APPENDIX III

CODE SYSTEM

FOR

THE PETROLEUM EXPLORATION AND PRODUCTION DATA BANK SYSTEM OF PERTAMINA UNIT EP-II

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0. COMMON

(1) Province Code

Following is a proposal.

Code	Name
1	Jambi
2	S. Sumatra
3	W. Sumatra
4	Riau
5	Bengkulu
6	Lampung

(2) Area Code

Following is a proposal.

Code	Name
01	South Palembang District
02	Middle Palembang District
03	Musi District
04	Jambi District

(3) Field Office Code

Following is a proposal.

Code	Name
1	Bajubang
2	Prabumulih

(4) Field Code

Followings are field and prospect name being reported and an example of its code number and abbreviation. It is necessary for PERTAMINA to correct the name and prepare code number and abbreviate it.

Code	Name	Abbreviation
001*1	Prabumulih Centre	PRC*2
	Prabumulih West	
	Lembak	
	Payakabung	
	Talang Jimar West	
	Talang Jimar Middle	
	Talang Jimar East	
	Tanjung Tiga	
	Tanjung Miring West	
	Tanjung Miring East	
	Gunung Kemala	
	Benuang	
	East Benakat	
	Limau Niru	
	Limau Middle/West & MC	
	Limau P Section	

Code	Name	Abbreviation
	Limau Q Section (5A-22)	
	Limau Q Section (5A-51)	
	Limau Q Section (5A-108)	
	Belimbing	
	Tanjung Lontar	
	Suban Jeriji	
	Batu Keras	
	Sungai Taham	
	Kuang	
	Tasim	
	Pagardewa	
	Prabumenang	
	Meraksa	
	Kikim	
	Ogan Block	
	Lubuk Rukam	
	Karangan	
	Beringin	
	Sukacinta	
	Betung	
	Kedaton	
	Musi	
	Lampung	
	Mangunjaya	
	Babat	
	Kukui	

Code	Name	Abbreviation
	Keban	
	Suban Burung	
	Kluang	
	Kluang North	
	Lebong	
	Bentayan	
	Bajubang	
	Tempino	
	Kenali Asam	
	Kenali Asam West	
	Kasang	
	Sungai Gelam	
	Pijoan	
	Setiti	
	Neruo Senami	
	Sungai Lilin	
	Senawar	
	Bayung Lincir	
	Sengeti	
	Arang 2 West	

*1 and *2 are examples.

(5) Facilities Field Code

Followings are facilities field names being reported and an example of its code number and abbreviation.

It is necessary for PERTAMINA to correct the name and prepare code number and abbreviate them.

Code	Name	Abbreviation
01*1	Tanjung Tiga	TJT*2
	Talang Jimar	
	TG. Miring Barat	
	G. Kemala	
	Prabumulih Barat	
	Limau Barat	
	Kuang	
	Belimbing	
	Limau Timur	
	Karangan	
	Ogan Block	
	Prabumulih	
	Benakat	
	Benakat Timur	
	Karang Endah	
	Paya Kabung	
	Simpang	
	Bajubang	
	Tempino	
	Kenali Asam	
	Setiti	
	Sei Lilin	
	Sengeti	

*1 and *2 are examples.

(6) Station Code

A proposal for station name is made as follows.

[#1] - [#2] - [#3]

#1: Abbreviation of facilities field name (See 0 - (5))

#2: Abbreviation of kind of station (See 8 - (1))

#3: Sequence-number

Sequence-number is a part of the name actually used in facilities fields.

Following is an example of the station name defined above and a code number.

Code	Name
001	TJT-BS-01*

*TJT is an abbreviation of Tanjung Tiga.
BS is an abbreviation of block station.

(7) Formation Code

Following is a proposal.

Code	Name	Abbreviation
01	Kasai	KAF
02	Muara	MUF
03	Air Benakat	ABF
04	Gumai	GUF
05	Batu Raja	BRF
06	Talang Akar	TAF
07	Lahat	LAF
08	Basement	BAS

(8) Reservoir Unit Code

A proposal reservoir unit codes are made and used with field code as follows.

[#1] - [#2]

#1: Field code (See 0-(4))

#2: Reservoir unit code

Reservoir unit code is the code which is reservoir code currently used in PERTAMINA.

Followings are reservoir unit codes and names in Limau field being reported.

It is necessary for PERTAMINA to correct the name and code.

Code	Name
1200	S
1311	W1 South Flank
1312	W1 West Flank
1313	W1 North Flank
1331	W3 South Flank
1332	W3 West Flank
1333	W3 North Flank
1351	W42 South Flank
1352	W42 West & North Flank
1401	X0 South Flank
1402	X0 West & North Flank
1404	X0 East Flank
1411	X1
1412	X1
1421	X1
1422	X1
1431	X3 South Flank
1432	X3 West & North Flank
1510	Y1
1520	Y2
1530	Y3
1610	Z

(9) Layer Code

A proposal for layer code is made and used with field code as follows.

[#1] - [#2]

#1: Field code (See 0-(4))

#2: Layer code

Layer code should be properly decided by PERTAMINA considering of actual usage.

Followings are layers in Limau field being reported. It is necessar, for PERTAMINA to correct the name and code.

Code	Name
01*1	S
	W1
	W3
	W42
	X0
	X1
	X3
	Y1
	Y2
	Y3
	Z

"*1" is an example.

(10) Well Code

A proposal for well code is made as follows.

[#1] - [#2]

#1: Field code (see 0-(4))

#2: Number

Number should be properly decided by PERTAMINA considering of actual usage.

Following is an example of well code and well name.

Code	Name
001-001	PRC-001 or Prabumulih Centre - 001
002-001	Limau-M001

(11) Completion Status

Following is a proposal.

Code	Name
1	Completed
2	Suspended
3	Abandoned

(12) String Code

Following is a proposal.

Code	Name
S	Short length tubing
M	Middle length tubing

Code	Name
L	Long length tubing
A	Annulus

(13) Kind of completed zone
Following is a proposal.

Code	Name
1	Oil zone
2	Gas cap zone
3	Gas zone
4	Water zone

(14) String Specification

Following is a proposal.

Code	Name
1	Ordinary string
2	Rod pump
3	Submergible pump
4	Gas lift
5	Dump flood water injection
6	powered water injection
7	Gas injection

(15) Current Status

Following is a proposal.

Code	Name
	(01-09 Producing & Injecting)
01	Natural flowing
02	Pumping
03	Gas lifting
04	Injecting
	(10-19 Shut-in)
10	Shut-in due to production or injection schedule
11	Shut-in due to well survice
12	Shut-in due to surface repair
13	Shut-in due to low pressure - waiting for BHP build up -
14	Shut-in due to high gas-oil ratio
15	Shut-in due to high BS & W
	(20-29 Waiting)
20	Waiting for facilities
21	Waiting for workover
22	Waiting for stimulation
23	Waiting for abandonment
	(30-39 Observation)
30	Observation

(16) Well Status Code

A proposal for well status code is made as follows.

[#1] - [#2]

#1: String specification (See 0-(14))

#2: Current status (See 0-(15))

(17) Kind of Reservoir

Following is a proposal.

Code	Name
11	Praffine oil reservoir
12	Asphalg oil reservoir
20	Gas reservoir

(18) Site Description

Following is a proposal.

Code	Name
1	Tidal area
2	Swamp
3	Jungle
4	Open area with forest
5	Open area with natural grass
6	Desert
7	Hill with jungle
8	Hill with forest
9	Hill with natural grass
10	Mountain (gentle)
11	Mountain (steep)
12	Glacial area
13	Offshore

(19) Map Code

Following is a proposal.

[#1] - [#2] - [#3]

#1 : Group name

#2 : Kind of map

#3 : Reference-number

Reference-number should be properly decided by PERTAMINA considering of actual usage.

Following is an example of map code.

[A] - [11] - [xxxxxxxxxx]

- A is abbreviation of geological and right holder's area information.
- 11 is a proposed code of topographic map. (See APPENDIC III - 1 - (12) and 2 - (10).)

(20) Report Code

Following is a proposal.

[#1] - [#2] - [#3]

#1 : Group name (A-I)

#2 : Kind of report (See 1-(15), 2-(11))

#3 : Reference-number

Reference-number should be properly decided by PERTAMINA considering of actual usage.

Following is an example of report code.

[A] - [03] - [xxxxxxxxxx]

- A is abbreviation of geological and right holer's area information.
- 03 is abbreviation of well resume report.

(21) PERTAMINA or Foreign Contractor

Following is a proposal.

Code	Name
1	PERTAMINA
2	Foreign contractor

(22) Kind of Organization (for executor)

Following is a proposal.

Code	Name
1	PERTAMINA
2	Other

(23) Kind of Inspection

Following is a proposal.

Code	Name
(In case of vessel, tank, heat exchanger and pipeline)	
01	Visual inspection and hammering test
02	Leak test

Code	Name
03	Hydrostatic test
04	Non-destructive inspection
05	Destructive inspection

(In case of machinery and prime mover)

06	Visual inspection
07	Clearance inspection
08	Leak test of seal
09	Alignment inspection for shaft and couplings
10	Running test

(24) Kind of Repair

Following is a proposal.

Code	Name
1	Scheduled maintenance
2	Repair or renewal
3	Improvement

(25) Result of Inspection

Following is a proposal.

Code	Name
1	Good condition
2	Take more care
3	Repair
4	Overhaul as soon as possible
5	Write off

1. A-GEOLOGICAL DATA AND RIGHT HOLDER'S AREA INFORMATION

(1) Kind of Contract

Following is a proposal.

Code	Name	Abbreviation
1	P.S. contract	PS
2	Working contract	WK
3	Joint venture	JV
4	Technical assistance contract	TA
5	Other contract	OC

(2) Contract Code

A proposal for contract code is made as follows.

[#1] - [#2]

#1: Abbreviation of kind of contract (See 1 - (1))

#2: Sequence-number

Sequence-number should be properly decided by PERTAMINA considering of actual usage.

Following is an example of contract code.

[PS] - [001]

PS is abbreviation of P.S. contract.

(3) Contractor Code

Followings are contractor name being reported and examples of thier code numbers. It is necessary for PERTAMINA to abbreviate them

Code	Name	Abbreviation
01	Asamera South Sumatra	
02	P.T. Caltex Indonesia	
03	P.T. Stanvac Indonesia	
04	Roy. M. Huffington	
05	Calasiatic and Topco	
06	Conoco Indonesia	
07	Marathon Indonesia	
08	Sumatra Gulf Oil	
09	Hudbay Oil	
10	Jambi Oil	
11	Esso and Andalas Mobil Oil	
12	Chevron & Texaco	
13	Jambi Shell	
14	Japex Sumatra	

(4) Kind of Geological Survey

Following is a proposal.

Code	Name	Abbreviation
10	Geological field survey	(GFS)
11	Regional mapping survey	RMS
12	Stractural mapping survey	SMS
13	Stratigraphic mapping survey	STM
14	Reconnaissance sampling survey	RSS
15	Other geological field survey	OGF
20	Photo-geological survey	(PGF)

Code	Name	Abbreviation
21	Photo-geological survey	PHG
22	Side looking airborne radar survey	SLR
23	Other photogeological survey	RSP
31	Other geological survey	OGS

(5) Geological Survey Code

A proposal for geological survey code is made as follows.

[#1]-[#2]

#1: Abbreviation of kind of geological survey (See 1-(3))

#2: Sequence-number

Sequence-number should be decided by PERTAMINA considering of actual usage.

Following is an example of geological survey code.

[RMS] - [001]

RMS is abbreviation of regional mapping survey.

(6) Type of Map, Figure and Report

Following is a proposal.

Code	Name
1	Surveyed area map
2	Main map prepared by survey
3	Main figure prepared by survey
4	Survey report

(7) Kind of Geological Analysis

Following is a proposal.

Code	Name	Abbreviation
11	Geochemical analysis	GCH
20	Paleontological analysis	(PLA)
21	Foraminifera analysis	FRA
22	Pollen analysis	POL
23	Nanno-plankton analysis	NNP
24	Ostracoda analysis	OST
25	Other paleontological analysis	OPL
30	Lithological analysis	(LTA)
31	Carbonate rock analysis	CBR
32	Clastic rock analysis	CLR
33	Other lithological analysis	OLT
41	Other geological analysis	OGA

(8) Geological Analysis Code

A proposal for geological analysis code is made as follows.

[#1] - [#2]

#1: Abbreviation of kind of analysis (See 1-(6))

#2: Sequence-number

Sequence-number should be decided by PERTAMINA considering of actual usage.

Following is an example of geological analysis code.

[FRA] - [001]

FRA is abbreviation of foraminfera analysis.

(9) Sample Source for Analysis

Following is a proposal.

Code	Name
1	Area
2	Field
3	Well
4	Formation
5	Layer

(10) Kind of Sample

Following is a proposal.

Code	Name
1	Cutting sample
2	Conventional core sample
3	Side wall core sample
4	Surface rock sample

(11) Type of Trap

Following is a proposal

Code	Name	Abbreviation
1	Structural trap	STC
2	Stratigraphic trap	STG

Code	Name	Abbreviation
3	Combination trap	CMB
4	Carbonate build up trap (Reef)	REF
5	Other trap	OTH

(12) Type of Figure and Report

Following is a proposal.

Code	Name
1	Main Chart
2	Figure
3	Analysis Report

(13) Kind of Analysis Performed

Following is a proposal.

Code	Name
	(In case of Geochemical Analysis)
01	Organic carbone analysis
02	Extraction and fractionation analysis
03	Kerogen typing analysis
04	Gas chromatography analysis
05	Gas and gasolines analysis
06	Spore colouration analysis
07	Vitrinite reflectivity analysis
08	Thermal alteration index analysis
09	E.S.R. maximum paleontemperature analysis
10	Elemental analysis

Code	Name
11	Pyrolysis analysis
12	Other
	(In case of Lithological Analysis)
01	Microsopic analysis
02	Electron microscopic analysis
03	Chemical analysis
04	X-ray analysis
05	Heavy mineral analysis
06	Clay mineral analysis
07	Shaving analysis
08	Settling velocity method analysis
09	Other analysis

(14) Kind of Map and Figure

Following is a proposal

Code	Name
10	General map
11	Topographic map
12	Contract area map
13	Well location map
14	Prospect and lead map
15	Field location map
16	Exploration activity map
17	Other general map

Code	Name
20	Geological information map
21	Field geological map
22	Tectonic map
23	Facies map
24	Geothermal map
25	Geochemical map
26	Other geological information map
30	Geological contour map
31	Structural contour map
32	Isopach (Iso-Lith) map
33	Other geological contour map
40	Reservoir information map
41	Production map
42	Isoporosity map
43	Isopermeability map
44	Net oil isopach map
45	Net gas isopach map
46	Other reservoir information map
50	Cross-section
51	Structural cross-section
52	Stratigraphic cross-section
53	Other cross-section
60	Chart
61	Geological correlation chart

Code	Name
62	Paleontological distribution chart
63	Other chart
70	Other map and figure

(15) Kind of Report

Following is a proposal.

Code	Name
01	Monthly exploration report
02	Annual exploration report
03	Well resume report
04	Drilling proposal report
05	Drilling operation program report
06	Paleontological report
07	Field mapping report
08	Photogeological report
09	Prospect and lead repoet
10	Geochemical analysis report
11	Lithological analysis report
12	Geological analysis report
13	Log evaluation report
14	Geological evaluation report
15	Basin study and regional study report
16	Special study report
17	Work program and budget report
18	Other geological report

2. B-GEOPHYSICAL DATA INFORMATION

(1) Kind of Geophysical Survey

Following is a proposal.

Code	Name	Abbreviation
1	Seismic survey	SML (Reflection)
		SMR (Refraction)
2	Magnetic survey	MGN
3	Gravity survey	GRV
4	Well velocity survey	WVS
5	Special study	SPS

(2) Geophysical Survey Code

A proposal for geophysical survey code is made as follows.

#1 - #2

#1: Abbreviation of kind of survey (See 2-(1))

#2: Reference-number

Reference-number should be properly decided by PERTAMINA considering of actual usage.

It is recommended for PERTAMINA to prepare correlation table of this code and survey name commonly used in field.

Following is example of the geophysical survey code defined above.

It is necessary for PERTAMINA to code it.

SML - 001

Above code is the code of seismic reflection survey which have "001" as your reference-number.

(3) Method of Survey

Following is a proposal.

Code	Name
1	Reflection
2	Refraction

(4) Recording System

Following is a proposal.

Code	Name
1	Digital
2	Analogue

(5) Shooting Pattern

Following is a proposal.

Code	Name
1	Split spread
2	In Line spread
3	T spread
4	L spread
5	Offset spread
6	End-on spread
7	Slalom line spread

(6) Airborne or Land

Following is a proposal.

Code	Name
1	Airborne
2	Land

(7) Kind of Section

Following is a proposal.

Code	Name
1	Unmigrated time section
2	Unmigrated depth section
3	Migrated time section
4	Migrated depth section

(8) Application of Deconvolution

Following is a proposal.

Code	Name
1	Done before stack (DBS)
2	Done after stack (DAS)
3	DBS & DAS
4	Without

(9) Migrated or Unmigrated

Following is a proposal.

Code	Name
1	Unmigrated
2	Migrated

(10) Kind of Map

Following is a proposal.

Code	Name
01	Location map
02	Time contour map
03	Interval time contour map
04	Depth contour map
05	Isopach map
06	Residual field intensity map
07	Interpretation map
08	Gravity map
09	Residual gravity map
10	Special geophysical map
11	Other map

(11) Kind of Report

Following is a proposal.

Code	Name
01	Seismic survey report
02	Magnetic survey report
03	Gravity survey report
04	Well velocity survey report
05	Special study report

(12) Horizon Name

Following is a proposal.

Code	Name
01	H-1, Orange
02	H-2, L. Green
03	H-3, Yellow
04	H-4, Green
05	H-5, Blue
06	H-6, Brown
07	H-7, Violet
08	H-8, Red

(13) Horizon Name (based on the standard formation name)

Code	Name
01	Top of
02	Near top of
03	Upper
04	Middle of
05	Within
06	Base of
07	Lower
08	Correlated with
09	Approximately

(14) Synthetic Seismogram

Code	Name
1	Run
2	Not

3. C-WELL DATA INFORMATION

(1) Objective of Well

Following is a proposal.

Code	Name
1	Wild cat
2	Delineation and/or appraisal
3	Producer
4	Injector
5	Observatory

(2) Objective of Workover

Following is a proposal.

Code	Name
1	Recompletion by changing completed zone
2	Recompletion by adding new completed zone
3	Repair of completed zone by shut off
4	Mechanical repair
5	Reopening

(3) Operator

Following is a proposal.

Code	Name
01	NIAM
02	BPM
03	SHELL
04	PERMINDO
05	PERTAMIN
06	PERMINA
07	STANVAC
08	PERTAMINA

(4) Vertical or Deviated

Following is a proposal.

Code	Name
1	Vertical
2	Deviated

(5) Kind of Deviation Survey

Following is a proposal.

Code	Name
1	TOTCO
2	Magnetic
3	Gyro

(6) Wing Valve Configuration (Wellhead Assembly)

Following is a proposal.

Code	Name
1	Single wing
2	Double wing

(7) Type of Subsurface Pump (Rod Pump)

Following is a proposal.

Code	Name
1	RWB
2	THE
3	TLE

(8) Gas Anchor (Rod Pump)

Following is a proposal.

Code	Name
1	With gas anchor
2	Without gas anchor

(9) Type of Surface Pump (Rod Pump)

Following is a proposal.

Code	Name
1	Crank counter balance
2	Beam counter balance
3	Air balance
4	Other

(10) Type of Prime Mover (Rod Pump)

Following is a proposal.

Code	Name
1	Electric-motor
2	Gas engine
3	Gasoline engine
4	Diesel engine

(11) Gas separator (submergible pump)

Following is a proposal.

Code	Name
1	With gas separator
2	Without gas separator

(12) Macaroni Pipe (Gas Lift)

Following is a proposal.

Code	Name
1	With macaroni pipe
2	Without macaroni pipe

(13) Type of Lifting (Gas Lift)

Following is a proposal.

Code	Name
1	Continuous
2	Intermittent

(14) Type of Installation (Gas Lift)

Following is a proposal.

Code	Name
1	Open
2	Semiclosed
3	Closed
4	Chamber
5	Others

(15) Objective of Perforation

Following is a proposal.

Code	Name
1	Completion
2	Squeeze cementing
3	Test
4	Other

(16) Status of Perforation

Following is a proposal.

Code	Name
1	Opened
2	Closed

(17) Type of Mud

Following is a proposal.

Code	Name
1	Fresh water base
2	Salt water base
3	Oil in water emulsion
4	Oil base
5	Others

(18) Name of Mud Agent (in kg)

Following is a proposal

Code	Name
01	Bentonite
02	Barite
03	CMC L
04	CMC H
05	Spersene
06	Resinex (Durenex)
07	Q-broxin
08	XP-20
09	CC-16
10	Caustic Soda
11	SAPP
12	Mica F/M/C
13	Mud Fibre

(19) Name of Mud Agents (in liter)

Following is a proposal.

Code	Name
1	Drilling detergent
2	Pipe lax
3	Diesel oil

(20) Objective of Squeeze Cementing

Following is a proposal.

Code	Name
1	Supplementing primary cement
2	Sealing off undesired perforation
3	Plugging channel
4	Repairing damaged casing

(21) Kind of Plug Back

Following is a proposal.

Code	Name
1	Cement
2	Bridge plug
3	Cement & bridge plug

(22) Name of Cement and Additives (in kg)

Following is a proposal.

Code	Name
01	Class G
02	Class D
03	Litepoz
04	CACL2
05	Bentonite
06	D28 Retardar
07	D13 Retardar
08	D-60 Flac

(23) Name of Cement and Additives (in liter)

Following is a proposal.

Code	Name
1	D-47 Antiform
2	CW-7 Mud wash

(24) Kind of Trouble

Following is a proposal.

Code	Name
1	Lost circulation problem
2	Hole solughing problem
3	Pipe sticking problem
4	Well control problem
5	Water flow problem
6	Deviation control problem
7	Down hole equipment failure
8	Other

(25) Kind of Log

Following is a proposal.

Code	Name	Abbreviation
01	Spontaneous-Potential	SP
02	Electric Log	EL
03	Induction Log	IES
04	Dual Induction Laterolog	DIL
05	Laterolog	LL
06	Microlog	ML
07	Microlaterolog	MLL
08	Proximity Log	PML
09	Micro Sperical Focused Log	MSFL
10	Sonic Log	SL
11	Borehole Compensated Sonic	BHC-SONIC
12	Directional Survey	DIPSURVEY
13	C D M	CDM
14	H D T	HDT
15	Temperature Survey	TS
16	Cement Bond Log	CBL
17	V D L	VDL
18	Litho Density Log	LDT
19	Gamma Ray Log	GR
20	Neutron Log	CNL
21	Formation Density Log	FDC
22	Casing Collar Log	CCL

(26) Scale of Well Log

Following is a proposal.

Code	Name
1	1 : 200
2	1 : 500
3	1 : 1000

(27) Kind of Interpretation

Following is a proposal.

Code	Name	Abbreviation
1	Quick look	QLM
2	Computer Processed by Pertamina	CPP
3	C P I	CPI
4	H D T	HDT
5	C S U	CSU
6	Cyber dip	CBD

(28) Type of Coring Bit

Following is a proposal.

Code	Name
1	Roller bit
2	Diamond bit

(29) Type of Barrel

Following is a proposal.

Code	Name
1	Conventional
2	Wire line
3	Rubber sleeve
4	Oriented core

(30) Folourescence show

Following is a proposal.

Code	Name	Abbreviation
1	Poor	P
2	Moderate	M
3	Good	G
4	Strong	S

(31) Type of Drill Stem Test

Following is a proposal.

Code	Name
1	Open hole
2	Cased hole

(32) Swabbing Operation (DST)

Following is a proposal.

Code	Name
1	Carried out
2	Not carried out

(33) Succeeded or Not (Wireline Formation Test)

Follwing is a proposal.

Code	Name
1	Succeeded
2	Not succeeded

(34) Kind of Fluid Estimated (Wireline Formation Test)

Following is a proposal.

Code	Name
1	Gas
2	Oil
3	Water

4. D-PETROPHYSICAL AND PVT ANALYSIS DATA INFORMATION

(1) Kind of Petrophysical and PVT Analysis

Following is a proposal.

Code	Name	Abbreviation
1	Core analysis	COR
2	PVT analysis	PVT

(2) Petrophysical and PVT Analysis Code

A proposal for petrophysical and PVT analysis code is made as follows.

[#1] - [#2]

#1: Abbreviation of kind of petrophysical and PVT analysis (See 4-(1))

#2: Sequence-number

Sequence-number should be properly decided by PERTAMINA considering of actual usage.

Following is an example of petrophysical and PVT analysis code.

[PVT] - [002]

(3) Kind of Sampling

Following is proposal

Code	Name	Abbreviation
1	Conventional coning (plug size)	CCP
2	Conventional coning (full diameter)	CCF
3	Sidewall coning	SWC

(4) Kind of Sample

Following is proposal

Code	Name	Abbreviation
1	Subsurface sample	SS
2	Recombined sample	RS

(5) Kind of Analysis Performed

Following is a proposal

Code	Name
	(In case of core analysis)
01	Porosity
02	Horizontal permeability
03	Vertical permeability
04	Fluid contents
05	Grain density (calculated)

Code	Name
06	Grain density
07	Bulk (saturated) density (by mercury injection)
08	Mounting required for solf or friable rocks
09	Special handling required because of rock type or texture
10	Fluid contents by dean stark method
11	X-ray photographs, per foot or core
12	Acid solubility with versenate analysis for CaO/MgO ratio
13	Pore water chloride (conventional only)
	Capillary pressure
	porous plate cell
	Air-water or air-oil, plug size
14	Single point
15	Two point
16	Complete curve
	Oil-water, plug size
17	Single point
18	Two point
19	Complete curve
20	Calculation of connate water as a function of both height above water and permeability (or porosity)
21	Calculation of pore size distribution
	Liquid permeability
22	Special water permeability
	Permeability as a function of throughtput
23	Initial liquid

Code	Name
24	Each additional liquid
25	Effective oil permeability at connate water saturation
	Electrical resistivity measurement (consolidated samples only)
26	Formation factor, room conditions, no overburden pressure
27	Resistivity index
28	In conjunction with porous plate cell capillary pressure test (per sample, per point)
29	Not in conjunction with capillary pressure test (per sample, per point)
30	Determination of "B" factor
	Water flood tests (Room conditions)
	Basic flood (saturation and permeability data at end points, only)
31	Fresh
32	Restored
	Water flood susceptibility
33	Fresh
34	Restored
	Water/oil relative permeability (Unsteady sate)
35	Fresh
36	Restored
	Water flood susceptibility
37	Fresh
38	Restored
	Water/oil relative permeability (Unsteady sate)
39	Fresh
40	Restored

Code	Name
41	Water flood on cores containing oil and trapped gas
	Residual gas
42	Imbibition displacement
43	Low rate dynamic displacement
	Relative permeability tests (Unsteady state)
	Gas-oil
44	Without connate water
45	With connate water
46	Gas-water
47	Water/oil, calculated from pore size distribution
	Wettability studies
48	Imbibition of both oil and water, at room conditions (per test)
	Overburden permeability and porosity
49	Air permeability (per overburden pressure)
50	Porosity (Helium. Porosimeter-Boyles law per overburden pressure)
51	Permeability and porosity (per overburden pressure)
	Sample preparation and selection
	Room condition
52	Air permeability
53	Porosity
54	Mounting (friable or vuggy cores)
55	Firing sample (Muffle furnance)

Code	Name
	Miscellaneous
56	One sorting
57	Two sorting
	Slit and clay size distribution by sedimentation balance
58	In conjunction with one sorting
59	Not in conjunction with one sorting
60	Other specialized test

(in case of PVT analysis)

(oil reservoir)

01	Pressure-volume relations of reservoir fluid at reservoir temperature, including saturation pressure determination, compressibility of oil above saturation pressure and two phase volume below saturation pressure.
02	Differential vaporization of reservoir fluid at reservoir temperature; and presentation of gas solubility and oil shrinkage data.
03	Determination of specific gravity and compressibility factor of liberated gas at all points on differential vaporization and determination of density of the liquid phase.
04	Viscosity of reservoir fluid at reservoir temperature and pressures from above reservoir pressure to atomospheric pressure.
05	Separator tests at four single-stage separator pressure and laboratory temperature to determine the effects of separator pressure on solution gas-oil ratio, formation volume factor and stock tank oil gravity.
06	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.

Code	Name
07	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.
08	Single-stage separator test in addition to above separator tests.
09	Multi-stage separator test including determination of separator volume factors at each stage of separation.
10	Compositional analysis of separator oil and gas, and calculation of hydrocarbon composition of recombined reservoir fluid (This would be applied only for recombined sample).
11	Pressure temperature diagram
	(condensate reservoir)
12	Compositional analysis of separator vapor and liquid, and recombination to any specified gas/liquid ratio.
13	Dew-point pressure determination and pressure-volume relations of recombined reservoir fluid at reservoir temperature.
14	Compressibility factor of reservoir fluid at reservoir temperature between reservoir pressure and dew-point pressure.
15	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.
16	Presentation of above results in terms of total liquid content (GPM) per million standard cubinc feet of initial reservoir fluid.
17	Presentation of above results in terms of liquid products and gas recoverable by normal temperature, single or two-stage separation per million standard cubinc feet of initial reservoir fluid.

Code	Name
18	Retrograde liquid accumulation in reservoir determined at pressure investigated in above depletion study.
19	Pressure temperature diagram.
20	Compositional analysis of separator vapor and liquid, and recombination to any single specified gas/oil ratio or bubble point pressure.
21	Saturation pressure and pressure-volume relations of recombine reservoir temperature.
22	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 abanconment pressure. Includes composition of equilibrium liquid phase at final depletion pressure.
23	Liquid shrinkage versus pressure using constant volume depletion techniques as above.
24	Viscosity of liquid phase at reservoir temperature at several pressures from above reservoir pressure to atomospheric pressure.
	(Compositional studies and water analysis)
25	Kethane through C7+
26	Gas Gravity (Measure)
27	Complete chemical analysis of oil field water or mud filtrate samples (including dissoved solids (10 ions), total dissolved solids, PH, hydrogen sulfide, specific gravity 60/60 °F, and calculated resistivity.
28	Chloride and Total Dissolved Solids.
29	Resistivity (Measured), at Room Temperature.
30	Other.

5. E-PRODUCTION DATA INFORMATION

(1) Kind of Recovery Method

Following is a proposal.

Code	Name
1	Primary recovery
2	Secondary recovery
3	Tertiary recovery

(2) Kind of Injection Fluid

Following is a proposal.

Code	Name
1	Fresh water
2	Sea water
3	Formation water
4	Wet gas
5	Dry gas
6	CO_2
7	Air
8	Other kind of water

(3) Filtration

Following is a proposal.

Code	Name
1	With filtration
2	Without filtration

(4) Additives

Following is a proposal.

Code	Name
1	With additive
2	Without additive

(5) Kind of pressure for gas

Code	Name
1	High pressure
2	Medium pressure
3	Low pressure

6. F-RESERVES DATA INFORMATION

(1) Development Status of Reservoir Unit

Following is a proposal.

Code	Name
1	Producing under primary recovery
2	Producing under secondary recovery
3	Producing under tertiary recovery
4	Nonproducing under primary recovery
5	Nonproducing under secondary recovery
6	Nonproducing under tertiary recovery
7	Undevelopment

(2) Abandon Condition for Gas Cap Zone and Gas Reservoir

Following is a proposal.

Code	Name
1	60 KSC
2	30 KSC
3	20 KSC
4	10 KSC

7. G-PRODUCTION OPERATION DATA INFORMATION

(1) Kind of Well Test and Stimulation

Following is a proposal.

Code	Name	Abbreviation
1	Production test	PT
2	Injection test	IT
3	Subsurface pressure survey	SP
4	Production log	PL
5	Well stimulation	WS

(2) Well Test and Stimulation Code

A proposal for well test and stimulation code is made as follows.

#1 - #2 - #3 - #4

#1: Well code (See 0-(10))

#2: Abbreviation of kind of well test and stimulation (See 7-(1))

#3: Sequence-number

#4: Date (YY)

Sequence-number should be properly decided by PERTAMINA considering of actual usage.

(3) Kind of Production Test

Following is a proposal.

Code	Name
1	Initial production test before stimulation
2	Initial production test after stimulation
3	Production test before workover
4	Production test after workover
5	Production test before stimulation
6	Production test after stimulation
7	Production test

(4) Type of Production Test

Following is a proposal.

Code	Name
1	Flow test for oil
2	Multipoint test for gas
3	Isochronal test for gas
4	Pulse test
5	Other

(5) Flowing method for Test

Following is a proposal.

Code	Name
1	Natural flowing
2	Rod pumping
3	Submergible pumping
4	Gas lifting
5	Swabbing

(6) Bottomhole Sampling

Following is a proposal.

Code	Name
1	With bottomhole sampling
2	Without bottomhole sampling

(7) Kind of Injection Test

Following is a proposal.

Code	Name
1	Initial injection test before stimulation
2	Initial injection test after stimulation
3	Injection test before workover
4	Injection test after workover
5	Injection test before stimulation
6	Injection test after stimulation
7	Injection test

(8) Bottomhole Pressure Survey

Following is a proposal.

Code	Name
1	With bottomhole pressure survey
2	Without bottomhole pressure survey

(9) Type of Injection Test

Following is a proposal.

Code	Name
1	Falloff test
2	Step rate test

(10) Kind of Injection Fluid

Following is a proposal.

Code	Name
1	Fresh water
2	Sea water
3	Formation water
4	Wet gas
5	Dry gas
6	CO_2
7	Air
8	Other king of water

(11) Filtration

Following is a proposal.

Code	Name
1	With filtration
2	Without filtration

(12) Additives

Following is a proposal.

Code	Name
1	With additives
2	Without additives

(13) Type of Subsurface Pressure Survey

Following is a proposal.

Code	Name
1	Build pressure survey
2	Falloff pressure survey
3	Spot measurement

(14) Kind of Production Log

Following is a proposal.

Code	Name
1	Inflatable combination tool (ICT)
2	Production combination tool (PCT)
3	Packer flowmeter
4	Continuous Flowmeter
5	Full bore spinner flowmeter
6	Gradiomanometer

(15) Objective for Stimulation

Following is a proposal.

Code	Name
1	Production stimulation
2	Injection stimulation

(16) Type of Stimulation

Following is a proposal.

Code	Name
1	Matrix acidizing
2	Fracture acidizing
3	Hydraulic fracturing

(17) Kind of Field Laboratory Fluid Analysis

Following is a proposal.

Code	Name	Abbreviation
1	Oil analysis	OIL
2	Condensate analysis	CON
3	Gas analysis	GAS
4	Water analysis	WAT

(18) Kind of Sampling Place

Following is a proposal.

Code	Name
1	Wellhead
2	Production maniholds
3	Separator

(19) Field Laboratory Fluid Analysis Code

A proposal for field laboratory fluid analysis code is made as follows.

[# 1] - [# 2]

#1 : Abbreviation of kind of fluid laboratory analysis (See 7-(17))

#2 : Sequence-number

Sequence-number should be properly decided by PERTAMINA considering of actual usage.

8. H-PRODUCTION FACILITIES DATA INFORMATION

(1) Kind of Station

Following is a proposal.

Code	Name	Abbreviation
01	Block station	BS
02	Gathering station	GS
03	Central station	CTS
04	Heater station	HTS
05	Compressor station	CS
06	Booster pump station	BPS
07	Storage station	STS
08	Final delivery point	FDP
09	Dehydration station	DHS
10	Metering station	MTS
11	Power station	PWS
12	Telemetering station	TMS
13	Other station	OTS

(2) Main Function

Following is a proposal.

Code	Name
01	Separation
02	Storage
03	Pumping
04	Compression
05	Sweetening
06	Dehydration

07	Heating
08	Waste water treatment
09	Metering
10	Power

(3) Kind of Equipment

Following is a proposal.

Code	Name	Abbreviation
01	Separator	SP
02	Vessel tank	VT
03	Absorber	AB
04	Stripper	SR
05	Filter	FL
06	Adsorber	AD
21	Storage tank	TK
31	Heat exhanger	HE
32	Fired heater	FH
33	Refrigerator	RF
41	Pump	PP
42	Compressor	CP
43	Generator	GN
44	Fan or blower	BL
45	Agitator	AG
51	Electric motor	EM
52	Ignition engine	IE
53	Steam engine	SE
54	Gas turbine	GT
55	Steam turbine	ST
91	Fire fighting system	FF

(4) Equipment Code

A proposal for equipment code is made as follows.

[#1] - [#2]

#1: Abbreviation of kind of equipment

(See 8-(3))

#2: Sequence-number

Sequence-number should be decided by PERTAMINA considering of actual usage.

Followings are examples of equipment code.

SP - 001 *1

VT - 001 *2

*1 SP is abbreviation of separator

*2 VT is abbreviation of vessel tank

(5) Type of Vessel

Following is a proposal.

Code	Name
1	Horizontal cylinder
2	Vertical cylinder
3	Sphere

(6) Kind of Absorbent

Following is a proposal

Code	Name
1	Amine
2	Glycol
3	Other

(7) Type of Filter

Following is a proposal.

Code	Name
1	Netlike
2	Granular
3	Porous

(8) Kind of Adsorbent

Following is a proposal.

Code	Name
1	Bauxite
2	Alumina
3	Silica
4	Molecular sieves
5	Carbon

(9) Type of Storage Tank

Following is a proposal.

Code	Name
1	Cone roof
2	Dome roof
3	Floating roof
4	Expansion roof
5	Water seal type
6	Dry seal type
7	Underground type

(10) Method of Plate Combination

Following is a proposal.

Code	Name
1	Welded
2	Bolted
3	Riveted

(11) Type of Heat Exchanger

Following is a proposal.

Code	Name
1	Shell and tube
2	Plate
3	Multi-tube
4	Double-pipe
5	Block

(12) Type of Fired Heater

Following is a proposal

Code	Name
1	Direct heater
2	Indirect water bath
3	Indirect salt bath

(13) Type of Refrigerator

Following is a proposal.

Code	Name
1	Compression type
2	Absorption type

(14) Type of Pump

Following is a proposal.

Code	Name
1	Centrifugal
2	Mixed flow
3	Axial flow
4	Reciprocating
5	Volumetric rotary
6	Regenerative
7	Other

(15) Type of Compressor

Following is a proposal.

Code	Name
1	Axial flow
2	Centrifugal
3	Volumetric rotary
4	Reciprocating

(16) Type of Generator

Following is a proposal.

Code	Name
1	AC
2	DC

(17) Type of Fan or Blower

Following is a proposal.

Code	Name
1	Axial flow
2	Centrifugal
3	Volumetric rotary

(18) Type of Agitator

Following is a proposal.

Code	Name
1	Propeller
2	Turbine
3	Paddle
4	Other

(19) Type of Electric Motor

Following is a proposal

Code	Name
1	Induction
2	Synchronous
3	Other

(20) Type of Ignition Engine

Following is a proposal.

Code	Name
1	Gas engine
2	Petrol engine
3	Diesel engine
4	Gasoline engine

(21) Type of Gas Turbine

Following is a proposal.

Code	Name
1	Open cycle (Internal combustion type)

(22) Type of Steam Turbine

Following is a proposal.

1 Curtis
2 Impulse (Rateau)
3 Reaction (Parsons)
4 Curtis-Impulse
5 Curtis-Reaction
6 Impulse-Reaction
7 Curtis-Impulse-Reaction
8 Other

(23) Type of Fire Fighting System

Following is a proposal.

Code	Name
1	Water extinguishing system
2	Foam extinguishing system

Code	Name
3	Dry chemical system
4	CO_2 or halon system
5	Other system

(24) Manufacturer Code

A proposal for manufacturer code is made as follows.

[#1] - [#2]

#1: Country code (2 digits)

#2: Sequence number (3 digits)

Country code and sequence number should be decided by PERTAMINA considering of actual usage.

Following is an example of manufacturer code.

[01] - [005]

e.g. USA - Ingersoll-Rand

9. I-PIPELINE DATA INFORMATION

(1) Pipeline Code

A proposal for pipeline is made as follows.

[#1] - [#2]

#1: Station code

#2: Sequence-number

Station code is the code of station at the end point to which the pipeline is connected.

Sequence-number should be properly decided by PERTAMINA considering of actual usage.

Following is an example of the pipeline code defined above.

[001]-[02]

(2) Objective at Installation

Following is a proposal.

Code	Name
1	Production
2	Injection
3	Gas lift
4	Transportation
5	Other

(3) Kind of Line-pipe

Following is a proposal.

Code	Name
1	Regular line pipe (unlined)
2	Cement-lined regular line pipe
3	Asbestos-cement pipe
4	Plastic pipe
5	Aluminum pipe

(4) Type of Connection

Following is a proposal.

Code	Name
1	Welded
2	Screwed
3	Flanged

(5) Type of Valve

Following is a proposal.

Code	Name
1	Gate
2	Ball
3	Plug
4	Glove
5	Check
6	Needle
7	Butterfly
8	Other

APPENDIX IV

UNIT ABBREVIATION IN THIS REPORT

UNIT ABBREVIATION IN THIS REPORT

SYMBOL USED IN THIS REPORT	DESIGNATION	REMARKS
-	-	no dimension
acre	acre	
acre ft	acre feet	
air = 1	-	specific gravity of gas as air = 1
°API	degree API	
bbl	barrel	
bbl/acre ft	barrel/acre ft	
Btu/scf	British thermal unit/ standard cubic feet	
cal	calorie	
°C	degree centigrade	
cc or cm^3	cubic centimeter	
cm H_2O	centimeter water	
cm H_2O G	centimeter water gauge	
cp	centipoise	
d or day	day	
darcy	darcy	a unit of measure of permeability
deg.	degree	

SYMBOL USED IN THIS REPORT	DESIGNATION	REMARKS
ft	feet	
ft^3/acre ft	cubic feet/acre feet	
g/cm^3	gram/cubic centimeter	
h	hour	abbreviation for metric unit
hr	hour	abbreviation for English unit
ha	hectare	
Hz	hertz	
in	inch	
kcal/h	kilocalorie/hour	
kg	kilogram	
kg cal/kg	kilogram calorie/ kilogram	net calorific value
kg/cm^2	kilogram/square centimeter	
kg/cm^2G	kilogram/square centimeter gauge	
$kg/cm^2/10m$	kilogram/square centimeter/ten meter	
kg/h	kilogram/hour	
kl	kiloliter	
kl/d	kiloliter/day	

SYMBOL USED IN THIS REPORT	DESIGNATION	REMARKS
kl/h	kiloliter/hour	
km	kilometer	
km^2	square kilometer	
kVA	kilovolt ampere	
kW	kilowatt	
l or ltr	liter	
l/min	liter/minute	
lb	pound	
lb/in^2 or psi	pound/square inch	
lb/ft	pound/feet	
m	meter	
M	thousand	for English unit
m^2	square meter	
m^3	cubic meter	
m^3/d	cubic meter/day	
$m^3/d/kg/cm^2$	cubic meter/day/kilogram/ square centimeter	
m^3/h	cubic meter/hour	
m/s	meter/second	
$m^3/std\ m^3$	cubic meter/standard cubic meter	
md-m	millidarcy meter	
meq/l	milli-equivalent/liter	component contents
min	minute	

SYMBOL USED IN THIS REPORT	DESIGNATION	REMARKS
mm	millimeter	
MM	million	for English unit
ms or msec	millisecond	
ohm.m or Ω.m	ohm meter	resistivity
percent or %	percent	
pcs	peaces	
ppm	parts/million	
psi	pounds/square inch	
Rp	rupiah	
rpm	revolutions/minute	
s or sec	second	
scf or std ft^3	standard cubic feet	
shot	shot	a charge of high explosive
shots/ft	shots/feet	
spm	strokes/minute	
STB	stock-tank barrel	
std m^3	standard cubic meter	
std m^3/d	standard cubic meter/day	
std m^3/h	standard cubic meter/hour	
std m^3/std m^3	standard cubic meter/ standard cubic meter	weighted gas condensate ratio

SYMBOL USED IN THIS REPORT	DESIGNATION	REMARKS
US$	US dollar	
V	volt	

APPENDIX V

PARTICIPANTS' ACTIVITY PERFORMANCE

Participants' Activity Performance

Name	Working Period	Main Work Performed	Remarks
Erwin Kasim (Deputy coordinator)	Sep. 17, 1979	- Courtesy call to Pertamina Representative in Tokyo	Arriving in Tokyo on Sep. 15, 1979
		- Courtesy call to Institute of Energy and Economics	Leaving Tokyo on Sep. 27, 1979
	Sep. 19, 1979	- Courtesy call to Mr. S. Wada, Director, Manager of PERD of JOE	
	Sep. 25, 1979	- Courtesy call to Mr. K. Takihara, President of JOE	
	Sep. 17 - 26, 1979	- Discussion works on participation	
Tjipto Basuki (Geophysicist)	Sep. 17, 1979	- Courtesy call to Pertamina Representative in Tokyo	Arriving in Tokyo on Sep. 15, 1979
	Sep. 17, 1979	- Courtesy call to Institute of Energy and Economics	Leaving Tokyo on Oct. 14, 1979
	Sep. 19, 1979	- Courtesy call to Mr. S. Wada, Director, Manager of PERD of JOE	
	Sep. 25, 1979	- Courtesy call to Mr. K. Takihara, President of JOE	

Name	Working Period	Main Work Performed	Remarks
Tjipto Basuki	Sep. 17, 1979 - Oct. 12, 1979	- Review of the survey report*) and development method performed by JOE - Study on the outline of the basic concept for geophysical data information group - Settlement and classification of output data for geophysical data information group 1) Item number 2) Output item 3) Data output example 4) Output data type & length 5) Output Report - Settlement of keyword for retrieving output item for geophysical information data group - Discussion on the determination of input data form and number of column - Discussion on the determination of input data tree - Estimation of frequency of occurance and data volume of input data - Discussion of data source report - Review and discussion on the outline of the basic concept for geological data information group	*) A survey Report on the Petroleum Exploration and Production Data Bank System Development Project in Republic of Indonesia

Name	Working Period	Main Work Performed	Remarks
Sudjana D. A. (System Analyst)	Sep. 17, 1979	- Courtesy call to Pertamina Representative in Tokyo	Arriving in Tokyo on Sep. 15, 1979
		- Courtesy call to Institute of Energy and Economics	
	Sep. 19, 1979	- Courtesy call to Mr. S. Wada, Director, Manager of PERD of JOE	
	Sep. 25, 1979	- Courtesy call to Mr. K. Takihara, President of JOE	
	Oct. 3, 1979	- Attending computer exhibition	
	Sep. 17, 1979 - Oct. 19, 1979	- Study and review on a survey report prepared by JICA	
		- Discussion on participation schedule	
		- Review source document collected by JICA survey team	
		- Review output format and keyword for retrieving output data for geophysical data information group	
		- Concepting output method and procedure, mainly geophysical data information group	

Name	Working Period	Main Work Performed	Remarks
Ali Gayo (System Analyst)	Sep. 17, 1979	- Courtesy call to Pertamina Representative in Tokyo	Arriving in Tokyo on Sep. 15, 1979
		- Courtesy call to Institute of Energy and Economics	
	Sep. 19, 1979	- Courtesy call to Mr. S. Wada, Director, Manager of PERD of JOE	
	Sep. 25, 1979	- Courtesy call to Mr. K. Takihara, President of JOE	
	Oct. 3, 1979	- Attending computer exhibition	
	Sep. 17, 1979 - Oct. 19, 1979	- Study and review on a survey report prepared by JICA	
		- Discussion on participation schedule	
		- Review source document collected by JICA survey team	
		- Review output format and keyword for retrieving output data for geophysical data information group	
		- Conceptual design of the data base structure, mainly geophysical data information group	
		- Study on IMS	

Name	Working Period	Main Work Performed	Remarks
B. S. Sitoemorang (Team leader)	Sep. 26, 1979	- Courtesy call to Mr. K. Takihara, President of JOE and Mr. S. Wata, Director, Manager of PERD of JOE	Arriving in Tokyo on Sep. 25, 1979 Leaving Tokyo on Oct. 11, 1979
	Sep. 28, 1979	- Courtesy call to Mr. S. Kishida, Exective Director of JICA	
		- Courtesy call to Mr. T. Ibi, Deputy Director Development Div., Potroleum Dept., AGENCY OF NATURAL RESOURCES AND ENERGY	
	Oct. 1, 1979	- Courtesy call to Mr. S. Kiyotaki, Derector of Technical Cooperation Dev., Economic Cooperation Dep't, International Trade Policy Bureau	
	Oct. 3, 1979	- Field trip to gas field around Nagaoka, Niigata Prefecture	
	Oct. 8, 1979	- Discussion on participation schedule	
Drs. Djumero (Reservoir Engineer)	Oct. 16, 1979	- Review of the survey report and development method performed by JOE	Arriving in Tokyo on Oct. 15, 1979
		- Study on the outline of the basic concept for pressure production data information group and reserves information group	
		- Settlement and classification of output data for pressure production data information group and reserves information group	
		- output report	

Name	Working Period	Main Work Performed	Remarks
Drs. Djumoro		- Settlement of keyword for retrieving output item for pressure production data information group and reserves information group	

Name	Working Period	Main Work Performed	Remarks
Sudjana D. A. (System Analyst)	Oct. 20 - Nov. 6, 1979	- Settlement of input data format for geophysical data information group. - Study on output method and procedure, mainly geological data, well data, pressure and production data and reserves data information groups. - Discussion on coding system. - Discussion on the hardware configuration. - Discussion on the hardware for data entry to the data bank system. - Discussion on the hardware for the utilization of the data bank system. - Confirmation of the current operation of the computer system of Unit II at Plaju. - Confirmation of the addition and replacement plan of the hardware and software to the computer system of Unit II at Plaju.	Leaving Tokyo on Nov. 7, 1979
Ali Gayo (System Analyst)	Oct. 20 - Nov. 6, 1979	- Conceptual design of the detailed data base structure, mainly geophysical data information group. - Study on output method and procedure, mainly geological data, well data, pressure and production data and reserves data information groups.	Leaving Tokyo on Nov. 7, 1979

Name	Wording Period	Main Work Performed	Remarks
Ali Gayo (System Analyst)		- Discussion on the hardware configuration. - Discussion on the hardware for data entry to the data bank system. - Discussion on the hardware for the utilization of the data bank system. - Confirmation of the current operation of the computer system of Unit II at Plaju. - Confirmation of the addition and replacement plan of the hardware and software to the computer system of Unit II at Plaju.	
Drs. Djumero (Reservoir Engineer)	Oct. 20 - Nov. 6, 1979	- Study on the outline of the basic concept for petrophysical and PVT analysis information group. - Settlement and classification of output data for petrophysical and PVT analysis information group. - Settlement of keyword for retrieving output item for petrophysical and PVT analysis information group. - Study on Output report for petrophysical and PVT analysis information group, production data information group and reserves information group.	Leaving Tokyo on Nov. 7, 1979

Name	Working Period	Main Work Performed	Remarks
A. Karim Hasim (Kepala Data Processing Unit II)	Nov. 6 - Nov. 9 & Nov. 14 - Nov. 16, 1979	- Discussion on data base structure, mainly geological survey information, pressure & production data information and pipeline data information. - Discussion on input data format and output method. - Courtesy call to Pertamina Representative. - Discussion on introduction of IMS in Unit II, processing rule of computer job and major role of data base administrator. - Discussion on the hardware configuration of the Data Bank System. - Discussion on the memory size of CICS and IMS - Discussion on the data entry operation - Discussion on the manpower of the Data Bank maintenance.	Arriving in Tokyo, Nov. 5, 1979 Leaving Tokyo Nov. 20, 1979
	Nov. 12 and 13, 1979	- CRC	

Name	Working Period	Main Work Performed	Remarks
Agung Witono (Data Base Administrator)	Nov. 6 - Nov. 9 & Nov. 14 - Nov. 16, 1979	- Discussion on data base structure, mainly geological survey information, pressure & production data information and pipeline data information. - Discussion on input data format and output method. - Courtesy call to Pertamina Representative. - Discussion on introduction of IMS in Unit II, processing rule of computer job and major role of data base administrator. - Discussion on the hardware configuration of the Data Bank System. - Discussion on the memory size of CITS and IMS. - Discussion on the data entry operation. - Discussion on the manpower of the Data Bank maintenance.	Arriving in Tokyo, Nov. 5, 1979 Leaving Tokyo Nov. 20, 1979
	Nov. 12 and 13	- CRC	

Name	Working Period	Main Work Performed	Remarks
Teuku Sulaiman (Production Engineer)	Nov. 22, 1979	- Courtesy call to Pertamina Representative in Tokyo	Arriving in Tokyo on Nov. 20, 1979 Leaving Tokyo on Dec. 16, 1979
	Nov. 30, 1979	- Courtesy call to Mr. S. Wada, Director Manager of PERD, JOE	
	Nov. 21, 1979 - Dec. 14, 1979	- Discussion on participation schedule - Settlement and/or classification of input data for production facilities and pipeline information group 1) Data item 2) Data structure 3) Data unit of figure type - Settlement of identification code for station, equipment, pipeline and so on. - Settlement of output data item and selection key item for production facilities information group and pipeline information group - Settlement of output format and estimation of input data volume for production facilities information group and pipeline information group	

Name	Working Period	Main Work Performed	Remarks
Lili Hambali (System Analyst)	Nov. 22, 1979	- Takes training formality at JICA	Arriving in Tokyo on Nov. 22, 1979
	Nov. 30, 1979	- Courtesy call to Mr. S. Wada, Director Manager of PERD, JOE	Leaving Tokyo on Dec. 20, 1979
	Nov. 26, 1979 - Dec. 19, 1979	- Study on the outline of the basic concept for Data Bank System	
		- Study on data structure for reserves information group	
		- Study on concepting input and output method for reserves information group	
		- Study on concepting of data processing flow, coding syste, operating system data base system (IMS/VS) for Data Bank System	
Djumero S. (Reservoir Eng.)	Nov. 28, 1979	- Takes training formality at JICA	Arriving in Tokyo on Nov. 28, 1979
		- Courtesy call to Mr. S. Wada, Director Manager of PERD, JOE	Leaving Tokyo on Dec. 21, 1979
	Nov. 29, 1979 - Dec. 20, 1979	- Study on output format for petrophysical and fluid property information group, pressure production information group and reserves information group	
		- Study on concepting of coding system and estimation of input data volume for fluid property information group, pressure production information group and reserves invormation group.	

Name	Working Period	Main Work Performed	Remarks
Zanial Achamad (Geologist)	Nov. 30, 1979	- Courtesy call to Mr. S. Wada, Director Manager of PERD, JOE	Arriving in Tokyo on Nov. 30, 1979
	Nov. 30, 1979 - Dec. 27, 1979	- Discussion on participation schedule	Leaving Tokyo on Dec. 28, 1979
		- Study on the outline of the basic concept for geological data information group	
		- Settlement and classification of input data for geological information group and operation area information group	
		- Discussion on construction of data structure for geological information group and operation area information group	
		- Study on the geological information items related to well data information	
		- Estimation of frequency of data occurence and input data occurence and input data volume for geological information group and operation area information group	
		- Settlement and classification output data for operation area information group and geological information group	
		- Discussion on the settlement of keywords for retrieving output item for operation area information group and geological information group	
	Dec. 12, 13 & 19, 1979	- Visited Jambi Oil Co.	

Name	Working Period	Main Work Performed	Remarks
R. Sumantri (Petroleum Eng.)	Jan. 31, 1980	- Introduction meeting.	Arriving in Tokyo on Jan. 31, 1980
	Feb. 1, 1980	Courtesy call to Mr. S. Wada, Director Manager of PERD, JOE.	
	Feb. 1, - 26, 1980	Main works performed for conceptual system design of Well Data and Production Operation Information Groups are as follows: - Discussion on the outline of the basic concept of input data item. - Evaluation and selection of input data item. - Settlement of input data item. - Discussion and settlement of basic output format. - Discussion and settlement of data properties and unit of input data items. - Preparation and settlement of conceptual combination data output format	Leaving Tokyo on Feb. 27, 1980

Name	Working Period	Main Work Performed	Remarks
Soepraptono Soeleiman (Directorate E & P - MIGAS)	Feb. 29, 1980	Meeting with Mr. S. Machida Second Training Division, Training Affairs Department JICA with regards to training formality.	Arriving in Tokyo on February 28, 1980 Leaving Tokyo on Mar. 27, 1980
	Mar. 3, 1980	- Introduction, meeting and discussion on participants' schedule of training. - Courtesy call to Mr. S. Wada, Director Manager of PERD, JOE. - Courtesy call to Mr. K. Takihara, President, Japan Oil Engineering Co., Ltd.	
	Mar. 3 - 7, 1980	- Discussion preliminary proposed output format and method with regards to Geological Data and Right Holders Area Information, Geophysical Data Information, Production Facilities Data Information, Pipeline Data Information, Reserves Data Information and Production Data Information.	
	Mar. 10 - 14, 1980	- Discussion on preliminary proposed output format and method related to well Data Information and Production operation Data Information. - Review of the Segment Diagram Index and Data Structure and output format and method.	

Name	Working Period	Main Work Performed	Remarks
	Mar. 17 - 21, 1980	- Study/discussion on settlement of Coding System, master file and input format, flow chart for input and output procedure. - Meeting with Mr. Kasahara on Summary and Conclusion of the Output Reporting Method and consideration of the participants proposed concerning the coming presentation to Indonesian users. - Discussion on Petrophysical and PVT Analysis Data Informations.	
	Mar. 24 - 26, 1980	- Study/discussion on estimation of input data volume. - Preparation of Participant's Comment and Participant's Activities Record. - Preparation of Final Report for JICA.	

Name	Working Period	Main Work Performed	Remarks
Lili Hambali (System Analyst - PERTAMINA)	Feb. 29, 1980	Takes training formality at JICA.	Arriving in Tokyo on Feb. 28, 1980
	Mar. 3, 1980	Courtesy call to Mr. S. Wada, Director Manager of PERD, JOE.	Leaving Tokyo on March 27, 1980
	Mar. 3, 1980 - Mar. 26, 1980	- Study on Conceptual Design for Data Structure. - Study on Coding System and Master file of E & P Data Bank System. - Study on input and output procedure. - Preparation of Participant's Comment and Participant's Activity Record. - Preparation of Final Report for JICA.	

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