
. . . . .	Title, date and identification of invoice concerned
. . . . .	Reporter and organization to which reporter belongs
. . . . .	Location of laboratory
. . . . .	Summarized sample analysis information
	Following items are properly tabulated
. . . . .	- Sample identification
. . . . .	- Kind of sample (cuttings, subsurface core or surface rock)
. . . . .	- Sampling depth (in case of well sample)
. . . . .	- Number of sample
. . . . .	- Performed kind of analysis
	Microscopic analysis,
	Electron-microscopic analysis,
	Chemical analysis
	X-ray analysis
	Heavy mineral analysis
	Clay mineral analysis
	and etc.
. . . . .	- Unit cost, U.S.S & Rp./analysis/sample
. . . . .	Total cost, U.S.S & Rp.
. . . . .	Other petrographical analysis information

Exam No.

Have been item

- C 2 3 1 Analysis identification
- 2 3 2 Title, date and identification of order document (if available)
- 3 3 3 Title, date and identification of sample analysis report
- 4 3 4 Title, date and identification of invoice concerned
- 5 3 5 Reporter and organization to which reporter belongs
- 6 3 6 Location of laboratory
- 7 3 7 Summarized sample analysis information
- 8 3 8 Following items are properly tabulated
- 9 3 9 - Sample identification
- 10 3 10 - Kind of sample (cuttings, subsurface core or surface rock)
- 11 3 11 - Sampling depth (in case of well sample)
- 12 3 12 - Number of sample
- 13 3 13 - Performed kind of analysis
- 14 3 14 - Unit cost, U.S.\$ & Rp./analysis/sample
- 15 3 15 - Total cost, U.S.\$ & Rp.

- C 2 4 Other geological analysis information
- 3 4 1 Kind of analysis
- 4 4 2 Analysis identification
- 5 4 3 Title, date and identification of order document (if available)
- 6 4 4 Title, date and identification of sample analysis report
- 7 4 5 Title, date and identification of invoice concerned
- 8 4 6 Reporter and organization to which reporter belongs
- 9 4 7 Location of laboratory
- 10 4 8 Summarized sample analysis information
- 11 4 9 Following items are properly tabulated
- 12 4 10 - Sample identification
- 13 4 11 - Kind of sample (cuttings, subsurface core or surface rock sample)
- 14 4 12 - Sampling depth (in case of well sample)
- 15 4 13 - Number of sample
- 16 4 14 - Performed kind of analysis

Item No.	Input Data Item
C 2	- Unit cost U.S.\$ and Rp./analysis/sample
C 3	Total cost U.S.\$ and Rp.
C 4	Study Result and Report information
C 5	Common identification item
C 6	Unit name
C 7	Province name (Jambi, S.Sumatra, W.Sumatra, Riau, Bengkulu or Lampung)
C 8	Area name
C 9	Field office name (Bajubang or Prabumulih)
C 10	Field name (see Attachment II)
C 11	Date
C 12	- Prepared or revised date for map and section
C 13	- Reported date for report
C 14	Map information
C 15	Geological map information
C 16	Title and identification of map
C 17	Author and organization to which author belongs
C 18	Brief description of map
C 19	Following items are properly tabulated
C 20	- Approximate size of geologically compiled area (km <sup>2</sup> )
C 21	- Map sheet size
C 22	- Scale
C 23	- Number of cross-section line supplemented to map
C 24	Title and identification of report to which map is attached
C 25	Author and organization to which author belongs
C 26	Brief description of map
C 27	Following items are properly tabulated
C 28	Tectonic map information
C 29	Title and identification of map
C 30	Author and organization to which author belongs
C 31	Brief description of map
C 32	Following items are properly tabulated

- C 3 1 2 3 - Object (surface or subsurface)
- . . . . . - Scale
- . . . . . - Number of cross-section line supplemented to map
- . . . . . - Map sheet size
- . . . . . 4 Title and identification of report to which map is attached
- . . . . . Structure contour map information
- . . . . . 3 Title and identification of map
- . . . . . 2 Author and organization to which author belongs
- . . . . . 3 Brief description of map
- . . . . .     Following items are properly tabulated
- . . . . . - Object (marker, reservoir or formation, see Attachment IV & V)
- . . . . . - Scale
- . . . . . - Contour interval
- . . . . . - Number of cross-section line supplemented to map
- . . . . . - Map sheet size
- . . . . . 4 Title and identification of report to which map is attached
- . . . . . 4 Isopach map information
- . . . . . 1 Title and identification of map
- . . . . . 2 Author and organization to which author belongs
- . . . . . 3 Brief description of map
- . . . . .     Following items are properly tabulated
- . . . . . - Object (reservoir or formation, see Attachment IV & V)
- . . . . . - Scale
- . . . . . - Contour interval
- . . . . . - Map sheet size
- . . . . . 4 Title and identification of report to which map is attached
- . . . . . 5 Iso-porosity map
- . . . . . 1 Title and identification of map

Item No.	Input Data Item
C 3	1 Author and organization to which author belongs
.	2 Brief description of map
.	3 Following items are properly tabulated
.	- Object (reservoir or formation, see Attachment IV & V)
.	- Scale
.	- Contour interval
.	- Map sheet size
.	4 Title and identification of report to which map is attached
.	6 Iso-permeability map
.	1 Title and identification of map
.	2 Author and organization to which author belongs
.	3 Brief description of map
.	Following items are properly tabulated
.	- Object (reservoir or formation, see Attachment IV & V)
.	- Scale
.	- Contour interval
.	- Map sheet size
.	4 Title and identification of report to which map is attached
.	7 Other map information
.	1 Kind of map
.	2 Title and identification of map
.	3 Author and organization to which author belongs
.	4 Brief description of map
.	Following items are properly tabulated
.	- Object (according to the kind of map)
.	- Scale
.	- Map sheet size
.	- Remarks (Contour interval, number of cross-section and etc., if necessary)





Item No.	Input Data Item
C 3	Following items are properly tabulated
4	- Means of correlation (lithological or geological time)
4	- Vertical and horizontal scale
4	- Correlated well name
4	- Chart sheet size
4	Title and identification of report to which chart is attached
5	Other section and/or chart information
1	Title and identification of section and/or chart
2	Author and organization to which author belongs
3	Brief description of section and/or chart, if necessary
	Following items are properly tabulated
	- Object
	- Means
	- Scale
	- Name of well relevant to section and/or chart
	- Section and/or chart sheet size
4	Title and identification of report to which section and/or chart is attached
6	Report information
1	Kind of report
	Periodical report (daily, weekly, monthly and annual report),
	Well resume report, Drilling proposal, Paleontological report,
	Field mapping report, Special study report, or work program
	and budget report
2	Title and identification of report
3	Author and organization to which author belongs
4	Main content (list only)
5	List and identification of main map and figure which are attached to reports

Item No.	Input Data Item
0	Well Data Information
1	Originally drilled well information
2	Common identification item
3	Unit name
4	Province name (Jambi, S.Sumatra, W.Sumatra, Riau, Bengkulu or Lampung)
5	Area name
6	Field office name (Prabumulih or Dejumbang)
7	Field name (see Attachment II)
8	Location name
9	Well name (see Attachment III)
10	Name of formation completed (see Attachment IV)
11	Name of reservoir completed (see Attachment V) completed date
12	Objective of well (wild cat, delineation, appraisal, producer, injector or observatory)
13	Well status after completion (oil producer, gas producer, water injector, gas injector, observatory, suspended or abandoned)
14	General information
15	Operator
16	Contractor in case of drilling according to drilling contract agreement
17	Type of well (vertical or deviated)
18	Drilling location (coordinate)
19	Universal transverse mercator (U.T.M) grid
20	G. Coordinate
21	Bottom hole location (coordinate) in case of deviated well
22	U.T.M. grid

Input Data Item

Item No.

D	1	1	5	2	G. Coordinate
.	.	.	6	.	Site description (see Attachment I)
.	.	.	7	.	Derrick floor elevation from sea level
.	.	.	8	.	Vertical length from well head base flange to derrick floor
.	.	.	9	.	Total depth
.	.	.	1	.	Measure depth
.	.	.	2	.	True vertical depth in case of deviated well
.	.	.	10	.	Plug back depth
.	.	.	11	.	Perforated interval for completion
.	.	.	12	.	Horizontal deviation at total depth in case of deviated well
.	.	.	13	.	Mean drift angle in case of deviated well
.	.	.	14	.	Spud date
.	.	.	15	.	Total days (from spud date to completed date)
.	.	.	16	.	Reason of abandoned in case of abandoned well
.	.	.	17	.	Total well cost (U.S.\$ & Rp.)
.	.	.	1	.	Tangible cost (U.S.\$ & Rp.)
.	.	.	2	.	Intangible cost (U.S.\$ Rp.)
.	.	.	3	.	Total cost (U.S.\$ & Rp.)
.	.	.	2	.	Completion information
.	.	.	1.	.	Type of completion (dual, annulus, single, twin, triple, or others)
.	.	.	2	.	Type of producing method (natural flow, rod pump, submersible centrifugal pump or gas lift)
.	.	.	3	.	Hole size and casing information
.	.	.	4	.	Following items are properly tabulated
.	.	.	.	.	- Hole size and interval
.	.	.	.	.	- size, depth, type and number of casing
.	.	.	.	.	Example: Type X-55, 54.5 lbs/ft, Buypass
.	.	.	4	.	Completion string information in case of well other than artificial lifting well
.	.	.	.	.	artificial lifting well
.	.	.	.	.	tubing information

- Tubing identification, size, type and number of tubing, and total strings depth      Example, type: J-55, 4.7 lbs/ft. E.U
- Date of installation
- Completion assembly
- Following items are properly tabulated
- Size, manufacture, model and depth of safety valve (storm choke)
  - Size, manufacture model and depth of injection valve
  - Size, manufacture, model, and depth of safety joint
  - Size, manufacture, model, and depth of sliding side door
  - Size, manufacture, model, and depth of packer(s)
  - Size, manufacture, model, and depth of seating Nipple(s)
  - Size, manufacture, model, and depth of anchor
- Completion string and rod pumping information in case of rod pump well
- Tubing information
- Size, type and number of tubing, and total string depth      Example, Type: J-55, 4.7lbs/ft. E.U.
- Subsurface pumping unit
- 1 Type of pump (tubing pump or rod/insert pump)
  - 2 Date of installation
  - 3 Pumping assembly
    - Manufacture, model, and A.P.I designations (if applicable) of pump
    - Type, bore size and length of barrel
      - Example, Type: Heavy wall
    - Type, diameter and length of plunger
      - Example, Type: Soft packed
    - Manufacture, model, size, and length of gas anchor
    - Manufacture, model, and size of tubing anchor/catcher
  - 4 Pumping assembly location
    - Top of pump
    - Standing valve depth

Item No.	Input Data Item
D 1	- Tubing anchor/catcher depth
2	Rod
3	Size model and length of polished rod
4	Identification, size, model and length of sucker rod
1	Surface mover unit (surface pumping equipment and prime mover)
2	Type of surface mover unit (crank counter balance, beam counter balance, airbalance or others)
3	Date of installation
4	Surface pumping equipment
1	- Manufacture and model
2	- Gear reducer torque capacity
3	- Type of gear reduction (single, double, or triple)
4	- Unit structural capacity
1	- Strokes and stroke length
2	Prime mover
3	- Kind (electric-motor, or gas, gasoline, and diesel engine)
4	- Manufacture
1	- Model
2	- Capacity
3	- Speed (R.P.M.)
4	Completion, string, and submersible centrifugal pumping information in case of submersible centrifugal pump well
1	Tubing information
2	- Size, type and number of tubing and total string depth Example, Type J-55, 4.7 lbs/ft. 2.U.
3	Completion assembly
4	- Size, manufacture, model and depth of safety valve, packer, sliding side door, etc.
1	Subsurface pumping unit
2	Date of installation
3	Pumping assembly
4	- Manufacture of pumping assembly
1	- Size, model, length, capacity, speed and number of stage or pump sections

- 1 - Size, model and length of gas separator section
- 2 - Size, model and length of seal section
- 3 - Size, model, length, capacity and speed of motor section
- 4 Subsurface power cable
- 5 - Manufacture
- 6 - Cable size
- 7 - Number of core
- 8 - Insulator and sheath
- 9 - Cable length by type of figure (round and flat)
- 10 Completion string and gas lifting information in case of gas lifting well
- 11 Type of flow (tubing, casing or macaroni)
- 12 Type of lifting (continuous or intermittent)
- 13 Type of installation (open, semiclosed, closed, chamber, macaroni, dual, or others)
- 14 Tubing information
- 15 - Tubing identification, size, type and number of tubing and total string depth Example, Type; J-55. 4.7 lbs/ft, I.U
- 16 - Size, type and number of macaroni pipe and total depth
- 17 Subsurface gas lift assembly
- 18 Date of installation
- 19 Gas lift assembly
- 20 Following items are properly tabulated
- 21 - Size, manufacture, model and depth of unloading valves
- 22 - Size, manufacture, model and depth of operating valve
- 23 - Size, manufacture, model and depth of mandrels
- 24 - Size, manufacture, model and depth of packer (s)
- 25 - Size, manufacture, model and depth of standing valve
- 26 Completion assembly of other string in case of multi strings
- 27 - Size, manufacture, model and depth of safety valve, packer, sliding side door, nipple, etc.

Input Data Item

Item No.

- 0 1 2 4 7 Surface equipment
- 0 1 2 4 7 - Manufacture and model of intermitter
- 0 1 2 4 8 Gas supply
- 0 1 2 4 8 - Surface design injection pressure
- 0 1 2 4 8 Perforation information
- 0 1 2 4 8 Following items are properly tabulated according to their respective objective
- 0 1 2 4 8 - Objective (completion, shut off, test or emergency)
- 0 1 2 4 8 - Date
- 0 1 2 4 8 - Interval
- 0 1 2 4 8 - Formation or reservoir name
- 0 1 2 4 8 - Size of string perforated
- 0 1 2 4 8 - Type and size of perforation
- 0 1 2 4 8 Example. Type; Thru tubing Unijet Aluminium
- 0 1 2 4 8 - Number and density of shot
- 0 1 2 4 8 Completion fluid
- 0 1 2 4 8 - Date of replace
- 0 1 2 4 8 - Annulus or/end tubing
- 0 1 2 4 8 - Property of fluid
- 0 1 2 4 8 Kind, density, volume, etc.
- 0 1 2 4 8 Well head assembly
- 0 1 2 4 8 1 Size, manufacture, model and working pressure of casing head assembly
- 0 1 2 4 8 2 Size, manufacture, model and working pressure of tubing head assembly
- 0 1 2 4 8 3 Size, manufacture, model and working pressure of Xmas tree and type of flange connected to its wing valve.
- 0 1 2 4 8 Abandonment information
- 0 1 2 4 8 - Date of abandonment
- 0 1 2 4 8 - Plug back information
- 0 1 2 4 8 Reference is made to information in (D-1-3-6)
- 0 1 2 4 8 - Description of each type of hole



Drilling operation information		
Type of rig	1	
Name of rig	2	
Bit record	3	
Model of mud pump	1	
Following items are properly tabulated according to their respective run number	2	
- Run number		
- Bit size		
- Model		
- Nozzle size		
- Interval		
- Footage		
- Hours		
- Rate of penetration		
- Bit condition		
Teeth, bearing and gage		
- Weight on bit		
- Rotary speed (R.P.M)		
- Pressure, liner size and stroke of mud pump		
Mud record	4	
Following items are properly tabulated according to their respective interval	1	
- Interval		
- Type of mud (fresh water base, salt water base, oil in water emulsion or oil base)		
- Mud properties		
weight, viscosity, water loss, P.N., sand content, salt content and oil content		
Volume of mud agents consumed	2	
Mud off test	3	
Following items are properly tabulated according to their respective tested depth		

Item No.	Input Data Item
1	- Tested depth
2	- Mud weight
3	- Pressure applied
4	- Fracture gradient and equivalent specific gravity
5	Primary cementing
6	Following items are properly tabulated according to their respective casing size
7	- Casing size
8	- Stage number and their depth
9	- Class, additive, slurry weight and number of sacks (with weight per sack) of cement
10	- Top of cement
11	- pressure test after cementing job
12	Test pressure, holding time and result
13	- Comment on remedial cementing
14	Squeeze cementing
15	Following item are properly tabulated according to their respective objective
16	- Objective (sealing off undesired perforation, plugging channel, repairing damaged casing, supplementing primary cement)
17	- Date
18	- Depth (interval)
19	- Perforation
20	- Size of string perforated, type and size of perforation, and number and density of shot
21	Example: Type, thru tubing, Unijet Aluminium
22	- Class, additive, slurry weight and number of sacks (with weight per sack) of cement
23	- Squeezing injection rate
24	- Squeezing maximum pressure
25	- Comments on results (pressure test, dry test, etc.)
26	Plug back job
27	Following items are properly tabulated according to their respective objective

- 8 - Objective (completion, sidetrack, abandon, lost circulation treatment or others)
- 9 - Kind of work (cement and/or bridge plug)
- 10 - Date
- 11 - Interval
- 12 - Cement job
- 13 - Class, additive, slurry weight and number of sacks (with weight per sack) of cement
- 14 - Bridge plug
- 15 - Depth, manufacture, model and size of plug
- 16 - Pressure test
- 17 - Test pressure, holding time and result
- 18 - Total cement and additive consumption
- 19 - Deviation survey
- 20 - Following item are properly tabulated.
  - 21 - Survey number
  - 22 - Kind of survey (torco, magnetic or gyro)
  - 23 - Measure and vertical depth surveyed
  - 24 - Drift angle by survey point
  - 25 - Direction by survey point
  - 26 - Horizontal deviation by survey point
  - 27 - Lost circulation
  - 28 - Following items are properly tabulated according to their respective depth.
    - 29 - Depth
    - 30 - Formation
    - 31 - Type of loss (total loss or partial loss)
    - 32 - Type and properties of drilling fluid at lost
    - 33 - Treatment method
    - 34 - Total volume lost
    - 35 - Total volume of additives, lost circulation materials and mud for treatment

Item No.	Input Data Item
D 1	- Balanced weight of drilling fluid
3	Troubles encountered during the course of drilling operation
11	- Date emergence
12	- Date overcome
.	- Kind of trouble
.	- Treatment method
.	- Comment on treatment result
13	Service contractor
.	Cement job
1	Mud engineering
2	Mud logging (Data Unit)
3	Well logs
4	Perforation
5	Coring
6	Drill stem test
7	Production test
8	Fluid sampling
9	Well stimulation
10	Wire line service
11	Directional survey
12	Others
13	Time analysis
14	Rigging up
1	Rigging down
2	Drilling
3	Round trip
4	Circulation
5	Coring
6	Reaming
7	Pressure test/injection test/mud off test
8	Running casing
9	

Input Data Item

Item No.

1	3	14	10
2	4	11	11
3	5	12	12
4	6	13	13
5	7	14	14
6	8	15	15
7	9	16	16
8	10	17	17
9	11	18	18
10	12	19	19
11	13	20	20
12	14	21	21
13	15	22	22

- Cementing
- Wait on cement
- Completion/swab/preparation
- Fishing
- Repairing mud pump
- Repairing equipment
- Logging time
- Production test / B.H.P
- Waiting
- Well shut in
- Deviation survey
- Others
- Total

Geological information

Geological markers

- Following items are properly tabulated
- Name of penetrated formation and/or markers
- Depth
- Drilling depth from derrick floor, true vertical depth (deviated well only) and subsea depth

Well logs

- Following items are properly tabulated
- Kind of log
- Run number
- Interval (drilling depth)
- Scale
- Date surveyed
- Coring
- Following items are properly tabulated
- Core identification

Item No.	Input Data Item
D 1	- Type of coring (conventional coring or wire line coring)
2	- Type of barrel (conventional barrel, rubber sleeve, or oriented core barrel)
3	- Kind (rock or diamond), manufacture, model and size of coring bit
4	- Interval
5	- Recovery
6	- Coring mud information
7	Type of mud (fresh water base, salt water base, oil in water emulsion or oil base)
8	Mud properties
9	Weight, viscosity, P.H. water loss and salinity
10	Side wall sample
11	Following items are properly tabulated
12	- Sample identification
13	- Sample depth
14	- Recovery
15	- Sampling mud information
16	Type of mud (fresh water base, salt water base, oil in water emulsion or oil base)
17	Mud properties
18	Weight, viscosity, P.H. water loss and salinity
19	Cutting sample
20	- Sampling interval
21	- Frequency of sampling
22	- Reference number of master log (mud logging record)
23	Well shooting
24	Reference is made to information in (B-1-4-1)
25	Testing information
26	Drill stem test
27	Test information

Item No.	Input Data Item
1	Type of test (open hole or cased hole)
2	Operator
3	Date
4	Tested interval
5	Tested formation or reservoir
6	Composition of test tool
7	- Beam size at top and bottom
8	- Size, length of test pipe (tubing or drill pipe)
9	- Model, size and depth of tester
10	- Identification, model, size and depth of pressure gauge, clock and thermometer
11	Test record of pressure with elapsed time
12	Kind (fresh water, salt water or others), length and weight of water cushion
13	Weight of mud in hole
14	Identification and depth of pressure gauge utilized
15	Following items are properly tabulated with elapsed time
16	- Tester open and closed time
17	- Hydrostatic pressure before and after test
18	- Initial flow pressure
19	- Initial closed-in pressure
20	- Final flow pressure
21	- Final closed-in pressure
22	Temperature
23	- Bottom hole temperature at measured depth
24	Recovered fluid information in test pipe
25	- Amount and specific gravity of recovered oil
26	- Amount and salinity of recovered water
27	- Amount of produce gas
28	- Others
29	BS&W, etc.
30	Recovered fluid information in bottom hole sampler
31	Type and size of bottom hole sampler
32	Amount and kind of fluid recovered in bottom hole sampler

Item No. Input Data Item

- 0 1 5 2 Formation interval test
- 1 Test identification
- 2 Type of test (single formation test, repeat formation test)
- 3 Operator
- 4 Date
- 5 Tested interval
- 6 Tested formation or reservoir
- 7 Amount and kind of fluid recovered in sample container
- 8 Formation pressure recovered at tested depth
- 3 Production test
- 1 Test identification
- 2 Type of test (oil or gas)
- 3 Operator
- 4 Test period
- 5 Tested interval
- 6 Tested formation or reservoir
- 7 Test strings
- 8 - Size, type and total depth of test strings
- 1 - Model and depth of safety valve (storm choke) if installed
- 2 Production test and pressure survey information
- 3 Identification, type, size and depth of pressure gauge, clock and thermometer
- 4 Survey record
- 5 - Choke size
- 6 Well head flowing or shut in pressure
- 7 Flow line pressure at choke down stream
- 8 Separator pressure
- 9 Flow rate of oil, gas and water
- 10 - BS & W
- 11 - Measure gravity of oil and water analysis



Item No.	Input Case Item
1	- Bottom hole flowing or shut in pressure in case of production test with bottom hole pressure survey
2	- Bottom hole temperature in case of production test with bottom hole temperature survey
3	- Productivity Index
3	- Pressure by depth
4	- Pressure by depths are tabulated independently of the above production log
5	- Following item are properly tabulated according to their respective run number
5	- Run number
5	- Combination of log
5	- Date
5	- Interval
5	- Survey number of relevant production test identification
5	- Injection test
5	- Test identification
5	- Kind of injection fluid (sea water, formation water, other kind of water, wet gas or dry gas)
5	- Properties of fluid
5	- Specific gravity, salinity and other main impurities in case of water
5	- Main components in case of gas
5	- Type of test (injection test only or injection test with bottom hole pressure survey)
5	- Operator
5	- Test period
5	- Tested interval
5	- Tested formation or reservoir
5	- Test strings
5	- Injection test and pressure survey information

Item No.	Input Data Item
D 1	Identification, model, size and depth of pressure gauge, clock and thermometer
5	
10	
1	Survey record
2	Following items are properly tabulated with elapsed time
.	- Choke size
.	- Breaking off pressure
.	- Injection rate
.	- Bottom hole flowing and shut in pressure
.	- Bottom hole temperature
.	- Injectivity index
6	Well stimulation
.	Job identification
1	Objective (production stimulation or injection stimulation)
2	Type of stimulation (matrix acidizing, fracture acidizing or hydraulic fracturing)
3	Operator
4	Period for treatment
5	Formation or reservoir name and interval for treatment
6	String through which treatment is conducted
7	- Size, type, total depth of string and packer depth
.	Type of base fluid (HCl, CH <sub>3</sub> COOH, HCOOH, HF, NH <sub>2</sub> SO <sub>3</sub> H or others)
8	Main additives
9	Summary of treatment
10	Following items are properly tabulated with elapsed time
.	- Injection rate, volume and kind of injected fluid (preflush, main, or after flush)
.	- Breaking off or fracturing pressure at well head
.	- Flowing pressure at well head
.	- Time waiting on reaction
.	- Flowing back and cleaning up hours
.	Summary of flow tests before, in between, and/or after treatment
11	

Item No.	Description
1	Well head pressure and bottom hole pressure if available
2	Work over, well information
3	Common identification
4	Unit name
5	Province (Jambi, S. Sumatra, W. Sumatra, Riau, Bengkulu or Lampung)
6	Area name
7	Field office name (Prabumulih or Bejulang)
8	Field name (see Attachment II)
9	Location name
10	Well name (see Attachment III)
11	Work over number (serial number of workover operation on original well)
12	Name of formation completed (see Attachment IV)
13	Name of reservoir completed (see Attachment V)
14	Completed date
15	Objective of work over (completed formation/reservoir change, status conversion, completion method change, shut off, plug back or additional perforation, stimulation or remedial work)
16	Well status after work over (oil producer, gas producer, water injector, gas injector, observatory, suspended or abandoned)
17	General information
18	Operator
19	Contractor in case of work over according to workover contract agreement
20	Bottom hole location (coordinate) in case of deviated well
21	U.T.M. grid
22	Bearing

Input Data Item

Item No.

- D 2 1 4 Derrick floor elevation from sea level
- . . . 5 Vertical length from well head base flange to derrick floor
- . . . 6 Total depth
- . . . 1 Measure depth
- . . . 2 True vertical depth in case of deviated well
- . . . 7 Plug back depth
- . . . 8 Horizontal deviation at total depth in case of deviated well
- . . . 9 Commenced date
- . . . 10 Total days (from commenced date to completed date)
- . . . 11 Total work over cost (U.S.\$ & Rp.)
- . . . 1 Tangible cost (U.S.\$ & Rp.)
- . . . 2 Intangible cost (U.S.\$ & Rp.)
- . . . 3 Total cost (U.S.\$ & Rp.)

Completion information

If available, data input for work over information is made according to items and item number as described in D-1-2, replacing it by D-2-2.

Workover operation information

If available, data input for workover information is made according to items and item number as described in D-1-3, replacing it by D-2-3.

Geological information

If available, data input for workover information is made according to items and item number as described in D-1-4, replacing it by D-2-4.

Testing information

If available, data input for workover information is made according to items and item number as described in D-1-5, replacing it by D-2-5.

PETROPHYSICAL AND FLUID PROPERTY INFORMATION

- 0 Common identification item
- 1 Unit name
- 2 Field office name (Bajubang or Prabumulih)
- 3 Field name (see Attachment I)
- 4 Well name (see Attachment III)
- 5 Formation name (see Attachment IV)
- 6 Reservoir name (see Attachment V)
- 7 Reported date

- 1 Core Analysis information
- 1 Analysis identification
- 2 title, date and identification of order document
- 3 title, date and identification of sample analysis report
- 4 title, date and identification of invoices concerned
- 5 Reporter and organization to which reporter belongs
- 6 Location of laboratory
- 7 Summarized analysis information

Following items are properly tabulated

- Sample identification
- Coring date of each sample
- Sampling depth
- Sampling size
- Number of sample
- Unit cost U.S.\$ & Rp./analysis/sample
- Kind of analysis (see Attachment VI)

Total cost U.S.\$ & Rp.

8

Input Data Item

Item No.

- 2 PVT analysis information
  - 1 Oil reservoir PVT analysis
  - 1 Analysis identification
  - 2 Title, date and identification of order document
  - 3 Title, date and identification of sample analysis report
  - 4 Title, date and identification of invoice concerned
  - 5 Reporter and organization to which reporter belongs
  - 6 Location of laboratory
  - 7 Kind of sample (subsurface sample or recombined sample)
  - 8 Summarized analysis information
- Following items for each sample are properly tabulated
- Sample identification
  - Sampling date
  - Sampling depth in case of subsurface sample
  - Sampling condition in case of subsurface sample
  - Temperature
  - Pressure
  - Separator condition in case of recombined sample
  - Temperature
  - Pressure
  - Unit cost by U.S. Std. Rp. per analysis per each sample
  - Kind of analysis performed (see Attachment VII)
  - Condensate reservoir PVT analysis (recombined sample)
  - 1 Analysis identification
  - 2 Title, date and identification of order document
  - 3 Title, date and identification of sample analysis report
  - 4 Title, date and identification of invoice concerned
  - 5 Reporter and organization to which reporter belongs
  - 6 Location of laboratory
  - 7 Summarized analysis information

Following items for each sample are properly tabulated

Item No.

- 7 - Sample identification
- 2 - Sampling date
- 2 - Separator condition
- 2 - Temperature
- 2 - Pressure
- 2 - Unit cost by U.S.G & Rp. per analysis per each sample
- 2 - Kind of analysis performed (see Attachment VIII)
- 2 - Volatile oil reservoir PVT analysis
- 1 - Analysis identification
- 2 - Title, date and identification of order document
- 3 - Title, date and identification of sample analysis report
- 4 - Title, date and identification of invoice concerned
- 5 - Reporter and organization to which reporter belongs
- 6 - Location of laboratory
- 7 - Kind of sample (subsurface sample or recombined sample)
- 8 - Summarized analysis information
- 8 - Following items for each sample are properly tabulated
  - Sample identification
  - Sampling date
  - Sampling depth in case of subsurface sample
  - Sampling condition in case of subsurface sample
  - Temperature
  - Pressure
  - Separator condition in case of recombined sample
  - Temperature
  - Pressure
  - Unit cost by U.S.G & Rp. per analysis per each sample
  - Kind of analysis performed (see Attachment IX)
  - Compositional studies and water analysis
  - 1 - Analysis identification
  - 2 - Title, date and identification of order document

Item No.	Input Data Item
E 2 4 3	Title, date and identification of sample analysis report
. . . 4	Title, date and identification of invoice concerned
. . . 5	Reporter and organization to which reporter belongs
. . . 6	Location of laboratory
. . . 7	Summarized analysis information
	Following items for each sample are properly tabulated
. . . .	- Kind of sample
. . . .	- Sample identification
. . . .	- Sampling date
. . . .	- Sampling place
. . . .	- Sampling condition
	Temperature
	Pressure
. . . .	- Unit cost by U.S.G. & Rp. per analysis per each sample
. . . .	- Kind of analysis performed (see Attachment X)



Item No.

Input Data Item

PRESSURE AND PRODUCTION DATA INFORMATION

- 0 Common identification item
- 1 Unit name
- 2 Field office name (Bajubang or Prabumulih)
- 3 Field name (see Attachment I)
- 4 Block station name
- 5 Well name (see Attachment III)
- 6 Well status (oil producer, gas producer, water injector, gas injector, observatory, suspended or abandoned)
- 7 Type of producing method (natural flow, rod pump, submersible centrifugal pump or gas lift)
- 8 Type of completion (dual, single, annulus, twin, triple or others)
- 9 Producing or injecting formation (see Attachment IV)
- 10 Producing or injecting reservoir (see Attachment V)
- 11 Month (for items 1, 3, 4 and 5) or date (for item 2)
- 12 Gas oil ratio ( $300\text{m}^3/\text{m}^3$ )  
The value of gas oil ratio in the Data Base stored through input procedure functions as a common identification item by which producing strings of wells with the value of gas oil ratio higher than  $300\text{m}^3/\text{m}^3$  are selected and relevant information are printed out as requested.
- 13 Water cut (50%) (water production amount/(water+oil) production amount)  
The value of water cut in the Data Base stored through input procedure functions as a common identification item by which producing strings of wells with the value of water cut higher than 50% are selected and relevant information are printed out as requested.

Item No.	Input Data Item
F 1	Monthly production and pressure data
. . 1	Monthly oil production amount
. . 2	Monthly gas production amount
. . . 1	Low pressure
. . . 2	Medium pressure
. . . 3	High pressure
. . 3	Monthly water production amount
. . 4	Cumulative oil production amount
. . 5	Cumulative gas production amount
. . . 1	Low pressure
. . . 2	Medium pressure
. . . 3	High pressure
. . 6	Cumulative water production amount
. . 7	Share factor
. . 8	Production days
. . 9	Historical months since putting service on production
. . 10	Choke size
. . 11	Casing pressure
. . 12	Tubing pressure
. . 13	Separator pressure
. . 2	Subsurface pressure data
	Reference is made to information in H-1-4-1, H-1-4-3 and H-1-4-7 on the following items
. . 1	General information
. . 2	Producing or injecting information
. . 3	Static bottomhole pressure, temperature and their depths
. . 3	Injection data
. . . 1	Kind of injection fluid (fresh water, sea water, formation water, other water, wet gas and/or dry gas)

Input Data Item

Item No.

- 1 Monthly injection amount
- 2 Injection pressure
- 3 Cumulative injection amount
- 4 Property of injection fluid (in case of water)
- 5 Specific gravity
- 6 Salinity
- 7 Other main impurities
- 8 Main components (in case of gas)
- 9 Main treatment (in case of water) (aeration, sedimentation, chemical treatment, filtration and/or other treatment)

Gas lift information  
 Identification of compressor station through which gas is delivered to the well

- 1 Well inlet pressure
- 2 Monthly gas injection utilized for gas lifting
- 3 Cumulative gas injection utilized for gas lifting

- Gas consumption data
- 1 Monthly and cumulative gas amount for injection
  - 2 Monthly and cumulative gas amount for Puzri
  - 3 Monthly and cumulative gas amount for refinery playu
  - 4 Monthly and cumulative gas amount for PIN Palembang
  - 5 Monthly and cumulative gas amount for power plant
  - 6 Monthly and cumulative gas amount for field use
  - 7 Monthly and cumulative gas amount for compressor fuel
  - 8 Monthly and cumulative flare gas amount

Item No. Input Data Item

RESERVES INFORMATION

- 0 Common identification item
- 1 Unit name
- 2 Province name (Jambi, S.Sunatra, W.Sunatra, Riau, Bengkulu or Lampung)
- 3 Area name
- 4 Field office name (Rajubang or Prabumulih)
- 5 Field name (see Attachment II)
- 6 Reservoir name (see Attachment V)
- 7 Year

- 1 Reserves information on oil reservoir
- 1 Oil and associated gas reserves at the beginning of year
- 1 Proved oil reserves
- 2 Probable oil reserves
- 3 Possible oil reserves
- 4 Proved associated gas reserves
- 5 Probable associated gas reserves
- 6 Possible associated gas reserves
- 2 Oil and associated gas production
- 1 Oil production during year
- 2 Cumulative oil production at the end of year
- 3 Associated gas production during year
- 4 Cumulative associated gas production at the end of year
- 3 Oil and associated gas extension or reduction (by revision) during year
- 1 Proved oil reserves
- 2 Probable oil reserves
- 3 Possible oil reserves
- 4 Proved associated gas reserves

Item No.

- 5 Probable associated gas reserves
  - 6 Possible associated gas reserves
  - Engineering report
- Following information is stored for reference in conjunction with the engineering reports by which original reserves and revision had been studied
- 1 Kind of report
  - 2 Title, date and identification of report
  - 3 Reporter and organization to which reporter belongs
  - 4 Main contents including reservoir name concerned
  - 5 Oil and associated gas reserves at the end of year
  - 1 Proved oil reserves
  - 2 Probable oil reserves
  - 3 Possible oil reserves
  - 4 Proved associated gas reserves
  - 5 Probable associated gas reserves
  - 6 Possible associated gas reserves

- 2 Reserves information on gas reservoir
- 1 Kind of reservoir (gas reservoir or gas condensate reservoir)
- 2 Gas and gas condensate reserves at the beginning of year
- 1 Proved gas reserves
- 2 Probable gas reserves
- 3 Possible gas reserves
- 4 Proved gas condensate reserves in case of gas condensate reservoir
- 5 Probable gas condensate reserves in case of gas condensate reservoir
- 6 Possible gas condensate reserves in case of gas condensate reservoir
- 3 Gas and gas condensate production
- 1 Gas production during year

Item No.	Input Data Item
C 2	Cumulative gas production at the end of year
3	Gas condensate production during year in case of gas condensate reservoir
4	Cumulative gas condensate production at the end of year in case of gas condensate reservoir
4	Gas and gas condensate extension or reduction (by revision) during year
1	Proved gas reserves
2	Probable gas reserves
3	Possible gas reserves
4	Proved gas condensate reserves in case of gas condensate reservoir
5	Probable gas condensate reserves in case of gas condensate reservoir
6	Possible gas condensate reserves in case of gas condensate reservoir
5	Engineering report
	Following information is stored for reference in conjunction with the engineering reports by which original reserves and revision had been studied
1	Kind of report
2	Title, date and identification of report
3	Reporter and organization to which reporter belongs
4	Main contents including reservoir name concerned
6	Gas and gas condensate reserves at the end of year
1	Proved gas reserves
2	Probable gas reserves
3	Possible gas reserves
4	Proved gas condensate reserves in case of gas condensate reservoir
5	Probable gas condensate reserves in case of gas condensate reservoir

Input Data Item

Item No.

6 2 6 6 Possible gas condensate reserves in case of gas condensate reservoir

The possible gas condensate reserves in case of gas condensate reservoir are determined by the amount of gas that can be produced from the reservoir. This is a function of the initial gas in place and the recovery factor. The recovery factor is a function of the reservoir characteristics and the production history. The possible gas condensate reserves are determined by the amount of gas that can be produced from the reservoir. This is a function of the initial gas in place and the recovery factor. The recovery factor is a function of the reservoir characteristics and the production history.

Item No.

Input Data Item

PRODUCTION OPERATION INFORMATION

1 Well test information  
 0 Common identification item  
 1 Unit name  
 2 Field office name (Sajubang or Prabumulih)  
 3 Field name (see Attachment I)  
 4 Block station name  
 5 Well name (see Attachment III)  
 6 Formation name surveyed (see Attachment IV)  
 7 Reservoir name surveyed (see Attachment V)  
 8 Date or period surveyed

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1 Well production or injection ability test information  
 1 General information  
 1 Test identification  
 2 Surveyor  
 3 Well status (oil producer, gas producer, water injector, gas injector, observatory, suspended or abandoned)  
 4 Type of completion (dual, single, annulus, twin, triple or others)  
 5 Type of producing method (natural flow, rod pump, submersible centrifugal pump or gas lift)

2 Test information  
 Following items are properly tabulated and printed out together with test separator condition, wellhead flowing pressure and field laboratory fluid analysis results such as oil gravity, salt content, sulfur content, hydrogen sulfide content, and main components of fluid in case of gas  
 - Test time  
 - Production or injection time interval



Item No.

X	1	1	2	- Choke size
.	.	.	.	- Production or injection rates of oil, gas and/or water
.	.	.	.	Reference report
.	.	.	3	- Title, date and identification of report
.	.	.	.	- Reporter and organization to which reporter belongs
.	.	.	.	
.	.	2	.	Production test information (with or without bottomhole pressure survey)
.	.	.	1	General information
.	.	.	.	Survey identification
.	.	.	1	Surveyor
.	.	.	2	Well status (oil producer, gas producer, water injector, gas injector, observation, suspended or abandoned)
.	.	.	3	Type of test (production test only or production test with bottomhole pressure)
.	.	.	4	Completion information Reference is made to information in D-1-2 or D-2-2 on the following items
.	.	.	2	Type of completion (dual, single, annulus, twin, triple or others)
.	.	.	1	Type of producing method (natural flow, rod pump, submergible centrifugal pump or gas lift)
.	.	.	2	Hole size and casing information
.	.	.	3	Completion strings information in case of well other than artificial lifting well
.	.	.	4	Completion string and rod pumping information in case of rod pump well
.	.	.	4	Completion string and submergible centrifugal pumping information in case of submergible centrifugal pumping well
.	.	.	4	Completion string and gas lifting information in case of gas lift well
.	.	.	5	Perforation information

Item No. Input Data Item

- H 1 2 2 6 Completion fluid
- Wellhead assembly
- Abandonment information
- Production test and pressure survey information
- 1 Type, size and depth of pressure gauge, clock and thermometer
- 2 Survey Record
- Following items are properly tabulated with elapsed time
- Choke size
- Wellhead flowing or shut-in pressure
- Flow line pressure at choke down stream
- Separator pressure
- Flow rates of oil, gas and water
- Basic sediment and water (BS&W)
- Specific gravity of oil and water salinity
- Bottomhole flowing or shut-in pressure in case of production test with bottomhole pressure survey
- Bottomhole temperature
- Productivity index
- 3 Pressures by depths
- Pressures by depths are tabulated independently of the above
- Reference report
- 4 Title, date and identification of report
- Reporter and organization to which reporter belongs
- Injection test information
- (with or without bottomhole pressure survey)
- General information
- 1 Survey identification
- 2 Surveyor
- 3 Well status (oil producer, gas producer, water injector, gas injector, observatory, suspended or abandoned)
- 4 Type of test (injection test only or injection test with bottomhole pressure survey)

ISSUE NO.

X	1	3	1	5	Kind of fluid (fresh water, formation water, other water, wet gas and/or dry gas)
.	.	.	.	6	Property of injection fluid (in case of water)
.	.	.	.	1	Specific gravity
.	.	.	.	2	Salinity
.	.	.	.	3	Other main impurities
.	.	.	.	6	Main components (in case of gas)
.	.	.	2	.	Completion information
.	.	.	.	.	Reference is made to information in D-1-2 or D-2-2 on the following items
.	.	.	1	.	Type of completion (dual, annulus, single, twin, triple or others)
.	.	.	2	.	Type of producing method (natural flow, rod pump, submergible centrifugal pump or gas lift)
.	.	.	3	.	Hole size and casing information
.	.	.	4	.	Completion string information in case of well other than artificial lifting well
.	.	.	4	.	Completion string and rod pumping information in case of rod pump well
.	.	.	4	.	Completion string and submergible centrifugal pumping information in case of submergible centrifugal pump well
.	.	.	4	.	Completion string and gas lift information in case of gas lift well
.	.	.	5	.	Perforation information
.	.	.	6	.	Completion fluid
.	.	.	7	.	Wellhead assembly
.	.	.	8	.	Abandonment condition
.	.	.	3	.	Injection test and pressure survey information
.	.	.	1	.	Type, size and depth of pressure gauge, clock and thermometer
.	.	.	2	.	Survey record
.	.	.	.	.	Following items are properly tabulated with elapsed time

Input Data Item

Item No.

- X 1 3 3 2 - Choke size
- Wellhead flowing pressure and shut-in pressure
- Flow line pressure at choke up stream
- Flow rate of water or gas
- Bottomhole injecting and shut-in pressure in case of injecting test with bottomhole pressure survey
- Bottomhole temperature
- Injectivity index
- Reference report
- Title, date and identification of report
- Reporter and organization to which reporter belongs
  
- 4 Subsurface pressure survey information
- 1 General information
- 1 Survey identification
- 2 Surveyor
- 3 Well status (oil producer, gas producer, water injector, gas injector, observatory, suspended or abandoned)
- 4 Type of survey (point survey, build up survey or falloff survey)
- 2 Completion information
- Reference is made to information in D-1-2 or D-2-2 on the following items
- 1 Type of completion (dual, single, annulus, twin, triple or others)
- 2 Type of producing method (natural flow, rod pump, submersible centrifugal pump or gas lift)
- 3 Hole size and casing information
- 4 Completion string information (other than artificial lifting)
- 4 Completion string and rod pumping information in case of rod pump well
- 4 Completion string and submersible centrifugal pumping information in case of submersible centrifugal pump well

1	4	2	4	Completion string and gas lifting information in case of gas lift well
5			5	Perforation information
6			6	Completion fluid
7			7	Wellhead assembly
8			8	Abandonment condition
1		3	1	Production or injection information
2			2	Shut-in date
1			1	Cumulative production or injection amount
2			2	Oil
3			3	Gas (producing gas and recycle gas for lifting)
4			4	Water
5			5	Rate prior test
1			1	Oil
2			2	Gas (producing gas and recycle gas for lifting)
3			3	Water
4			4	Pressure survey information
5			5	Survey record
6			6	Shut-in pressures and shut-in times are properly tabulated
7			7	Bottomhole pressures by depths
8			8	Bottomhole pressure by depths are properly tabulated
1			1	Static bottomhole pressure, temperature and their depths
2			2	Reference report
3			3	Title, date and identification of report
4			4	Reporter and organization to which reporter belongs
5			5	Field laboratory fluid analysis information

Input Data Item

Item No.

H	2	0	Common identification item
.	.	1	Unit name
.	.	2	Field office name (Bajubang or Prabumulih)
.	.	3	Field name (see Attachment I)
.	.	4	Station name
.	.	5	Formation name surveyed (see Attachment IV)
.	.	6	Reservoir name surveyed (see Attachment V)
.	.	7	Sampling place (well name(see Attachment III), high stage separator, medium stage separator, low stage separator, flow line, gathering line, trunk line or other places)
.	.	8	Date samples

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.	.	1	Sampling information
.	.	1	Smpling identification
.	.	2	Kind of sample
.	.	3	Sampling condition
.	.	1	Temperature
.	.	2	Pressure

.	.	2	Oil analysis information
.	.	1	Sample identification
.	.	2	Analysis date
.	.	3	Location of laboratory
.	.	4	Laboratory report number
.	.	5	Summarized analysis result
.	.	1	General oil property

Following properties of oil are properly tabulated

- Analysis method applied
- Specific gravity
- Kinematic viscosity for measured temperature
- Pour point

1 Basic sediment and water (BS&W)  
 2 Water content  
 3 American society for testing materials (A.S.T.M) distillation  
 4 Analysis method  
 5 Distillation contents  
 6 Distillation contents over a tested range of temperature  
 7 are properly tabulated together with initial boiling  
 8 point and their respective method

9 Specific gravities and aromatic content of distillation  
 10 specific gravities and aromatic contents of distillates  
 11 at some specific temperature points are tabulated in  
 12 respective method together with specific gravity and  
 13 pour point of residue

Gas analysis information

1 Sample identification  
 2 Analysis date  
 3 Location of laboratory  
 4 Laboratory report number  
 5 Summarized analysis result  
 6 General gas property  
 7 Following properties of gas are properly tabulated  
 8 - Analysis method  
 9 - Density  
 10 - Specific gravity of hydrocarbon (air=1)  
 11 - Heating value (net calorific value)  
 12 Components analysis  
 13 Mole percents or weight percents of flowing components  
 14 are properly tabulated as a result of analysis together  
 15 with information of their analysis method applied

Item No. Input Data Item

- 1 - Carbon dioxide CO<sub>2</sub>
- 2 - Dioxide O<sub>2</sub>
- 3 - Nitrogen N<sub>2</sub>
- 4 - Methan C<sub>1</sub>
- 5 - Ethane C<sub>2</sub>
- 6 - Propane C<sub>3</sub>
- 7 - i-Butane iC<sub>4</sub>
- 8 - n-Butane nC<sub>4</sub>
- 9 - i-Pentane iC<sub>5</sub>
- 10 - n-Pentane nC<sub>5</sub>
- 11 - Hexanes plus C<sub>6</sub><sup>+</sup>
- 12 - Other impurities (mercaptan, mercury and other heavy metals)

- 13 Water analysis information
- 14 Sample identification
- 15 Analysis date
- 16 Location of laboratory
- 17 Laboratory report number
- 18 Summarized analysis result

Constituents in water are classified into following three categories and properly tabulated together with information of general water properties such as resistivity, PH, corrosion action and bacteria colony.

- 19 Dissolved salt
- 20 - Sodium Na<sup>+</sup>(=K<sup>+</sup>)
- 21 - Potassium K<sup>+</sup>
- 22 - Calcium Ca<sup>++</sup>
- 23 - Magnesium Mg<sup>++</sup>
- 24 - Hydroxyl OH<sup>-</sup>
- 25 - Bicarbonate HCO<sub>3</sub><sup>-</sup>
- 26 - Carbonate CO<sub>3</sub><sup>2-</sup>
- 27 - Silica



Input Data Item

Item No.

- Chloride  $Cl^-$
- Silicate  $SiO_2$
- Iron  $Fe$
- Aluminum  $Al$
- Total dissolved salts
- Disolved gases
- Carbon dioxide  $CO_2$
- Ammonia  $NH_3$
- Hydrogen sulfide  $H_2S$
- Other salt minerals and microorganisms
- Phosphate  $PO_4$
- Calcium carbonate  $CaCO_3$
- Anaerobic sulfate - reducing bacteria
- Other organisms if necessary

1  
 5  
 4  
 2  
 X

Input Data Item

Item No.

PRODUCTION FACILITIES INFORMATION

- I . . . 0 Common identification item
- . . . 1 Unit name
- . . . 2 Province name (Jambi, S. Sumatra, W. Sumatra, Riau, Bengkulu or Lampung)
- . . . 3 Field office name (Bajubeng or Prabumulih)
- . . . 4 Field name (see Attachment I)
- . . . 5 Station name (name of block station, compressor station, gathering station, booster pump station or others)
- . . . 6 Date for delivery of station or date for installation of equipment.

Station general information

- . . . 1 Location name of station
- . . . 2 Main function of station (separation, storage, pumping, compressing, sweetening, dehydration etc.)
- . . . 3 Design capacity for treatment (capacity of separation, storage, pumping, compressing, sweetening, dehydration etc.)
- . . . 4 Name of wells or station from which fluid comes
- . . . 5 Name of station or final destination to which fluid goes
- . . . 6 Date for start up of station operation
- . . . 7 Drawing identification of flow diagram and plot plan of station
- . . . 8 Cost information
  - Cost for material (U.S.\$ & Rp.)
  - Cost for installation (U.S.\$ & Rp.)
  - Total cost for construction (U.S.\$ & Rp.)
  - Title, date and identification of invoice concerned
  - Contract document
  - Tables, drawings and identification of main equipment documents

Item No.	Input Data Item
H 1	History of stationwide turnaround
1	Period
2	Name of executor
3	Cost information
4	- Total cost for turnaround (U.S.\$ & Rp.)
5	- Title, date and identification of invoice concerned
6	- Title, date and identification of contract document
7	Vessel
8	Identification of vessel
9	Name of vessel
10	Kind of vessel (separator, knockout, absorber, surge tank, sump tank, air receiver, filter, absorber or others)
11	Name of manufacturer
12	Specification in case of separator, knockout, surge tank sump tank or air receiver.
13	Goods name
14	Model name
15	Type of vessel (horizontal cylinder, vertical cylinder, sphere or others)
16	Object of treatment or storage
17	Flow rate of oil and/or gas treated
18	Volume of vessel
19	Design pressure and test pressure
20	Design temperature
21	Material information of shell
22	Dimension of vessel (O.D. X S. to S. X wall thickness)
23	Design information of fluid treated (if necessary)
24	Agitator (yes or no)
25	Identification of agitator in case of the existence of agitator

Item No.	Input Data Item
1	Heating or cooling coil (yes or no)
2	Heat insulation (yes or no)
5	Weight for empty
14	Specification in case of absorber
15	Goods name
16	Model name
1	Kind of absorbent (CaCl <sub>2</sub> , amine, glycol, ADIP, Sulfinol or others)
2	Object of treatment
3	Flow rate of fluid treated (=nominal capacity)
4	Flow rate of fluid absorbed
5	Flow rate of absorbent solution or volume of CaCl <sub>2</sub>
6	Type and number of trays or type and quantity of packing
7	Design pressure and test pressure
8	Design temperature
9	Material information of shell
10	- Name of material, stress relieving and weld examination
11	Dimension of absorber (O.D x S to S x wall thickness)
12	Design information of fluid treated
13	- H <sub>2</sub> O concentration, H <sub>2</sub> S concentration and CO <sub>2</sub> concentration
14	Heat insulation
15	Weight for empty
5	Specification in case of stripper or stabilizer
1	Goods name
2	Model name
3	Kind of absorbent (amine, glycol, ADIP, Sulfinol or others)
4	Kind of gas or steam stripped
5	Flow rate of gas or steam stripped (=nominal capacity)
6	Flow rate of absorbent solution treated
7	Steam consumption or fuel consumption



Input Data Item

Item No.

- 1 Heat insulation (yes or no)
- 2 Weight for empty
- 3 Specification in case of adsorber
- 4 Goods name
- 5 Model name
- 6 Kind of adsorbent bed (bauxite, alumina gel, silica gel, molecular sieves, carbon, or others)
- 7 Object of treatment
- 8 Flow rate of fluid treated
- 9 Flow rate of fluid adsorbed
- 10 Volume of adsorbent bed
- 11 Regeneration method (open steam, closed steam, natural gas, flue gas or closed vapor)
- 12 Operation time cycle
- 13 Adsorption and regeneration time
- 14 Design pressure and test pressure
- 15 Design temperature
- 16 Material of shell
- 17 Dimension of adsorber (O.D. x S. to S. x W.T.)
- 18 Design information of fluid treated
- 19 H<sub>2</sub>S concentration, CO<sub>2</sub> concentration and H<sub>2</sub>O concentration
- 20 Heat insulation (yes or no)
- 21 Weight for empty
- 22 Identification of drawing concerned
- 23 Cost information
- 24 Total cost (U.S. \$ & Rp.)
- 25 Title, date and identification of invoice concerned
- 26 Maintenance history

Input Data Item

Item No.

1	2	8	1	Date of work.
2	2	8	2	Kind of work (inspection or repair)
3	2	8	3	Name of executor (name of inspector or worker)
4	2	8	4	Kind of inspection (see Attachment XI)
5	2	8	5	Kind of repair (see Attachment XIII)
6	2	8	6	Result of inspection
7	2	8	7	Title, date and identification of report.
8	3	8	3	Tank
9	3	8	1	Identification of tank
10	3	8	2	Name of tank
11	3	8	3	Kind of tank (crude oil storage tank, natural gasoline storage tank, demulsifier storage tank, defoamant storage tank, fuel storage tank or others)
12	3	8	4	Name of manufacturer
13	3	8	5	Specification of tank
14	3	8	1	Goods name
15	3	8	2	Model name
16	3	8	3	Type of tank (bolted, riveted or weld) (liquid tank-cone roof, dome roof, floating roof, expansion roof or other); gas tank-water seal type, dry seal type or underground type)
17	3	8	4	Object of storage
18	3	8	5	Nominal capacity (=volume of tank)
19	3	8	6	Dimension of tank (O.D. x height x W.T.)
20	3	8	7	Material of tank
21	3	8	8	Agitator information
22	3	8	9	- Yes or no
23	3	8	9	- Type, number and identification of agitator
24	3	8	9	Heating or cooling coil (yes or no)

Item No.	Input Data Item
1	Heat insulation (yes or no)
2	Weight for empty
3	Identification of drawing concerned
4	Cost information
5	- Total cost (U.S. \$ & Rp.)
6	- Title, date and identification of invoice concerned
7	Maintenance history
8	Date of work
9	Kind of work (inspection or repair)
10	Name of executor (name of inspector or worker)
11	Kind of inspection (see Attachment XI)
12	Kind of repair (see Attachment XIII)
13	Result of inspection
14	Title, date and identification of report.
15	Heat exchanger
16	Identification of heat exchanger
17	Name of heat exchanger
18	Kind of heat exchanger (heater, evaporator, reboiler, cooler, chiller, condenser or other heat exchanger)
19	Name of manufacturer
20	Specification of heat exchanger
21	Goods name
22	Model name
23	Type of heat exchanger (vertical or horizontal) (shell and tube type, fixed tube sheet type, floating heat type, plate type, plate fin type, air cooled type or others)
24	Object of heating or cooling
25	Nominal capacity (kcal/hour duty)



- I 4 5 6 Heating surface area
- Bare and extended
- 7 Dimension of heat exchanger (O.D. x overall length)
- 8 Material of heating surface
- 9 Tube information (number x O.D. x W.T. x length)
- 10 Weight for empty
- 11 Other design information
- Following items are tabulated properly together with higher and lower temperature sides of heat exchanger
- Name of fluid
- Number of pass
- Design flow rate
- Design pressure
- Test pressure
- Inlet temperature
- Outlet temperature
- Identification of drawing concerned
- Cost information
- Total cost (U.S. \$ & Rp.)
- Title, date and identification of invoice concerned
- Maintenance history
- 1 Date of work
- 2 Kind of work (inspection or repair)
- 3 Name of executor (name of inspector or worker)
- 4 Kind of inspection  
(see Attachment XI)
- 5 Kind of repair  
(see Attachment XIII)
- 6 Result of inspection
- 7 Title, date and identification of report

Input Data Item

Item No.

1	5	Fired heater
.	.	Identification of fired heater
.	1	Name of fired heater
.	2	Kind of fired heater (steam generator, crude oil heater, reboiler for glycol hydrator, LPG vaporizer etc.)
.	3	Name of manufacturer
.	4	Specification of fired heater
.	5	Goods name
.	6	Model name
.	7	Type of fired heater (horizontal or vertical) (direct heater, indirect water bath heater, salt bath heater etc.)
.	8	Object of heating (water, crude oil triethylene glycol, LPG, Sulfinol etc.)
.	9	Nominal capacity (thermal duty)
.	10	Heating surface area
.	11	- Fire and smoke side
.	12	- Heating side of thermal fluid in bath
.	13	Dimension of fired heater (O.D. x overall length)
.	14	Material of heating surface
.	15	Tube information (number x O.D. x W.T. x length)
.	16	Name of thermal fluid in bath (water, dowtherm, KNO <sub>3</sub> etc.)
.	17	Name of fuel
.	18	Design flow rate of fluid heater or steam vaporized
.	19	Design pressure and test pressure for heated fluid side and bath side
.	20	Design inlet and outlet temperature for fluid heated
.	21	Setting pressure of safety valve for heated fluid side and bath side
.	22	Weight for empty
.	23	Identification of drawing concerned

Input Data Item

Item No.

I	5	7	Cost information
.	.	.	- Total cost (U.S. \$ & Rp.)
.	.	.	- Title, date and identification of invoice concerned
.	.	8	Maintenance history
.	.	.	Date of work
.	.	2	Kind of work (inspection or repair)
.	.	3	Name of executor (name of inspector or worker)
.	.	4	Kind of inspection (see Attachment XI)
.	.	5	Kind of repair (see Attachment XIII)
.	.	6	Result of inspection
.	.	7	Title, date and identification of report.
.	6	.	Refrigerator
.	.	1	Identification of refrigerator
.	.	2	Name of refrigerator
.	.	3	Kind of refrigerator (compressor refrigerator or absorption refrigerator)
.	.	4	Name of manufacturer
.	.	5	Specification in case of compressor refrigerator
.	.	.	Goods name of compressor
.	.	1	Model name of compressor
.	.	2	Type of refrigerator (two-stage system incorporating low-temperature booster pump, two-stage system in cascade form, or others)
.	.	3	Object of refrigeration (name of brine)
.	.	4	Name and charged weight of refrigerant
.	.	5	Nominal capacity (thermal duty)
.	.	6	Flow rate, inlet temperature and outlet temperature of brine at evaporator
.	.	7	Compressor information
.	.	8	

Input Data Item

Item No.

1	6	5	8	- Type
.	.	.	.	- Number
.	.	.	.	- Capacity
.	.	.	.	- Discharge pressure
.	.	.	9	Condenser information
.	.	.	.	- Name and flow rate of coolant
.	.	.	.	- Cooling surface area
.	.	.	10	Expansion valve and its model name
.	.	.	11	Heating surface area of evaporator
.	.	.	12	Heating surface area of intercooler
.	.	.	13	Installation area size (width x length)
.	.	.	14	Total weight for transportation
.	.	5		Specification in case of absorption refrigeration
.	.	.	1	Goods name
.	.	.	2	Model name
.	.	.	3	Type of refrigerator (ammonia-water system, water and lithium bromide system or others)
.	.	.	4	Object of refrigeration (name of brine)
.	.	.	5	Name and charged weight of refrigerant
.	.	.	6	Nominal capacity (thermal duty)
.	.	.	7	Flow rate, inlet temperature and outlet pressure of brine at evaporator
.	.	.	8	Absorber information
.	.	.	.	- Flow rate of cooling water
.	.	.	.	- Solution circulation rate (=pump capacity)
.	.	.	.	- Cooling surface area
.	.	.	9	Generator information
.	.	.	.	- Steam consumption
.	.	.	.	- Heating surface area
.	.	.	10	Condenser information

Item No.

- Name and flow rate of coolant
- Cooling surface area
- Expansion valve and its model name
- Heating surface area of evaporator
- Heating surface area of heat exchanger
- Installation area size (width x length)
- Total weight for transportation
- Identification of drawing concerned
- Cost information
- Total cost (U.S. \$ & Rp.)
- Title, date and identification of invoice concerned

- Maintenance history
- Date of work
- Kind of work (inspection or repair)
- Name of executor (name of inspector or worker)
- Kind of inspection
- (see Attachment XI & XII)
- Kind of repair
- (see Attachment XIII)
- Result of inspection
- Title, date and identification of report

- Pump and its prime mover
- Pump (excluding pumps for refrigerator or for fire fighting system)
- Identification of pump
- Name of pump
- Kind of pump (crude oil transportation, corrosion inhibitor feed, glycol circulation, fuel feed or others)
- Name of manufacturer
- Specification of pump
- Goods name

Item No.                      Input Data Item

- I 7 1 5 2 Model name
- . . . . 3 Type of pump (centrifugal, axial flow, reciprocating, volumetric rotary, regenerative or others)
- . . . . 4 Object of pumping (number of stages or plungers)
- . . . . 5 Flow rate (=nominal capacity)
- . . . . 6 Total difference head
- . . . . 7 Design discharge pressure and design temperature
- . . . . 8 Bore size and stroke length in case of reciprocating pump
- . . . . 9 NPSH available
- . . . . 10 Speed
- . . . . 11 Dimension of pump (width x length x height)
- . . . . 12 Material of casing and impeller or plunger
- . . . . 13 Type of seal (gland packing, single mechanical or other)
- . . . . 14 Name of flushing or sealing fluid
- . . . . 15 Water cooling (yes or no)
- . . . . 16 Driving connection
- . . . . . - Direct, belt or gear box
- . . . . . - Reduction ratio
- . . . . 17 Safety valve (yes or no)
- . . . . 18 Weight for empty
- . . . . 6 Identification of drawing concerned
- . . . . 7 Cost information
- . . . . . - Total cost (U.S. \$ & Rp.)
- . . . . . - Title, date and identification of invoice concerned
- . . . . 8 Maintenance history
- . . . . 1 Date of work
- . . . . 2 Kind of work (inspection or repair)
- . . . . 3 Name of executor (name of inspector or worker)
- . . . . 4 Kind of inspection

(See Attachment XIII)

Repair Data Item

Item No.

1	7	1	8	5	Kind of repair (see Attachment XIII)
				6	Result of inspection
				7	Title, date and identification of report
		2			Prime mover
			1		Identification of prime mover
			2		Name of prime mover
			3		Kind of prime mover (electric motor, internal combustion engine, steam engine, gas turbine or others)
			4		Name of manufacturer
			5		Specification in case of electric motor
				1	Goods name
				2	Model name
				3	Type of electric motor (horizontal or vertical) (induction, synchronous or other)
				4	Object of electric motor
				5	Nominal capacity (=output)
				6	Speed
				7	Voltage
				8	Current
				9	Phase
				10	Frequency
				11	Enclosure
				12	Name of lube oil
				13	Dimension of motor (O.D. x overall length)
				14	Weight
				5	Specification in case of internal combustion engine or steam engine
				1	Goods name
				2	Model name
				3	Type of engine (diesel engine, ignition spark engine or steam engine) (number of cylinders) (number of cylinders)

Item No. Input Data Item

1	7	2	5	4	Objective of engine
.	.	.	.	5	Output
.	.	.	.	.	- Continuous and maximum
.	.	.	.	6	Speed
.	.	.	.	7	Bore size and stroke length
.	.	.	.	8	Name of fuel or steam
.	.	.	.	9	Fuel consumption or steam consumption
.	.	.	.	10	Dimension of engine (width x length x height)
.	.	.	.	11	Name of lube oil
.	.	.	.	12	Cooling method
.	.	.	.	13	Accessory
.	.	.	.	14	Weight
.	.	.	5		Specification in case of gas turbine
.	.	.	.	1	Code name
.	.	.	.	2	Model name
.	.	.	.	3	Type of gas turbine (single shaft or two shafts) (open cycle or closed cycle)
.	.	.	.	4	Objective of gas turbine
.	.	.	.	5	output
.	.	.	.	.	- Continuous and maximum
.	.	.	.	6	Speed
.	.	.	.	7	Name of fuel
.	.	.	.	8	Fuel consumption
.	.	.	.	9	Air flow rate
.	.	.	.	10	Name of lube oil
.	.	.	.	11	Type of starter
.	.	.	.	12	Reduction gear ratio
.	.	.	.	13	Dimension of gas turbine (width x length x height)
.	.	.	.	14	Weight
.	.	.	.	15	Other description



Input Data Item

Item No.

1	Identification of drawing concerned
2	Cost information
3	- Total cost (U.S. \$ & Rp-)
4	- Title, date and identification of invoice concerned
5	Maintenance history
6	Date of work
7	Kind of work (inspection or repair)
8	Name of executor (name of inspector or worker)
9	Kind of inspection (see Attachment XII)
10	Kind of repair (see Attachment XIII)
11	Result of inspection
12	Title, date and identification of report
13	Compressor and its prime mover
14	Compressor (excluding compressors for refrigerator)
15	Identification of compressor
16	Name of compressor
17	Kind of compressor (natural gas transportation, gas circulation for regeneration of adsorbent or others)
18	Name of manufacturer
19	Specification of compressor
20	Goods name
21	Model name
22	Type of compressor (centrifugal, axial flow, reciprocating or volumetric rotary) (number of stages or plungers)
23	Object of compression
24	Nominal capacity (mflow rate)
25	Total differential pressure
26	Design pressure and design temperature
27	- Suction side and discharge side

Item No. Input Data Item

- 1 8 1 5 8 Bore size and stroke length in case of reciprocating compressor
- 2 9 Speed
- 3 10 Dimension of compressor (width x length x height)
- 4 11 Material of casing and blade or plunger
- 5 12 Type of seal and name of sealing fluid
- 6 13 Aftercooler (yes or no)
- 7 14 Accumulator (yes or no)
- 8 15 Driving connection
- 9 16 Derect, belt or gear box
- 10 17 - reduction ratio
- 11 18 Safety valve
- 12 19 Weight
- 13 20 Identification of drawing concerned
- 14 21 Cost information
- 15 22 - Total cost (U.S. \$ & Rp.)
- 16 23 - Title, date and identification of invoice concerned
- 17 24 Maintenance history
- 18 25 Date of work
- 19 26 Kind of work (inspection or repair)
- 20 27 Name of executor (name of inspector or worker)
- 21 28 Kind of inspection
- 22 29 (see Attachment XII)
- 23 30 Kind of repair
- 24 31 (see Attachment XIII)
- 25 32 Result of inspection
- 26 33 Title, date and identification of report
- 27 34 Prime mover

Data input for the prime mover information is made according to items and item numbers as described in X-7-2, replacing 15 by X-8-2.

Input Data Item

Item No.

1	Generator and its prime mover	
2	Generator	
3	Identification of generator	
4	Name of generator	
5	Kind of generator (D.C. or A.C.)	
6	Name of manufacturer	
7	Specification of generator	
8	Goods name	1
9	Model name	2
10	Type of generator	3
11	Object of service	4
12	Nominal capacity (output)	5
13	Voltage	6
14	Speed	7
15	Current	8
16	Phase	9
17	Frequency	10
18	Enclosure (Totally enclosed, open drip-proof or other)	11
19	Insulation	12
20	Exciter	13
21	Cooling method	14
22	Name of lube oil	15
23	Dimension of generator (width x length x height)	16
24	Weight	17
25	Identification of drawing concerned	18
26	Cost information	19
27	- Total cost (U.S. \$ & Rp.)	20
28	- Title, date and identification of invoice concerned	21
29	Maintenance history	22
30	Date of work	23
31	Kind of work (inspection or repair)	24

Item No.	Input Data Item
1	Name of executor (name of inspector or worker)
2	Kind of inspection (see Attachment XII)
3	Kind of repair (see Attachment XIII)
4	Result of inspection
5	Title, date and identification of report
6	Prime mover
7	Data input for the prime mover information is made according to items and item numbers as described in I-7-2, replacing it by I-9-2.
8	Fan or blower and its prime mover
9	Fan or blower (excluding air blowers for gas turbine, for fixed heater or for air cooled heat exchanger)
10	Identification of fan or blower
11	Name of fan or blower
12	Kind of fan or blower (ventilation, air fan for cooling tower, gas transportation or other)
13	Name of manufacturer
14	Specification of fan or blower
15	Goods name
16	Model name
17	Type of fan or blower (centrifugal, axial flow, volumetric rotary or other)
18	Object of blowing
19	Nominal capacity (efflow rate)
20	Differential head
21	Design pressure
22	Suction side and discharge side
23	Design temperature

Input Data Item

Item No.

- 11 10 1 5 9 Speed
- 10 10 2 5 10 Dimension of fan or blower
- 11 10 3 5 11 Material of fan or blade
- 12 10 4 5 12 Driving connection
- 13 10 5 5 13 - Direct, belt or gear box
- 14 10 6 5 14 - Reduction ratio
- 15 10 7 5 15 Weight
- 16 10 8 5 16 Identification of drawing concerned
- 17 10 9 5 17 Cost information
- 18 10 10 5 18 - Total cost (U.S. \$ & Rp.)
- 19 10 11 5 19 - Title, date and identification of invoice concerned
- 20 10 12 5 20 Maintenance history
- 21 10 13 5 21 Date of work
- 22 10 14 5 22 Kind of work (inspection or repair)
- 23 10 15 5 23 Name of executor (name of inspector or worker)
- 24 10 16 5 24 Kind of inspection
- 25 10 17 5 25 (see Appendix XII)
- 26 10 18 5 26 Kind of repair
- 27 10 19 5 27 (see Appendix XIII)
- 28 10 20 5 28 Result of inspection
- 29 10 21 5 29 Title, date and identification of report

Prime mover  
 Data input for the prime mover information is made according to items and item numbers as described in I-7-2, replacing it by I-10-2.

- Agitator and its prime mover
- Agitator or mixer
- Identification of agitator
- Name of agitator
- Kind of agitator (mixer for dissolution of additives or other)

Input Data Item

Item No.

- I 11 1 4 Name of manufacturer
- . . . 5 Specification of agitator
- . . . 1 Goods name
- . . . 2 Model name
- . . . 3 Type of agitator (horizontal or vertical) (paddle, propeller, turbine or other)
- . . . 4 Object of agitation (=name of solvent)
- . . . 5 Driver output
- . . . 6 Volume of vessel or tank equipped with agitator
- . . . 7 Number of agitator in the same vessel or tank
- . . . 8 Identification of vessel or tank equipped with agitator
- . . . 9 Design information of fluid agitated
  - Name, density, and concentration of solute
  - Temperature of solvent
- . . . 10 Agitator position in vessel
- . . . 11 Dimension of agitator (agitator diameter x shaft length)
- . . . 12 Material of agitator
- . . . 13 Number of baffles
- . . . 14 Type of shaft seal, and name of sealing liquid
- . . . 15 Weight of agitator
- . . . 6 Identification of drawing concerned
- . . . 7 Cost information
  - Total cost (U.S. \$ & RP.)
  - Title, date and identification of invoice concerned
- . . . 8 Maintenance history
  - 1 Date of work
  - 2 Kind of work (inspection or repair)
  - 3 Name of executor (name of inspector or worker)
  - 4 Kind of inspection
    - (see Attachment XII)
  - 5 Kind of repair
    - (see Attachment XIII)

Input Data Item

Item No.

Item No.	Input Data Item
1	Result of inspection
2	Title, date and identification of report
3	Prime mover
4	Data input for the prime mover information is made according to items and item numbers as described in I-7-2, replacing it by I-11-2.
5	Other machinery and its prime mover
6	Other machinery
7	Identification of machinery
8	Name of machinery
9	Kind of machinery (vacuum pump, hoist, centrifugal separator or others)
10	Name of manufacturer
11	Specification
12	Goods name
13	Model name
14	Type
15	Object of treatment
16	Nominal capacity (= flow rate of fluid treated, displacement volume or other)
17	Speed
18	Design pressure
19	Design temperature
20	Design information of fluid treated
21	- Pressure and temperature
22	- Name and concentration of impurities
23	Dimension (width x length x height)
24	Material
25	Weight
26	Other description

Input Data Item

Item No.

- 1 12 1 6 Identification of drawing concerned
- 1 12 1 7 Cost information
- 1 12 1 8 - Total cost (U.S.\$ & Rp.)
- 1 12 1 9 - Title, date and identification of invoice concerned
- 1 12 1 10 Maintenance history
- 1 12 1 11 Date of work
- 1 12 1 12 Kind of work (inspection or repair)
- 1 12 1 13 Name of executor (name of inspector or worker)
- 1 12 1 14 Kind of inspection
- 1 12 1 15 (see Attachment XII)
- 1 12 1 16 Kind of repair
- 1 12 1 17 (see Attachment XIII)
- 1 12 1 18 Result of inspection
- 1 12 1 19 Title, date and identification of report

Prime mover

Data input for the prime mover information is made according to items and item numbers as described in I-7-2, replacing it by I-12-2.

- 13 1 Fire fighting system
- 13 2 Identification of fire fighting system
- 13 3 Name of fire fighting system
- 13 4 Kind of fire fighting system (foam extinguishing system, high expansion foam system, synthetic foam system, twin-agent system, water spray system, dry chemical system, halon system etc.)
- 13 5 Name of manufacturer
- 13 6 Specification of fire fighting system
- 13 7 Goods name
- 13 8 Model name
- 13 9 Type, capacity and number of discharge nozzle (air foam chamber, foam monitor, foam generator, water hydrant, foam hydrant, water spray etc.)



Input Data Item

Item No.	Input Data Item
I 13	Object of fire fighting (sea fire, totally involved in tank fire, dike fire, indoor fire, fireproofing) (name of equipment or dike)
4	Kind and concentration of fire fighting media
5	Nominal capacity (flow rate per system)
6	Duration of discharge
7	Storage quantity of concentrate or solution
8	Justification and application rate
9	(NFPA, experimental data or other) (gpm/sq.ft)
10	Type, capacity and number of each fire fighting equipment component (fire pump, N <sub>2</sub> cylinder, pressure proportioner, concentrate storage tank, etc)
11	Kind, required flow rate and required pressure of fire water in case of using fire fighting solution or fire water
12	Name of flammable and combustible liquid
13	Other description (fire control, fire detector, fireproofing coating etc.)
6	Identification of drawing concerned
7	Cost information
	- Total cost (U.S. \$ & Rp.)
	- Title, date and identification of invoice concerned
	Maintenance history
8	Date of work
1	Kind of work (inspection or repair)
2	Name of executor (name of inspector or worker)
3	Kind of inspection
4	(see Attachment XII)
5	Kind of repair
	(see Attachment XIII)
6	Result of inspection
7	Title, date and identification of report.

Input Data Item

Item No.

- I 14 Flare system
- . . . 1 Identification of flare system
- . . . 2 Name of flare system
- . . . 3 Kind of flare system (ground flare or elevated flare)
- . . . 4 Name of manufacturer
- . . . 5 Specification of flare stack
- . . . 1 Size of flare tip and height of flare stack
- . . . 2 Name, flow rate and supply pressure of disposal gas
- . . . 3 Flare lighting method
- . . . 4 Size and mesh of flame arrester
- . . . 5 Flare seal drum (yes or no)
- . . . 6 Knockout drum (yes or no)
- . . . 7 Name of gas for purge
- . . . 8 Inside diameter, and length of disposal gas pipeline between gas supply and flare stack
- . . . 9 Disposal gas information
- . . . . Average molecular weight
- . . . . Density of vapor
- . . . . Heat of combustion per unit weight
- . . . 6 Identification of drawing concerned
- . . . 7 Cost information
- . . . . Total cost (U.S.S. & Rp.)
- . . . . Title, date and identification of invoice concerned
- . . . 8 Maintenance history
- . . . 1 Date of work
- . . . 2 Kind of work (inspection or repair)
- . . . 3 Name of executor (name of inspector or worker)
- . . . 4 Kind of inspection (see Attachment XII)
- . . . 5 Kind of repair (see Attachment XIII)

Input Data Item

Item No.

I 14	8	6	Result of inspection
.	.	7	Title, date and identification of report
.	.		Other equipment
.		15	

Item No. Input Data Item

Item No.	Input Data Item
J	PIPELINE INFORMATION
0	Common identification item
1	Unit name
2	Province name (Jambi, S. Sumatra, W. Sumatra, Riau, Bengkulu or Lampung)
3	Field office name (Sajubang or Prabumulih)
4	Field name at pipeline end point
5	Name of station or terminal at pipeline end point
6	Field name at pipeline starting point
7	Name of well or station at pipeline starting point
8	Identification of pipeline
9	Date for installation of pipeline
1	Kind of pipeline (flow line; from well to station, gathering or transfer line; from station to station, trunk line; from station to final destination = final storage tank, refinery, direct shipment etc., or other)
2	Object of transportation (gas, oil, water etc.)

Input Data Item

Item No.	Input Data Item
3	Specification of pipeline
1	Kind of line pipe (regular, high test, unlined and cement lined, asbestos-cement, plastic, aluminum etc.)
2	Type of connection (Butt-welded, threaded and coupled, etc.)
3	Grade of pipe (Example) API 5LX-52 or ASTM A53-B
4	Nominal size, wall thickness and schedule number of line pipe
5	Length of pipeline
6	Unit length and weight of line pipe
7	Material of line pipe
8	Hydrostatic test pressure
9	Internal pressure at minimum yield strength
10	Thread number per inch in case of threaded line pipe
11	Flange rating and facing in case of using flanges (type of facing; flat face, raised face, ring type joint, etc.)
12	Valve information
.	- Type of valve (Gate, ball, plug, globe, butterfly, check etc.)
.	- Size, rating and connection (screwed or flanged)
.	Coating information
13	Insulation information
14	Corrosion inhibition information
15	Identification of drawing for pipeline layout
4	Cost information
5	- Cost for material (U.S.\$ & Rp.)
.	- Cost for installation (U.S.\$ & Rp.)
.	- Total cost (U.S.\$ & Rp.)
.	- Title, date and identification of invoice

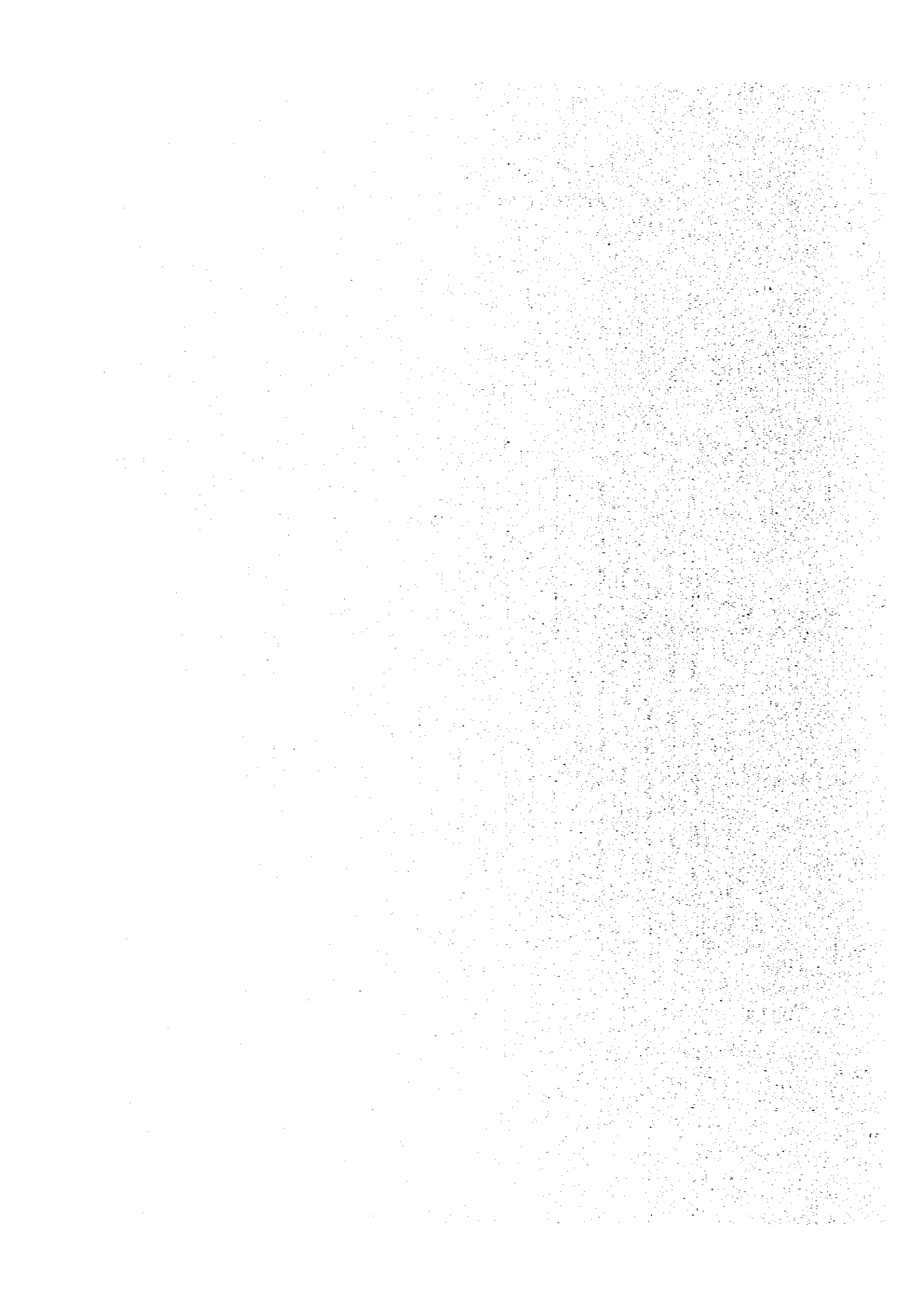
Input Data Item

Item No.

- J 6 Contract document
- . . - Title, date and identification of contract document
- . 7 Maintenance history
- . . 1 Date of work
- . . 2 Kind of work (inspection or repair)
- . . 3 Name of executor (name of inspector or worker)
- . . 4 Position and pipeline length for work
- . . 5 Kind of inspection (visual inspection, hammering test, leak test, hydrostatic test, corrosion test, thickness measurement, liquid penetrant inspection, ultrasonic inspection, radiographic inspection, etc.)
- . . 6 Kind of repair (cleaning, replacement, improvement of material, renewal, corrosion inhibition, etc.)
- . . 7 Results of inspection (inspect and repair in next turnaround, replace corrosion inhibitor, renew pipe, etc.)
- . . 8 Title, date and identification of report
- . . 9 Title, date and identification of invoice
- . . 10 Title, date and identification of contract document

**ATTACHMENT**

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ATTACHMENT I

STANDARD CLASSIFICATION OF SITE DESCRIPTION

- Tidal area
- Swamp
- Jungle
- Open area with forest
- Open area with natural grass
- Desert
- Hill with jungle
- Hill with forest
- Hill with natural grass
- Mountain (gentle)
- Mountain (steep)
- Glacial area

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ATTACHMENT II  
LIST OF FIELD NAME

I Palembang Complex

1 South Palembang Complex

- Prabumulih Center
- Prabumulih West
- Lembak
- Payakabung
- Talang Jimar
- Tanjung Tiga West
- Tanjung Tiga East
- Tanjung Miring West
- Tanjung Miring East
- Gunung Kemala
- Benuang
- Benakat East
- Limau West-MC.
- Limau East-5A.
- Tanjung Lontar
- Suban Jeriji
- Batu Keras
- Sungai Taham
- Kuang
- Pagardewa
- Prabumenang
- Meraksa
- Kikim
- Ogan Block
- Lubuk
- Karangan

- Belimbing
- Tasim
- Beringing
- Sukacinta
- Betung
- Kedaton
- Musi
- Lampung
- 
- 
- 

2 Middle Palembang Complex

- Mangunjaya
- Babat
- Kukui
- Keban
- Suban Burung
- Kluang
- Kluang North
- Lebong
- Bentayan
- 
- 
-

## II Jambi Area

- Bajubang
- Tempino
- Kenali Asam
- Kenali Asam West
- Kasang
- Sungai Gelam
- Pijoan
- Setiti
- Meruo Senami
- Sungai Lilin
- Senawar
- Bayung Lincir
- Sengeti
- Arang<sup>2</sup> West
- 
- 
-



ATTACHMENT III

LIST OF NUMBER OF WELL BY FIELDS

Number of wells by fields is listed bellow and these will be abbreviated or named as instructed by PERTAMINA in time for design work of data bank system.

<u>Number of Wells</u>	<u>Field Name</u>
13	Prabumulih centre
-	Prabumulih west
-	Lembak
202	Payakabung
-	Talang Jimar
-	Tanjung Tiga West
-	Tanjung Tiga East
10	Tanjung Miring West
6	Tanjung Miring East
52	Gunung Kemala
17	Benuang
45	East Benakat
47	Limau West-MC
201	Limau East-5A
21	Belimbing
-	Tanjung Lontar
52	Suban Jeriji
-	Batu Keras
-	Sungai Taham

<u>Number of Wells</u>	<u>Field Name</u>
16	Kuang
-	Tasin
4	Pagardewa
2	Prabumenang
-	Meraksa
-	Kikim
20	Ogan Block
1	Lubuk Rukam
8	Karangan
1	Beringin
1	Sukacinta
13	Betung
1	Kedaton
14	Musi
-	Lampung
-	Mangunjaya
-	Babat
-	Kukui
-	Keban
-	Suban Burung
-	Kluang
-	Kluang North
-	Lebong
-	Bentayan
124	Bajubang
175	Tempino



Number of Wells

Field Name

241

Kenali Asam

-

Kenali Asam West

-

Kasang

4

Sungai Gelam

-

Pijoan

30

Setiti

-

Neruo Senami

11

Sungai Lilin

-

Senawar

-

Bayung Lincir

11

Sengeti

1

Arang 2 West



Number of Wells

Field Name

241

Kenali Asam

-

Kenali Asam West

-

Kasang

4

Sungai Gelam

-

Pijoan

30

Setiti

-

Neruo Senami

11

Sungai Lilin

-

Senawar

-

Bayung Lincir

11

Sengeti

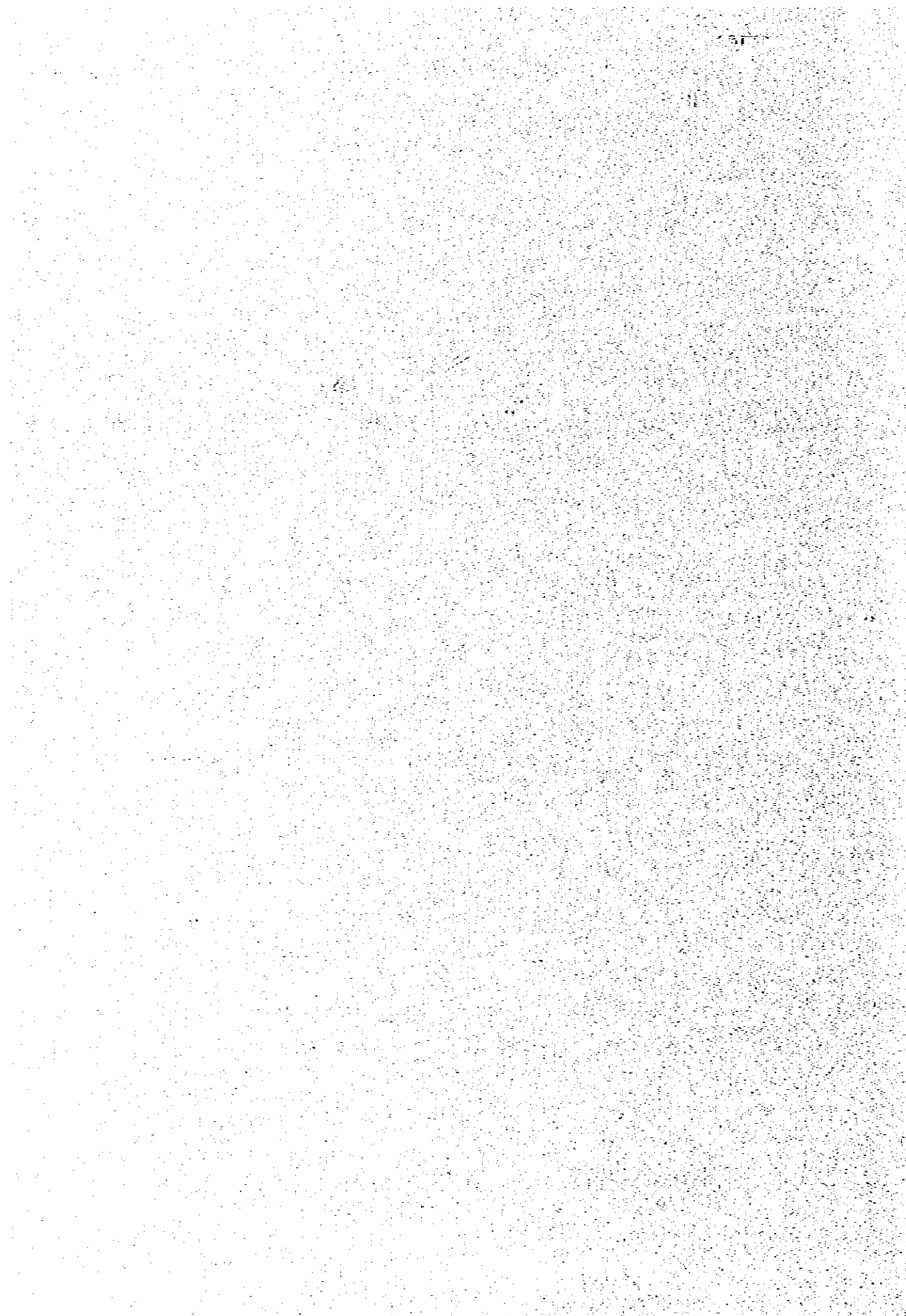
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Arang 2 West



ATTACHMENT IV  
LIST OF FORMATION NAME

- Kasai Formation
- Muara Formation
- Air Benakat Formation
- Gumai Formation
- Batu Raja Formation
- Talang Akar Formation
- Lahat Formation
- Basement



ATTACHMENT V

LIST OF RESERVOIR NAME

Field Name	Reservoir Name
Prabumulih West	A, B, H, K, K <sub>2</sub> , N, R, R <sub>1</sub> , R <sub>5-6</sub>
Tarang Jimar West	a, ABC, DEPH, KLM, OQR, ST
Tarang Jimar Midle	a, ABC, DEPH, KLM, OQR, ST
Tarang Jimar East	a, ABC, DEPH, KLM, OQR, ST
Tanjung Tiga West	a0a1 ABC Block I, a0a1 ABC Block II, a0a1, ABC Block III, a0a1 ABC Block IV, DEP Block I, DEP Block II, DEP Block III, DEP Block IV, H Block I, H Block II, H Block III, H Block IV, K Block I, K Block II, K Block III, K Block IV, L Block I, L Block II, L Block III, L Block IV
Tanjung Tiga East	a0a1 ABC Block I, a0a1 ABC Block II, a0a1 ABC Block III, DEP Block I, DEP Block III, H Block I, H Block II, H Block III
Tanjung Miring West	A30(BRF), C <sub>1-2</sub> , D <sub>1</sub> , G <sub>1</sub> , K <sub>1</sub>
Tanjung Miring East	A, B, C, D
Benuang	D <sub>1</sub> , G, Y
East Benakat	A, A <sub>1</sub> , A <sub>2</sub> , B, C, D, EF, G, G <sub>1</sub> , H, J, K <sub>1</sub> , K <sub>2</sub> , L, L <sub>1</sub> , M, N, O, P, Q, R

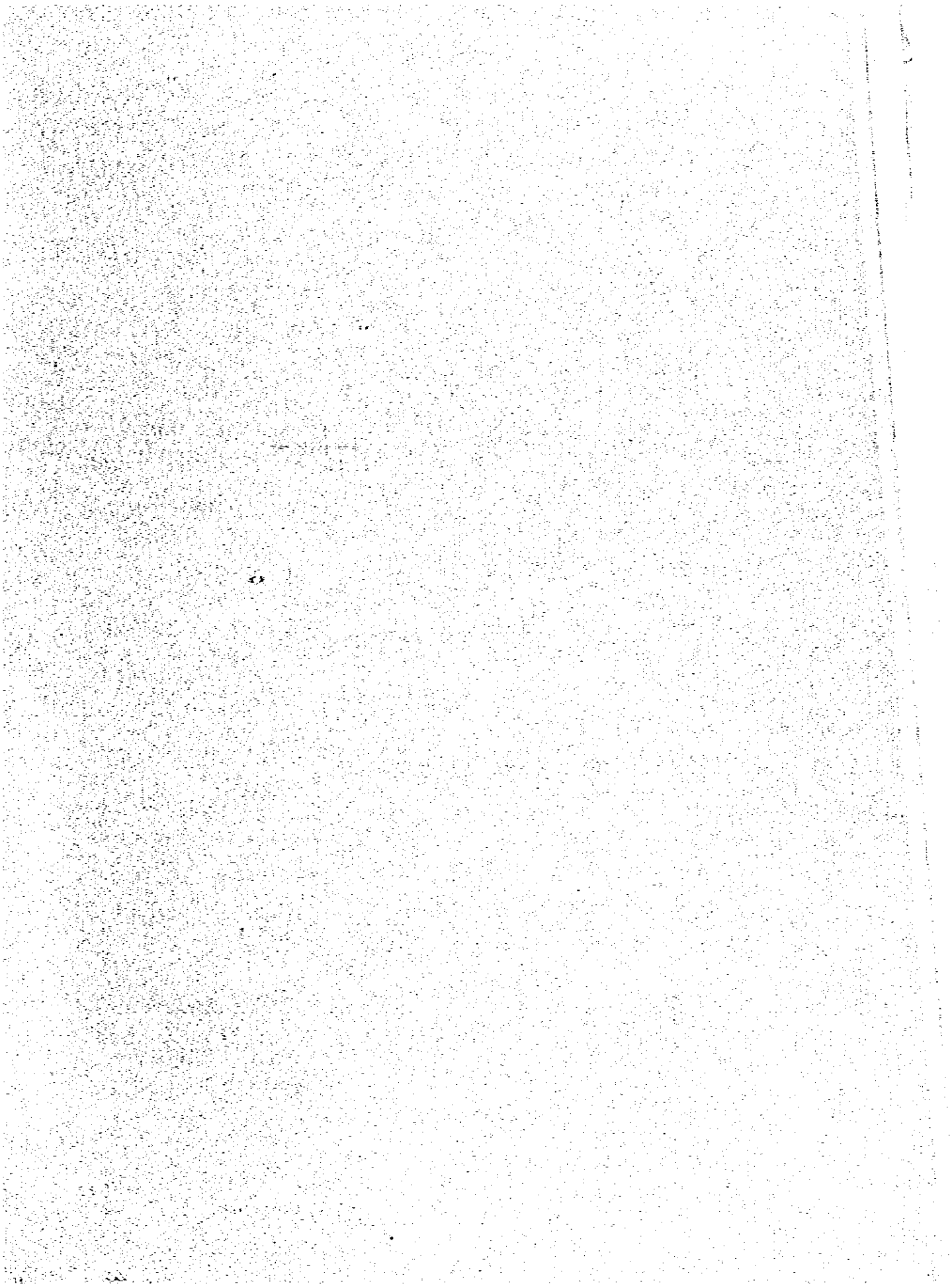
Field Name	Reservoir Name
Belimbing	R3 Block I, R3 Block III, R3 Block IV, R5 Block I, R5 Block III, R5 Block IV, S Block I, S Block III, S Block IV, μ Block I, μ Block III, μ Block IV, W Block I, W Block III, W Block IV, X0 Block I, X0 Block III, X0 Block IV
Organ Block	a0, B
Karangan	A3, B, C2-3
Limau Niru	S, W1 South Flank, W1 West Flank, W1 North Flank, W3 South Flank, W3 West Flank, W3 North Flank, W42 South Flank, W42 West & North Flank, X0 South Flank, X0 West & North Flank, X0 East Flank, X1 South Flank, X1 West & North Flank, X2 South Flank, X2 West & North Flank, X3 South Flank, X3 West & North Flank, Y1, Y2, Y3, Z1
Limau West	R4 LMC-18, R5 LMC-8, S L5A-53, S North Flank, S L5A-23, T LMC-8, μ, W1 Block I & II, W1 Block VI & VII, W3 Block III, W3 Block VI & VII, W4 Block VI & VII, X1-2 LMC-38, X3, Y1 LMC-13
Limau Tengah (Limau Center)	a1 (BRF), Q2 (BRF), R15, R2 LMC-47, R4 L5A-66, R4 L5A-89, R5-52 L5A-128.89, R5-52 LMC-24, S L5A-160, S LMC-44, S East Flank, S South MC-22, S L5A-128, W1 L5A-102, W3 Block VIII, W3 Block IX North Flank, W3 Block IX South Flank, W3 Block IX Northeast Flank, W42 Northeast Flank, W42 South Flank, X0-X1, X0, X2, X3, Y1

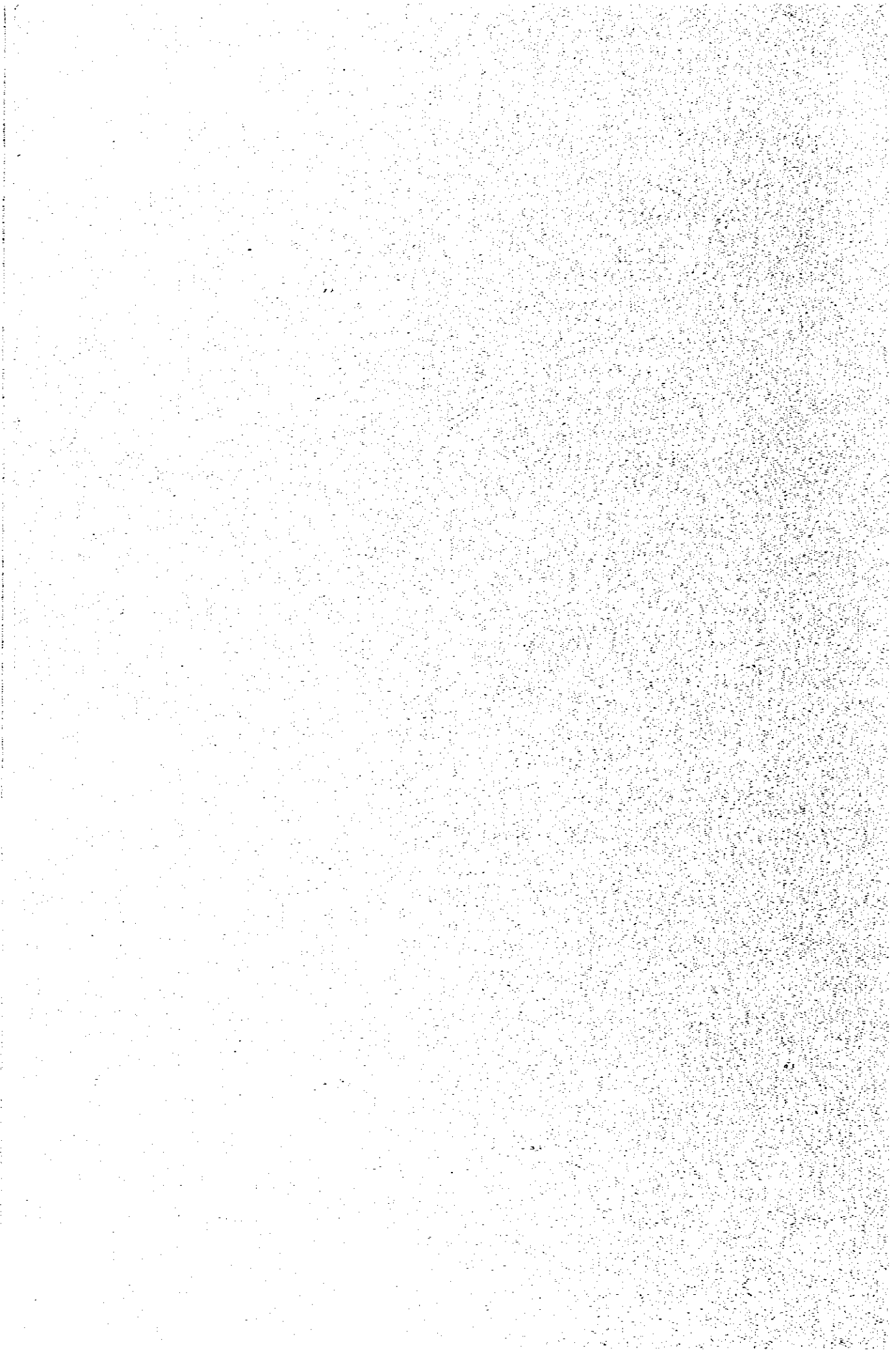


Field Name	Reservoir Name
Limau East Seksi "p"	R36-37 L5A-81, R36-37 L5A-103, R36-37 Sev, Timur L5A-145, R32 Seb Timur F-1, R32 Seb Barat F-1, R4 L5A-69, R4 L5A-49, R4 L5A-137, R5, R5-52, R9, S L5A-31, S L5A-73, W1 L5A-85, X0, X1, X2, X3, BRF(Q) L5A-136, BRF(Q) L5A-85 Lap. I, BRF(Q) L5A-85. Lap. II, BRF(Q) L5A-85. Lap. III
Limau East Seksi "Q" Area L5A-22	Q0 (BRF), Q1, Q2, R32-33 L5A-26, R32-33 South Flank, R37 North Flank, R37 East Flank, R36-37, R4, R52-53 L5A-83, R8, S L5A-26, S L5A-22, W1-3
Limau East Seksi "Q" Area L5A-51	R12-5, R32-33 Block Sembul, R32-33 West Flank, R32-33 East Flank, R52-53 Block Sembul, R52-53 West Flank, R52-53 East Flank, R6 Block Sembul, R6 West Flank, R6 East Flank, BRF(K3), BRF
Limau East Seksi "Q" Area L5A-108	R12, R32-33, R6
West Guang Kemara	H, H1, H2, J, J1, J2, K, K1, K2, K3, L, L1, L2, L3, M, M1, N, N1, N2, N3, O West, O East, P, P1, P2, P2a, P2b, P2c, P3, P4, P5, Q, Q1, Q2, Q3, V

Field Name	Reservoir Name
Guang Kemara Center	H, H <sub>1</sub> South, H <sub>1</sub> North, H <sub>2</sub> South, H <sub>2</sub> North, J, J <sub>1</sub> South, J <sub>1</sub> North, J <sub>2</sub> South, J <sub>2</sub> North, K, K <sub>1</sub> South, K <sub>1</sub> North, K <sub>2</sub> South, K <sub>2</sub> North, K <sub>3</sub> South, K <sub>3</sub> North, L, L <sub>1</sub> South, L <sub>1</sub> North, L <sub>2</sub> South, L <sub>2</sub> North, L <sub>3</sub> South, L <sub>3</sub> North, L <sub>2,3</sub> , M, M <sub>1</sub> South, M <sub>1</sub> North, N, N <sub>1</sub> South, N <sub>1</sub> North, N <sub>2</sub> South, N <sub>2</sub> North, N <sub>3</sub> South, N <sub>3</sub> North, O South, O North, P <sub>1</sub> South, P <sub>1</sub> North, P <sub>2a</sub> South, P <sub>2a</sub> North, P <sub>2b</sub> South, P <sub>2b</sub> North, P <sub>2c</sub> South, P <sub>2c</sub> North, P <sub>3</sub> South, P <sub>3</sub> North, P <sub>4</sub> South, P <sub>4</sub> North, P <sub>5</sub> South, P <sub>5</sub> North, Q, Q <sub>1</sub> South, Q <sub>1</sub> North, Q <sub>2</sub> South, Q <sub>2</sub> North, Q <sub>3</sub> South, Q <sub>3</sub> North, V
East Guang Kemara	H, H <sub>1</sub> , H <sub>2</sub> , J, J <sub>1</sub> , J <sub>2</sub> , K, K <sub>1</sub> , K <sub>2</sub> , K <sub>3</sub> , L, L <sub>1</sub> , L <sub>2</sub> , L <sub>3</sub> , M, M <sub>1</sub> , N, N <sub>1</sub> , N <sub>2</sub> , N <sub>3</sub> , O, P, P <sub>1</sub> , P <sub>2</sub> , P <sub>2a</sub> , P <sub>2b</sub> , P <sub>2c</sub> , P <sub>3</sub> , P <sub>4</sub> , P <sub>5</sub> , Q, Q <sub>1</sub> , Q <sub>2</sub> , V

Remarks, The list will be completed by further information provided by PERTAMINA.



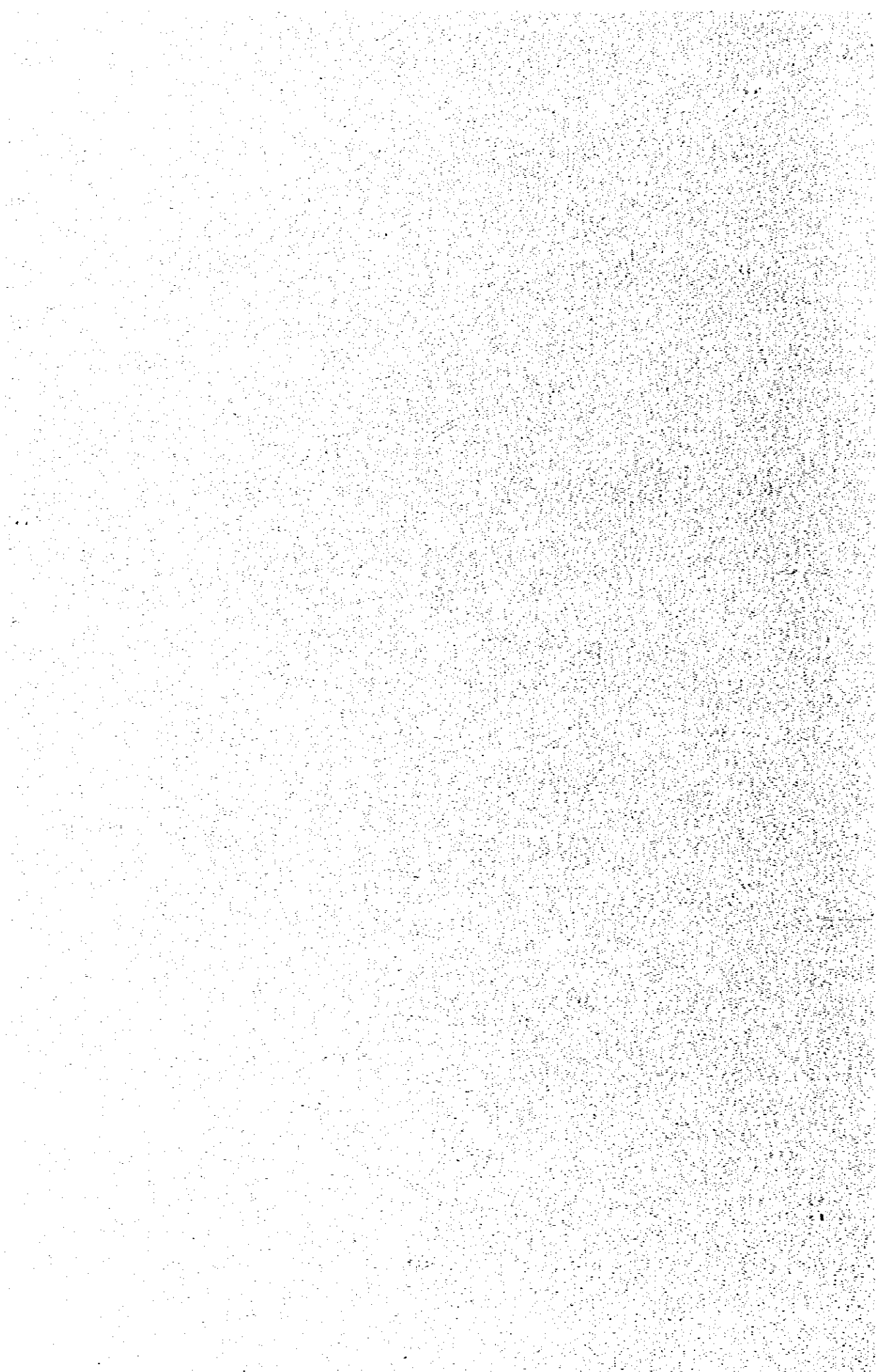


## ATTACHMENT VI

### STANDARD CLASSIFICATION OF CORE ANALYSIS

#### Kind of Analysis

- Porosity
- Permeability
- Fluid saturation
- Capillary test
- Water permeability
- Formation resistivity
- Acoustic velocity
- Water flood test
- Basic flood test
- Water flood susceptibility test
- Water-oil relative permeability test
- Water flood on core containing trapped gas
- Residual gas test
- Relative permeability general
- Gas-oil relative permeability test
- Gas-water relative permeability test
- Relative permeability calculated from pore size distribution
- Thermal recovery test (hot water flood test, steam flood test, steam soak test, fire tube test)
- Petrographic studies
- Wettability studies
- Cap-rock analysis
- Determination of hydrated clay content
- Overburden permeability and porosity test
- Rock compressibility test
- Sive analysis
- Surface and interfacial tension test



## ATTACHMENT VII

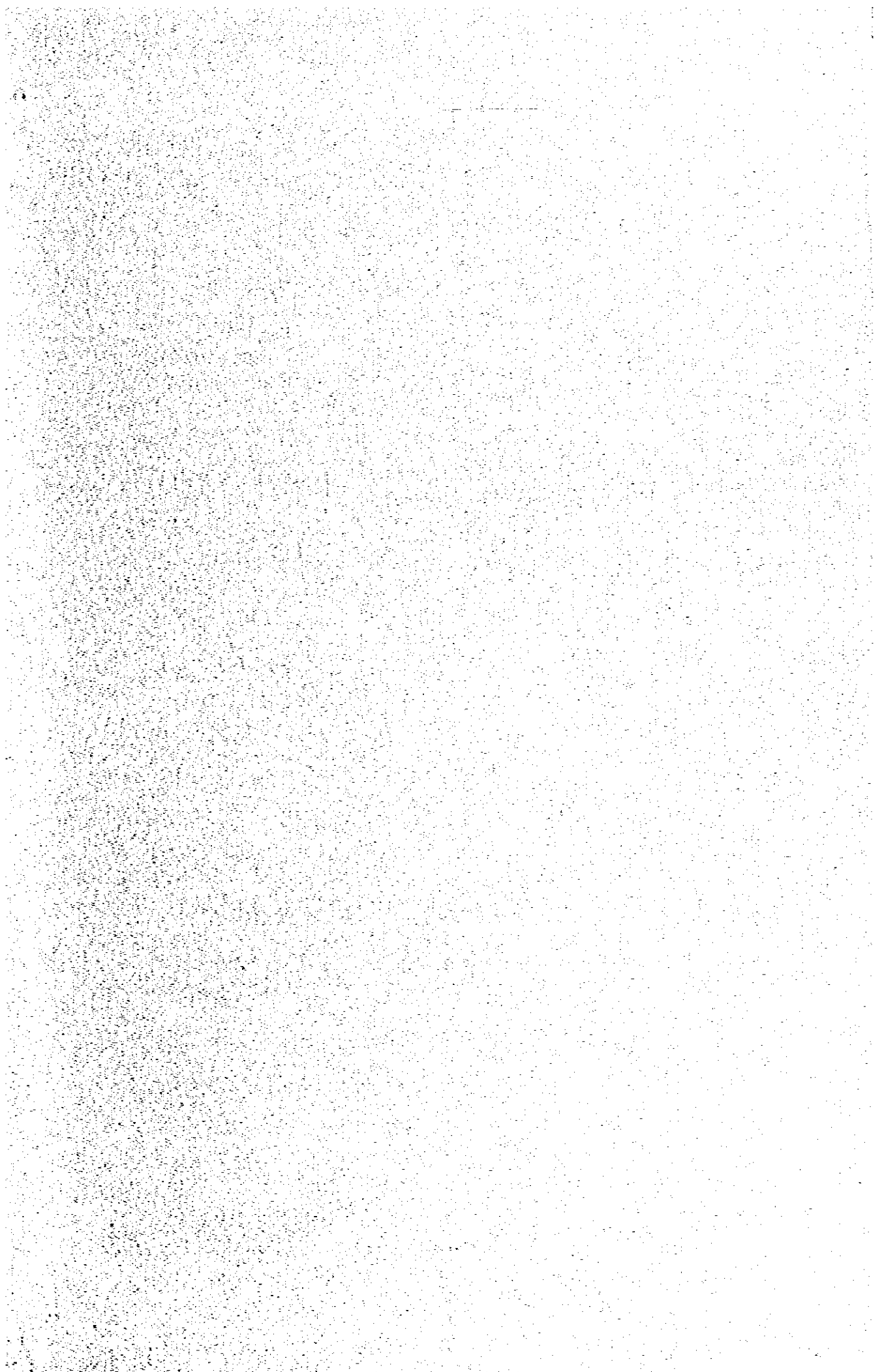
### STANDARD CLASSIFICATION OF OIL RESERVOIR PVT ANALYSIS

#### Kind of Analysis

- Pressure-volume relations of reservoir fluid at reservoir temperature, including saturation pressure determination, compressibility of oil above saturation pressure and two phase volumes below saturation pressure.
- Differential vaporization of reservoir fluid at reservoir temperature; and presentation of gas solubility and oil shrinkage data.
- Determination of specific gravity and compressibility factor of liberated gas at all points on differential vaporization and determination of density of the liquid phase.
- Viscosity of reservoir fluid at reservoir temperature and pressures from above reservoir pressure to atmospheric pressure.
- Separator tests at four single-stage separator pressures and laboratory temperature to determine the effects of separator pressure on solution gas-oil ratio, formation volume factor and stock tank oil gravity.
- Composition of separator gases from above separator tests to determine the effect of separator pressure and temperature on separator gas composition, GPM, heating value and specific gravity.
- Fractional distillation through hexanes of reservoir fluid including supplemental determinations for nitrogen, carbon dioxide and hydrogen sulfide by chromatography. Molecular weight and density of heptanes and heavier fraction are included.
- Single-stage separator test in addition to above separator tests.

- Multi-stage separator test including determination of separator volume factors at each stage of separation.
- Compositional analysis of separator oil and gas, and calculation of hydrocarbon composition of recombined reservoir fluid (This would be applied only for recombined sample)





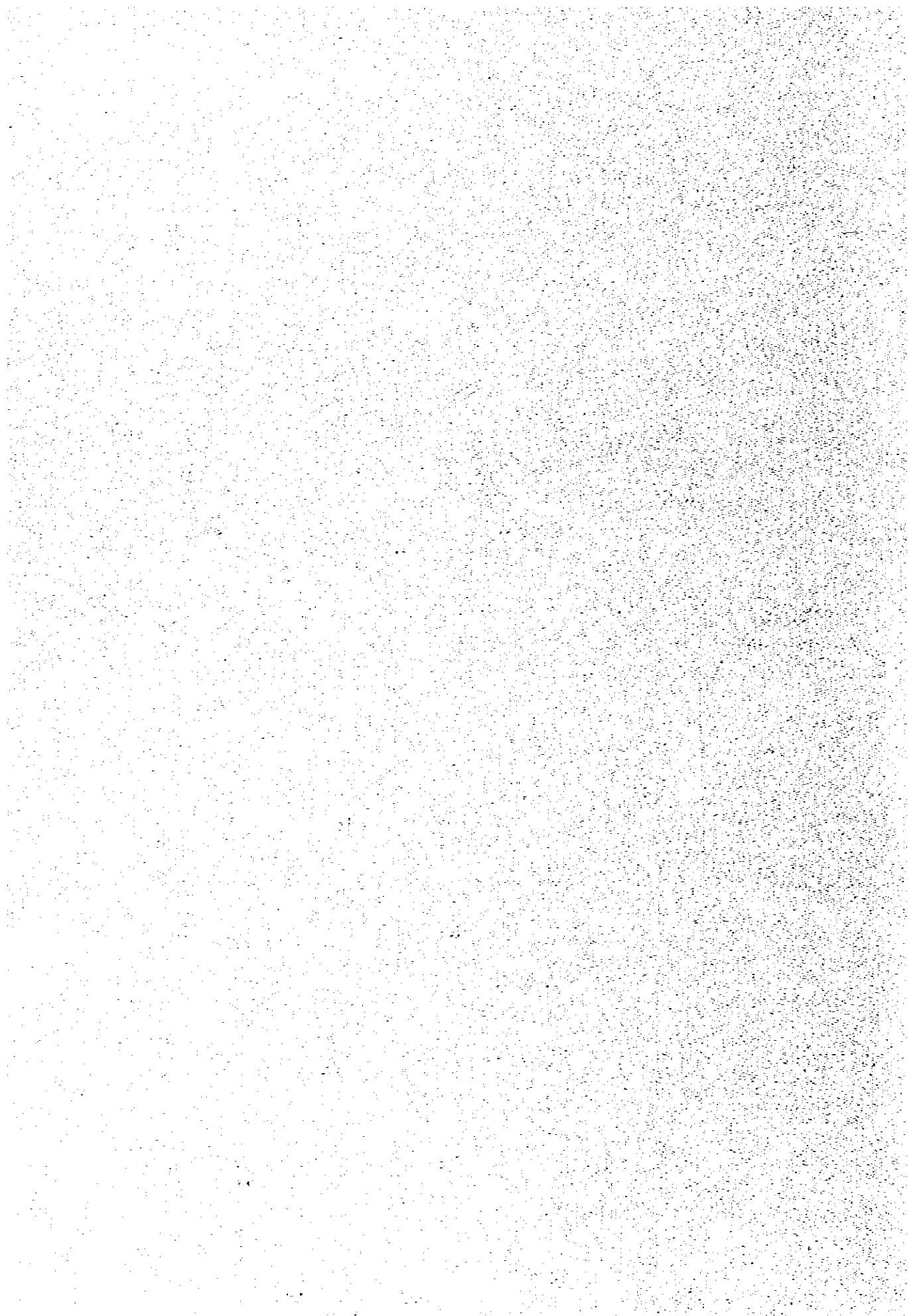


## ATTACHMENT VIII

### STANDARD CLASSIFICATION OF CONDENSATE RESERVOIR PVT ANALYSIS

#### Kind of Analysis

- Compositional analysis of separator vapor and liquid, and recombination to any specified gas/liquid ratio.
- Dew-point pressure determination and pressure-volume relations of recombined reservoir fluid at reservoir temperature.
- Compressibility factor of reservoir fluid at reservoir temperature between reservoir pressure and dew-point pressure.
- Depletion study of reservoir fluid, including determination of hydrocarbon composition of reservoir vapor at dew-point pressure and several succeeding pressures during pressure depletion, experimental compressibility factors, and produced well stream volumes.
- Presentation of above results in terms of total liquid content (GPM) per million standard cubic feet of initial reservoir fluid.
- Presentation of above results in terms of liquid products and gas recoverable by normal temperature, single or two-stage separation per million standard cubic feet of initial reservoir fluid.
- Retrograde liquid accumulation in reservoir determined at pressure investigated in above depletion study.



ATTACHMENT IX

STANDARD CLASSIFICATION OF VOLATILE OIL RESERVOIR PVT ANALYSIS

Kind of Analysis

- Compositional analysis of separator vapor and liquid, and recombination to any single specified gas/oil ratio or bubble point pressure.
- Saturation pressure and pressure-volume relations of recombined reservoir temperature.
- Constant volume depletion study at reservoir temperature to determine the gas phase composition, gas volume produced and gas deviation factors at several pressure from saturation pressure to abandonment pressure. Includes composition of equilibrium liquid phase at final depletion pressure.
- Liquid shrinkage versus pressure using constant volume depletion techniques as above.
- Viscosity of liquid phase at reservoir temperature at several pressures from above reservoir pressure to atmospheric pressure.

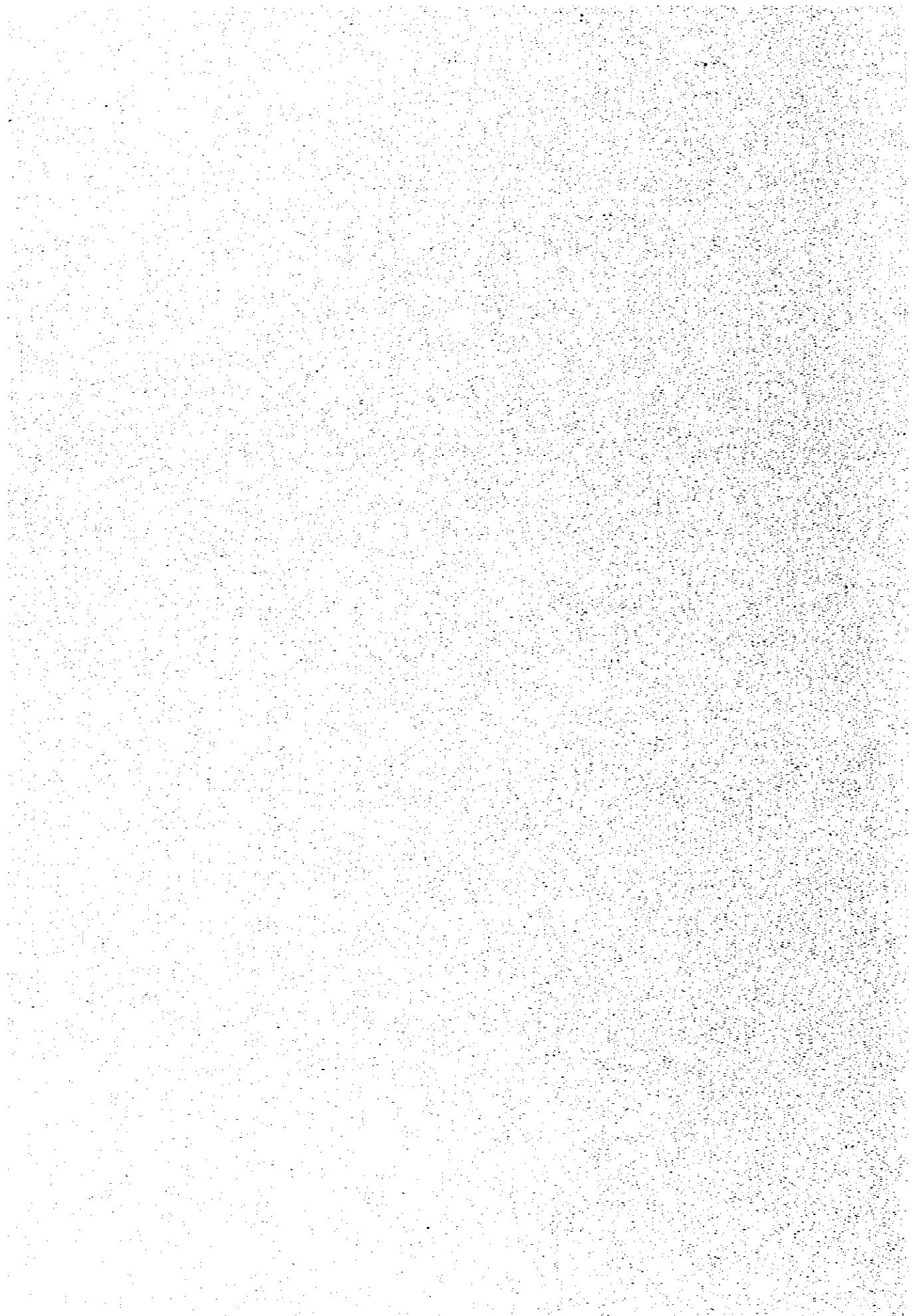


ATTACHMENT X

STANDARD CLASSIFICATION OF COMPOSITIONAL  
STUDIES AND WATER ANALYSIS

Kind of Analysis

- Methane through C<sub>7+</sub>
- Gas gravity (measured)
- Complete chemical analysis of oil field water or mud filtrate samples (including dissolved solids (10 ions), total dissolved solids, pH, hydrogen sulfide, specific gravity 60/60°F, and calculated resistivity.
- Chloride and Total Dissolved solids
- Resistivity (measured), at room temperature





**ATTACHMENT XI**  
**STANDARD CLASSIFICATION OF INSPECTION FOR VESSEL,  
TANK AND HEAT EXCHANGER**

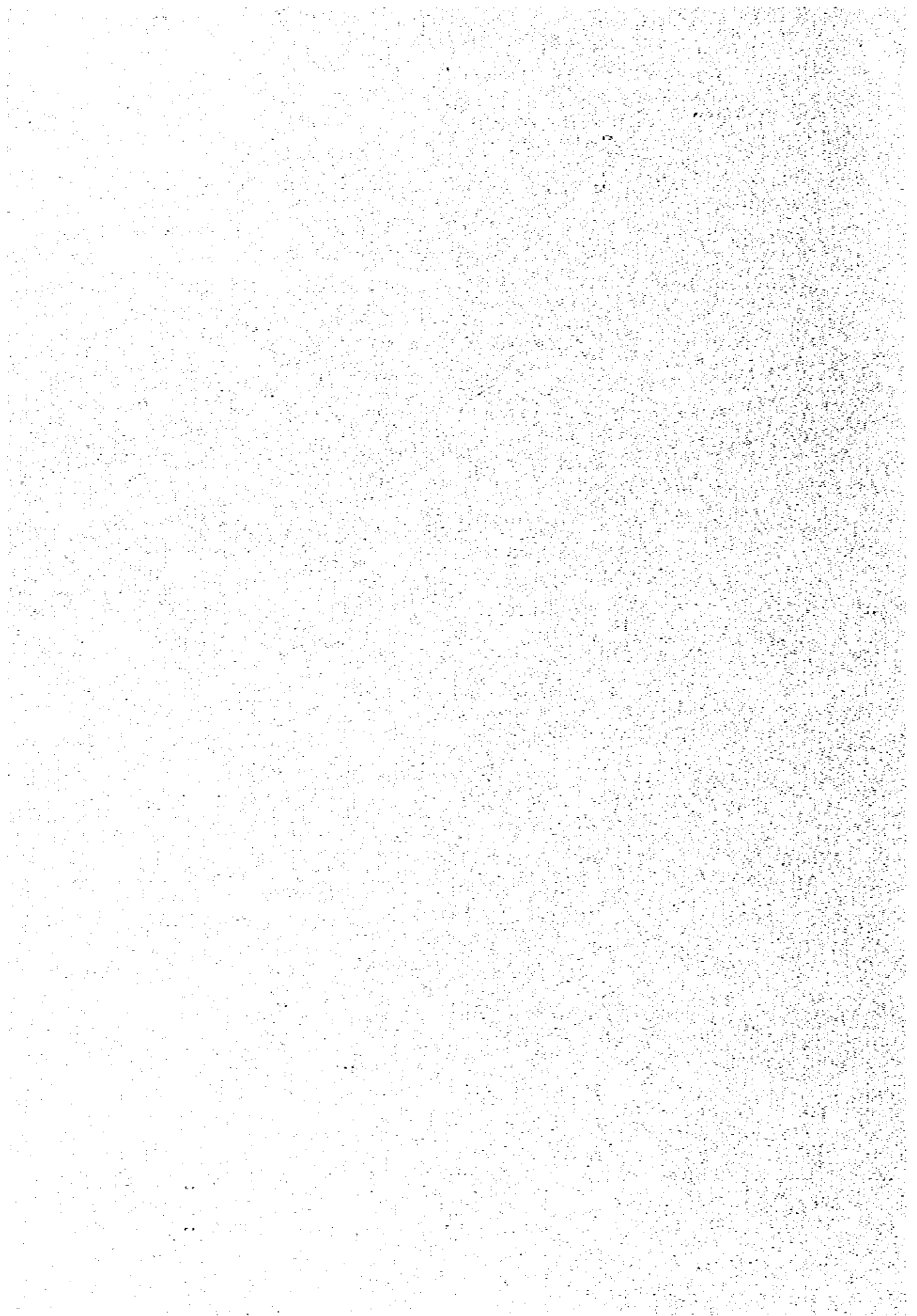
- Visual inspection and hammering test
- Leak test
- Hydrostatic test
- Non-destructive inspection
  - thickness measurement
  - liquid penetrant inspection
  - magna flux inspection
  - ultrasonic inspection
  - micro-structure inspection
  - hardness test
  - radiographic inspection
  - eddy current inspection
- Destructive inspection



ATTACHMENT XII

STANDARD CLASSIFICATION OF INSPECTION FOR CONDITION OF  
MACHINERY AND PRIME MOVER

- Visual inspection
- Clearance inspection  
bearings, flexible couplings, V-belts or chain for  
power transmission, speed reducer etc.
- Leak test of seal
- Alignment inspection for shafts and couplings
- Running test  
sound, vibratiion, motor ampere etc.



**ATTACHMENT XIII**  
**STANDARD CLASSIFICATION OF REPAIR**

Kind of repair		Example of work
- Scheduled maintenance		
• lubrication	.....	greasing up
• replacement	.....	replacement of component
• regulation	.....	adjustment, tightening
• cleaning	.....	chemical cleaning
- Repair or renewal	.....	maintenance welding,
		changing tubes,
		removal for disuse
		improvement of material
		or performance,
		corrosion control
- Improvement	.....	

