E. CONFERENCE NOTES

Appendix E contains copies of the selected Conference Notes that were issued during the course of the Dumai Base Oils Project Feasibility Study. These Conference Notes provide supplemental information on the study design basis and scope of work.

LUOR DANIEL

INTEROFFICE CORRESPONDENCE

To:	Ray Baytala	Date:	January 14, 1993
Location:	Irvine, 534Z	Reference:	
From:	Peter Harper PH		
Location:	Irvine, 330G	Client:	
Extension:	7326	Subject:	**Dumai Base Lube Oils Project**

A meeting was held with Chevron on 1/12/93 in San Francisco to discuss the financial assumptions to be used for the Dumai Base Lube Oils Project in Indonesia.

Those in attendance were:

Stephanie Butler - Chevron
Amanda Duisman - Chevron
Kyle Foscato - Chevron
David Pizzala - Chevron
Jeff Price - Chevron
Kevin Regan - Chevron
Steven Schneider - Chevron
Peter Harper - Chevron
Bill Trammell - Fluor Daniel

Following are the items discussed and the results to be used for the financial analysis.

Tax

Tax Rate of 44.75% (Corporate Income Tax of 35% plus Withholding Tax of 15% on Remaining Balance)
Value Added Tax - N\A
Tax Holidays - N\A

Escalations (% Per Annum)

Product Prices - 3%
Feedstock Prices - 3%
Operating Expenses - 3%

Salvage Value - N\A

Project Life - Construction Period plus 20 Years of Operations

Dumai

Working Capital - 1 Month of First Years Revenue

Capital Structure - Initial Case - 100% Equity:
Base Case - 75% Debt / 25% Equity

Depreciation - 8 Year Life @ 10% declining balance with remainder written off in year eight

Product Development Costs - $1.0 MM in first year of Construction Phase

Insurance Expense - $ MM per annum (escalated)

NPV - Computed @ 13% Discount Rate

Land Cost - to be developed by Fluor Daniel (Later discussion with Ray Baytala - $2.5MM)

Loans

ECA - 85% of imported value to be repaid over 10 years in 20 equal semi-annual installments of principal plus interest; Interest Rate - 8%; Exposure Fee - 7%

Commercial - will cover the remaining balance and will be repaid over 5 years in 10 equal semi-annual installments of principal plus interest; Interest Rate - 12%; Front End Fee - 2%

No other Fees or Costs

Feedstock & Product Prices - to be supplied by Chevron

Operating Days per Year - 330

It was agreed that Kyle Foscato would coordinate activities for Chevron.

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Dumai

FLUOR DANIEL

INTEROFFICE CORRESPONDENCE

cc: Stephanie Butler
Amanda Duisman
Kyle Foscato
David Pizzala
Jeff Price
Kevin Regan
Steven Schneider
Peter Harper
Bill Trammell

DUMAI BASE OILS PROJECT
FEASIBILITY STUDY

CONFERENCE NOTES CN:017

Purpose: Weekly Coordination Meeting

Date of Meeting: January 19, 1993

Place of Meeting: Irvine, California

Attendees:

CHEVRON	FLUOR DANIEL
Laszlo Bakonyvari	Bish Batra*
Doug Warner	Ray Baytala
	Scott Christian
	Kris Murdia

* Part Time

ITEM	ACTION	DISCUSSION
1.0		A copy of the meeting agenda is attached to these notes.
2.0	F/D	The respective Fluor Daniel authors presented summaries of various sections of the Final Report Draft (a copy of the Table of Contents, as reviewed, is attached). The following comments/revision requests were made, listed by section of the report:

Section	Comment/Revision Request
2.1	Provide additional discussion on overall (rather than Process Engineering) scope.
2.2	Add discussion on Kerr-McGee and UOP scope of work. Add more discussion on the Yield Confirmation Study. Add more general discussion on overall scope of work (Pertamina, Chevron, Caltex, etc.).
2.3	Mention Base Case, and refer to section of report where it is discussed in detail.
2.4	Include discussion of overall study methodology philosophy, including approach/flexibility/results which lead study in different direction. The following points were highlighted:

ITEM	ACTION	DISCUSSION
		• UP-II Balanced Operation. • Case 1 emphasized over Case 2 (e.g., no one-line diagram developed for Case 2, schedule not developed for Case 2). • Additional HVU draw. • UOP changes, step approach to scope of work. Mention that a parallel approach (make assumptions -- generate data --readjust based on final information) was implemented for each task to compress the study schedule. Discuss the diversity of the various contributors to the study, which led to the following approach being agreed to and used by the Consortium members: • Fluor Daniel generates information, if required. • Information is sent to appropriate source for review. • The source provides adjustments, as required. Add more description of the August/September Dumai Refinery site visit pertaining to information collected on common facilities, laboratories, maintenance, warehouses, fire/safety, etc. Discuss fact that Fluor Daniel did not perform a jetty occupancy study or marine survey during the study phase of the project.
CHEVRON	2.6	A write-up describing the status of the Yield Confirmation Study is to be provided by Chevron by January 22, 1993.
	2.7	No write-up provided for this activity as it is on-going.
	2.8	This section is not yet completed.
	3.1	General comments: Make sure that cost estimate reporting organization matches the report text organization.

ITEM	ACTION	DISCUSSION
		If possible, minimize the spread of confidential information throughout the report to facilitate editing of various "versions" at a later date.
		Ensure that the Table of Contents matches the section and sub-section titles.
	3.1.1	Mention that there is existing hydrocracker operating experience within the Dumai refinery, and that existing jetties are available with spare capacity.
	3.1.3	Further clarify the purpose of this section in the first paragraph.
		Include discussion on UOP statement that each HC Unibon Unit train can operate at greater than its original design capacity in Cases 2 and 4.
	3.1.5	To be written. Be sure to include discussion on laboratories, housing, maintenance, buildings and DCS systems.
	3.1.6	Include a description of the Indonesian government regulations included in the Terms of Reference.
		Include a summary table of effluents and emissions by unit/system or by last point source.
		Mention discussions made and decisions reached on effluents/emissions at Mid-Point Review meeting on November 17, 1992.
	3.2.2	Include a table showing lube stock properties, as provided by Chevron.
	3.3.1	Include table listing the existing refinery units and their capacities, as provided by Pertamina in the Terms of Reference.
		Mention that UOP was the process licensor for the original and expanded UP-II Refinery.
	3.3.2	Include discussion on UOP statement that each HC Unibon Unit train can operate at greater than its original design capacity in Cases 2 and 4.

ITEM	ACTION	DISCUSSION
		3.3.4 Write an introductory paragraph for this section.
		3.3.5 Move the discussion of plot plan development to its own section (possibly 3.6?). Add discussion regarding the following areas: • utilities • tankage • flare system • product flow characteristics
		3.4.2 Power Generation Include and discuss electrical one-line diagrams. Discuss sub-station tie-ins. Mention that a dedicated emergency generator is not provided due to the availability of existing spare generators.
		3.4.3 Product Loading Include a table showing current and proposed jetty occupancies.
		4.3 Move information in this section to Sections 6.1.6 and 6.1.7. Make the following additions/revisions: • Note explaining inconsistencies. • Describe envelope method. • Explain how envelope method was developed. • Detail the transfer pricing basis. • Add a table for the overall refinery. • Remove information on product pricing (provided it is discussed in Steve Schneider's financial analysis write-up).

ITEM	ACTION	DISCUSSION
3.0		Several bullet item handouts on recommendations for further study (both technical and commercial) and conclusions/summary were reviewed. These items, as modified during this meeting, will be incorporated into the Final Report (Sections 1.0 and 7.0).
4.0		The subject of Fluor Daniel's cost to complete the study was discussed. Subsequent to this meeting, Change Order #1 was issued on January 19, 1993.

RJB:SEC:ra
Attachments

CHEVRON
L. Bakonyvari

FLUOR DANIEL
R.J. Baytala

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DUMAI BASE OILS PROJECT FEASIBILITY STUDY
JANUARY 19, 1993
MEETING AGENDA (AT FLUOR DANIEL)

• Review Draft of Final Report	Chevron/Fluor Daniel
• UP-II Plant Tests	Chevron/Fluor Daniel
• Outstanding Chevron/FD/UOP Issues	Chevron/Fluor Daniel
• Fluor Daniel's Cost to Complete Study	Fluor Daniel
• Review Chevron Execution Checklist	Chevron/Fluor Daniel

422700.113/AGENDA

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- 1.2 Project Description
- 1.3 Process Configuration
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- 1.5 Financial Evaluation Program
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- 1.7 Analysis of Results
- 1.8 Addendum

2.0 INTRODUCTION
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- 2.2 Scope of Work
- 2.3 Case Descriptions
- 2.4 Study Methodology
- 2.5 Information Sources
- 2.6 Yield Confirmation Study
- 2.7 UP-II Plant Tests
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  - 3.1.1 Site Location and Considerations
  - 3.1.2 Overall Block Flow Diagrams and Stock Material Balances
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  - 3.1.4 Utilities and Offsites
  - 3.1.5 Infrastructure and Common Facilities
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- 3.2 Study Design Basis

3.2.1 General Design Criteria
3.2.2 Feed and Product Quality
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3.3 Process Units
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3.3.3 Lube Base Oils Complex Process Units
3.3.4 Equipment Lists
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4.2 Capital Cost Estimates
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- 6.2 Preliminary Project Financing Plan
  - 6.2.1 Sources of Funding
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  - 6.2.3 Sensitivity Analysis

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- 7.2 Commercial Issues
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8.0 OPPORTUNITIES FOR U.S. SOURCES OF SUPPLY
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- 8.2 Breakdown of Goods and Services
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- 8.4 Probable U.S. Locations for Sources of Supply

9.0 ADDENDUM
- 9.1 Summary
- 9.2 UP-II Balanced Operations
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APPENDIX
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- B. Technical Data
  - B-1 UP-II Process Data
  - B-2 UP-II Test Run Data
- C. Licensor Information
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C-5 Kerr-McGee SDA Plant Proposal
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DUMAI BASE OILS PROJECT
FEASIBILITY STUDY

CONFERENCE NOTES CN:016

Purpose: Weekly Coordination Meeting

Date of Meeting: January 12, 1993

Place of Meeting: Irvine, California

Attendees:

CHEVRON	FLUOR DANIEL
Laszlo Bakonyvari	Bish Batra
Doug Warner	Ray Baytala
	Kris Murdia

ITEM	ACTION	DISCUSSION
1.0		A copy of the meeting agenda is attached to these notes.
2.0		Chevron reported that the secrecy agreement work between Chevron and Pertamina is in progress.
3.0		Chevron passed on their comments on the December Progress Report to Fluor Daniel.
4.0		The UP-11 Plant Tests for the Base Oils Project are scheduled to start on 27/28 January '93. A telephone call was placed to Pertamina (Bambang Rispandriyo) to confirm the Test schedule.
5.0		UOP has sent their final report on the Hydrogen Plant Capacity Expansion. A telephone call was placed to UOP for their assistance in defining the changes in sufficient details for estimating the cost. UOP has verbally communicated information on major equipment.
6.0		The Adjustments to the draft study report will commence sometime in mid-March '93 based on the Yield Confirmation information from Chevron. The Final Study Report is targeted to be issued in the second half of April 1993. An activity line with major milestone dates for Chevron's process package from October '92 to April '93 was prepared during the meeting. A copy of the "Activity/Time" line is attached to these notes. The following items were discussed and agreed upon:
	Chevron	Chevron's Final Process Package (without the Adjustments) will be issued in the fourth week of January '93.

CHEVRON'S PROCESS PACKAGE DEVELOPMENT SCHEDULE

Jan 12, 1993

ITEM	ACTION	DISCUSSION
	F/D	The Draft Study Report for the February 8, 1993 meeting presentation will include the financial analysis.
	Chevron	Chevron will issue their marked-up preliminary Process Package with adjustments by the middle of March 1993.
	Chevron	Chevron will issue their final Process Package Document with Adjustments by March 31, 1993.
	Chevron	Chevron will issue the revised Stock Balance Block diagrams by the end of the third week of January 1993.
7.0		Chevron's input to the Final Study Report was discussed.
	Chevron	Chevron will prepare a summary report on the IPA's work and forward it to Fluor Daniel by January 25, 1993.
	Chevron	Chevron will provide a summary write-up on Lube Product Pricing and marketing aspects by January 25, 1993.
	Chevron	Chevron will provide a summary write-up on the Yield Confirmation Study for inclusion into the Draft Study Report by January 25, 1993.
8.0		The draft copy of the Study Report will be discussed on January 17, 1993. All participants will put together their thoughts on future study recommendation.
9.0		An agenda for the February 8, 1993, Final Report Review Meeting was handed out for comments. Few changes were suggested to the agenda. A copy of the revised agenda is attached to these notes.

RJB:ra
Attachments

CHEVRON
Laszlo Bakonyvari

FLUOR DANIEL
R.J. Baytala

DUMAI BASE OILS PROJECT FEASIBILITY STUDY
JANUARY 12, 1993
MEETING AGENDA (AT FLUOR DANIEL)

Chevron/Pertamina Secrecy Agreement	Chevron
December Progress Report	Chevron
UP-II Plant Test	Chevron/Fluor Daniel
UOP H_2 Plant Report	Chevron/Fluor Daniel
Adjustments to Final Report Schedule	Chevron/Fluor Daniel
Chevron Input to Final Report (Timing, Content) - IPA Report - Process Package - Yield Confirmation Study - Pricing Basis/Marketing Survey	Chevron
Discuss Final Report Review Plan	Chevron/Fluor Daniel
IPA Issues (Timing, Content)	Chevron
Comments on Chevron Process Package	Fluor Daniel
Review December 18th Action List (Timing)	Chevron/Fluor Daniel
February Consortium Meeting Agenda	Chevron/Fluor Daniel

CONFERENCE NOTES

CN.015

Date of Meeting: 18 December 1992

Place of Meeting: Fluor Daniel, Irvine

Purpose: Capital Cost Estimate Review

Attendees:	Pertamina	Chevron	Fluor Daniel
	B. Rispandriyo	L. Bakonyvari	B. Batra
		S. Schneider	R. Baytala
		D. Warner	D. Cole
			P. Gambaro
			P. Harper
			W. Hebert
			G. Hillebrand
			K. Murdia
			W. Trammel

ITEM	ACTION	DISCUSSION
1.0		Fluor Daniel reviewed the agenda for the meeting followed by distribution of handout material which summarized the estimate basis/methodology, estimate summaries, owner's costs, Fluor Daniel/Chevron estimate reconciliation, risk analysis and project schedule. A copy of the meeting agenda is attached to these notes.
2.0	Fluor Daniel	Fluor Daniel pointed out that the SDA plant estimates for cases 3 & 4 are capacity factored estimates. The SDA plant estimates will be revised using the equipment exponent method to be consistent with the rest of the case estimates.

3.0		Fluor Daniel presented the differences between the earlier Chevron capital cost estimates and the present Fluor Daniel estimate. Chevron also discussed reconciliation of their estimate by tabulating differences for each area. A copy of the capital cost reconciliation table prepared by Chevron is attached to these notes.
4.0	Chevron	The Owner's Costs were presented and reviewed. Chevron pointed out that their Owner's costs are a combination of escalated and unescalated costs and therefore agreed to revise the Owner's cost components to bring them on a consistent basis. In addition, Chevron agreed to address other Owner's costs which are not presently included in the estimates. These additional Owner's costs are listed in the "Action Items" table attached to these notes.
5.0		The differential capital cost estimates for the Alternate Site Location and 10" River Water Pipeline options were also discussed. It was agreed not to modify the Base Case estimates at the present time and continue with the above options as alternates for the study report.
6.0	Chevron	Fluor Daniel presented their recommended capital cost estimate contingencies allowance for each of the four cases. Chevron also presented the corresponding contingencies developed by their outside consultant, Independent Project Analysis, (IPA). Chevron will advise Fluor Daniel on the capital cost estimate contingency to be used for the financial analysis work.
7.0		The project schedule developed by Fluor Daniel and IPA was discussed. Fluor Daniel proposed an EPC schedule of months plus months for a Project Definition Phase as opposed to months suggested by IPA.
8.0	Chevron/ Fluor Daniel	Chevron presented the status of their Yield Confirmation Study. The results of the Yield Confirmation Study will not be available until the middle to end of January, '93. Due to this delay, the final report will need to incorporate the results of the yield study and other adjustment in the form of an "Addendum". The Final Report will be issued after the early February, '93 consortium meeting to allow for a consortium review of the project economics, conclusions reached, etc. It was agreed that the financial analysis will not be started until after the final cost estimate adjustments are incorporated based on the Yield Confirmation Study.

9.0 Fluor Daniel — Fluor Daniel stated that there is little incentive in pursuing the UP-II Balanced Operation Study (Operating the HCR Unibon Units at or near their design capacity) on the basis of the current Chevron feed and product pricing data. Chevron pointed out that the feed/product prices are soft and are subject to revision. Therefore, it was agreed to continue with the UP-II Balanced Operation Study.

10.0 Chevron — The input data for the Financial Evaluation Model was discussed. It was agreed that some of the Chevron input data needs further development prior to finalizing the base case input information for the model. The input data which need further development are summarized in the attached "Action Items" table.

11.0 Chevron — Pertamina briefly described the UP-II Plant Test Program. The plant test is scheduled to commence during the week of 15 January 1993. Pertamina's current test run plans include the HCR Units, Hydrogen Plant and Vacuum Unit. Pertamina has requested Chevron to provide a letter describing the scope of the plant test runs for supporting the Dumai Base Oil Project Feasibility Study.

12.0 Chevron — A tentative meeting is set for 12 January '93 between Chevron and Fluor Daniel to discuss the financial evaluation model and input data. Chevron is to arrange the date and location of the meeting.

FLUOR DANIEL	CHEVRON	PERTAMINA
R.J. Baytala	Laszlo Bakonyvari	Ir. Bambang Rispandriyo

Attachments: 2

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FLUOR DANIEL	CHEVRON	PERTAMINA
R.J. Baytala	Laszlo Bakonyvari	Ir. Bambang Rispandriyo

Attachments: 2

CAPITAL COST ESTIMATES/FINANCIAL EVALUATION

ACTION LIST

1.0 CAPITAL COST ESTIMATE

Owner's Costs	Action By
• Bring all owner's costs components on same basis (escalation).	Chevron
• DCS simulator to be included for training purposes?	Chevron
• Product Development cost considerations?	Chevron
• UP-II onsite land cost to be addressed.	Chevron
• Facilities for Marketing, General Administration and Technical Sales - Should these be included?	Chevron
• Owner's contingency: Needs definition.	Chevron
• Value Added Tax: Needs resolution.	Chevron
• Import Duties: Needs resolution.	Chevron

2.0 Operating Costs

• Operating Labor and Supplies: Use twice the current Chevron/Pertamina labor estimate.	Fluor Daniel
• Unit Utility Costs: Reduce Pertamina-supplied costs by capitalized portion.	Fluor Daniel
• Maintenance: Current costs prepared are acceptable.	—
• Management Fee: Use $ instead of currently proposed $ MM.	Fluor Daniel

3.0 Feed Costs

• HVGO - Revise price if appropriate.	Chevron
• Waxy Lubes (for cases 2 and 4) - Price required for the Lube Complex "Envelope" concept.	Chevron

		Action By
•	Short Resid price for cases 3 and 4.	Chevron
•	% Hydrogen - Revise price if appropriate.	Chevron
4.0	Product Revenues	
•	Lube Base Oils - Revise price if appropriate.	Chevron
•	LPG price.	Chevron
•	Diesel/Kero/Naphtha prices.	Chevron
•	H2 Rich Gas price.	Chevron/Fluor Daniel
•	Tar value (if any).	Chevron
5.0	Effluent Stream Costs	
•	Oily Water - Cost of processing and disposal.	Chevron/Fluor Daniel
•	Sour Water - Cost of processing and disposal.	Chevron/Fluor Daniel
6.0	Other Inputs Needed for Financial Analysis Model	
•	Corporate Taxes, Tax Credits and Tax Holiday Structure.	Chevron
•	Withholding Tax Rates.	Chevron
•	Depreciation Method and its Application.	Chevron
•	Equipment Salvage Value to be used.	Chevron
•	Working Capital to be included.	Chevron
•	Discount Rate for NPV analysis.	Chevron
•	Loan to Equity Ratio/Financial Structure to be used.	Chevron
•	Escalation Factors to be used.	Chevron/Fluor Daniel

DUMAI BASE OILS PROJECT FEASIBILITY STUDY
CAPITAL COST ESTIMATE REVIEW MEETING
December 18, 1992, 9:00 a.m.
Fisheye Conference Room (534-18-112)
Meeting Agenda

- REVIEW AGENDA AND AGREE ON MEETING OBJECTIVES

- CAPITAL COST ESTIMATE REVIEW
  - Estimate Basis Methodology
  - Estimate Review
  - Schedule Review
  - Reconciliation with Chevron Estimate
  - Owner Preference Items

- IPA STUDY/FD CONTINGENCY ANALYSIS
  - IPA Contingency
  - Fluor Daniel Contingency
  - Contingency to be Applied

- ESTIMATE ADJUSTMENTS TO BE MADE
  - Yield Confirmation Study Results
  - UP II Balanced Operation

- FINANCIAL EVALUATION PROGRAM
  - Review of Data to be Used
  - Reconfirm Basis & Sensitivities to be Run

- UP-II PLANT TEST PROGRAM

- WRAP-UP AND CONCLUSION

CONFERENCE NOTES

CN.014

Date of Meeting: 14 December 1992

Place of Meeting: Fluor Daniel, Irvine

Purpose: Weekly Engineering Coordination Meeting

Attendees:	Pertamina	Chevron	Fluor Daniel
	B. Rispandriyo	L. Bakonyvari	B. Batra R. Baytala K. Murdia

ITEM	ACTION	DISCUSSION
1.		Chevron announced delay in the Yield Confirmation Study due to mechanical problems associated with the pilot plant work. In order to maintain a reasonable study schedule, the following approach was agreed upon by the participants.
	Chevron	(a) Chevron will release the adjustments based on the Yield Confirmation Study results. The earliest release date for the adjustments based on the yield study is expected to be mid-January, '93. It is possible that the adjustment may not be available until mid-February, '93.
		(b) All adjustments to the study based on the Yield Confirmation study will be incorporated into the final report as an addendum; the final report will be issued after the consortium meeting in early February, '93.
		(c) The final study report will be based on the preliminary Chevron Process package. The Final Preliminary Chevron Process package will be issued by the last week of December, '92. This process package will include corrections as necessary along with the necessary narrative. It is anticipated that the work already completed by Fluor Daniel up to this point based on the preliminary

process package will not be impacted by the Final Preliminary Process Package.

Chevron (d) Chevron will prepare the Final Stock Balance Block diagrams after the adjustments per the yield confirmation study. However, the December, '92 process package report by Chevron will include the corrected stock balance block diagrams without the adjustments.

2.

3. Chevron It was agreed that the Plant Test Run preparation program will continue in order to meet the UP-II mid-January, '93 plant test schedule. The UOP technical advisors will be needed to assist in the test runs of HVU, HCR Unibon and Hydrogen units. The need for Chevron and Fluor Daniel's participation in the Plant Test Run will be addressed at a later date.

4. Chevron has provided revised feed/product rates around the lube units for Case 1. This is consistent with the approach taken to estimate the utilities cost for the lube complex. The estimation of feeds/products/utilities costs for the financial evaluation will utilize an "envelope" concept around the lube complex where each stream to/from the lube complex will be defined and priced.

FLUOR DANIEL	CHEVRON	PERTAMINA
R.J. Baytala	Laszlo Bakonyvari	Ir. Bambang Rispandriyo

CONFERENCE NOTES CN: 0.13

DUMAI BASE OILS PROJECT
FEASIBILITY STUDY

Purpose: Review UOP's Study Results

Date of Meeting: December 3-4, 1992

Place of Meeting: UOP Offices, Des Plaines, Illinois

Attendees:	PERTAMINA	UOP	CHEVRON	FLUOR DANIEL (FD)
	Ir. B. Rispandriyo*	B. Bjorklund* A. Durdevic B. Hedrick* R. Martel V. Thakkar* R. Verma* D. Wong*	L. Bakonyvari*	B. Batra R. Baytala*

* Part Time

ITEM	RESPONSIBILITY	DISCUSSION
1.		After introductions and unanimous commendation of the joint study group by all participants, the attached meeting agenda was agreed upon.
2.		Pertamina stated that Pertamina routinely tests process units after a turnaround and they expect to do the same in mid-January '93 after the November-December '92 turnaround. The normal testing period is approximately two weeks. Since study conclusions will not be available in time to make the decision whether Hydrocrackers and/or Hydrogen plant should be tested, it was decided to plan for testing both the Hydrocrackers and the Hydrogen plant.

ITEM	RESPONSIBILITY	DISCUSSION
	FD/UOP	It was also decided that FD will develop test run outline early next week for review and completion of test procedures by UOP. The procedures will then be sent to Pertamina for review, concurrence and planning. UOP and FD are likely to send their representatives to Dumai for witnessing the test run(s) and to ensure that all data required by UOP and FD is collected.
3.	UOP	It was agreed that UOP will provide a statement in the "Final Report" relating to Pertamina's access to the report. UOP also agreed to provide two versions of the report, i.e., one report (full version) containing relevant technical information for inclusion in FD's final report and the second report which will be an abridged version of the first, meant solely for presentation to the financial community.
4.		The schedule for UOP's work on the Project Development Document (PDD) phase of the project was discussed. UOP will require about 30 weeks to prepare the package if the Hydrocrackers are involved, and it will be somewhat less if no work on the Hydrocrackers is required. UOP will be able to provide preliminary information to FD after 15 weeks into the schedule necessitating that UOP must be commissioned by mid-March for FD to start work on July 1, 1993.
5.		In view of Pertamina's desire to reduce the gap in middle distillate demand and production, Chevron and Pertamina are very keen on utilizing the spare hydrocracking capacity in Cases 1 and 3. The Hydrogen plant, however, presents a serious bottleneck in achieving this bottleneck.

ITEM	RESPONSIBILITY	DISCUSSION
11.1		Maximum capacity that the existing plant can be operated at continuously without any debottlenecking.
11.2		Debottlenecking the unit to 25 percent above name plate capacity.

UOP was instructed to assume that hydrogen rich gas will be the plant feed up to its name plate capacity and mixed LPG feed will be used beyond the name plate capacity.

B. Rispandriyo
Pertamina

L. Bakonyvari
Chevron

B.Batra/R.Baytala
Fluor Daniel

R. Martel
UOP

DUMAI BASE OILS PROJECT
FEASIBILITY STUDY

UOP STUDY REVIEW MEETING AGENDA

December 3 and 4, 1992
UOP Offices, Des Plaines, Illinois

1.	General Comments	Chevron/FD/UOP
2.	Report Summary	UOP
	• Cases 1 thru 4	
	• Quality/Shortfall Issues	
	• Equipment Issues	
3.	Coker Schedule "A" Package	Chevron/FD
4.	Hydrogen Plant	Chevron/FD
5.	Other Topics of Discussion	
	• Test Run	Chevron/FD
	• Pertamina Secrecy Agreement	Chevron/FD
	• PDD Phase	Chevron/FD
	• New Developments	Chevron/FD
	• Commercial Data	Chevron/FD

CONFERENCE NOTES

CN.012

Date of Meeting: 17 November 1992

Place of Meeting: Fluor Daniel Offices, Irvine, California

Purpose: Discuss Overall Constructability Program

Attendees:

Chevron	Fluor Daniel	Pertamina
Laszlo Bakonyvari	Ray Baytala	Bambang Rispandriyo
Doug Warner	Bish Batra*	
	Gunter Hillebrand	
	Will Hebert	
	Peter Gambaro	
	Lyle Rosenbaum	

* Part Time

The following summarizes a meeting held on Constructability issues as they will affect the overall project. The attached agenda was prepared to facilitate the discussions.

ITEM	ACTION	DISCUSSION
1.		Fluor Daniel, Pertamina, and Chevron agree that development of an overall constructability program early on in the project is paramount to achieving a successful project. Many of the topics surfaced should be addressed in detail during the next phase of the project (PDD Phase.)
2.		Due to the apparent condition of the existing UP-II construction dock, a new construction dock for this project will probably be required as noted on the plot plans presented. A bathymetric survey will therefore be required during the PDD Phase.

3. It is Fluor Daniel's intention to prefabricate and dress out vessels with ladders, platforms, piping, etc., as much as possible. The heaviest vessels appear to be the hydrocracker reactors at 600-800 tons each. Fluor Daniel anticipates that LST transport vessels will be used on the project to haul oversize equipment.

4. A customs bonding area near the new construction dock will be required to facilitate customs clearance of equipment items. This approach has been used successfully on other Fluor Daniel projects in Indonesia.

5. Modularization of the main piperaks is feasible and will be studied during the PDD Phase. Pre-fab concrete pipeway bents will also be evaluated along with structural steel supports.

6. To the extent possible, mass excavation or the "bathtub approach" will probably be used to improve on the construction schedule. Fluor Daniel will evaluate this approach during the PDD phase.

7. Fluor Daniel would include constructability advisers early on during engineering as well as in discussions with equipment vendors prior to award of purchase orders.

8. FD Fluor Daniel believes that a plastic model should be used for construction planning, operator training and engineering design purposes. The cost of the model will be included in the feasibility study cost estimates. A 3D\CAD approach during detailed design for the grass-roots, high pressure sections of the facilities will probably be utilized to minimize material overages/underages and improve on construction efficiency.

9. Fluor Daniel does not use outside consultants to develop an overall constructability program. A sample constructability program manual from Fluor Daniel's Cilacap Debottlenecking Project was briefly presented.

10. For work in Indonesia, Fluor Daniel typically field fabricates small bore piping 2-1/2" in diameter and smaller.

11. Fluor Daniel and Chevron both agree that construction at the central location as shown on the plot plans is feasible but will be more difficult than in an isolated area. The following factors will need to be considered in-depth during the PDD Phase.

- Construction of the new process facilities in an area adjacent to the existing UP-II HCR units will require fencing of new construction, and close coordination with the refinery operations and maintenance organizations.

- The UP-II refinery maintenance organization will need to be able to perform routine or unscheduled maintenance of the existing adjacent units while new construction is underway.

- Construction techniques to be used for the new facilities will need to consider the vibration effects from extensive pile driving. The HCR hydrogen compressors are adjacent to the new construction site.

Pertamina

- Tie-ins for the new facilities will need to be planned in conjunction with planned refinery shutdowns. Petamina was requested to furnish Fluor Daniel with a copy of the refinery's 5-year shutdown schedule.

FLUOR DANIEL	CHEVRON	PERTAMINA
R.J. Baytala	Laszlo Bakonyvari	Bambang Rispandriyo

AGENDA ITEMS
FOR CONSTRUCTABILITY MEETING
November 17, 1992

- Prefabrication of large vessels
- Shop vs. field fabrication
- Delivery of oversize equipment
- Modularizating (main piperack, etc.)
- "Bathtub" approach for underground facilities
- Constructability input into vendor pre-award meetings
- Offsite field insulation
- Use of model
- Lifting vessels with platforms etc. attached
- Constructability organization and process
- Use of constructability consultant
- Timing of constructability input
- Small-Bore pipe fabrication
- Constructability at central location
- Constructability of revamp portion (tie-ins, etc.)
- New construction unloading dock

CONFERENCE NOTES

CN.011

Date of Meeting: 10 November 1992

Place of Meeting: Fluor Daniel Offices, Irvine, California

Purpose: Discuss Capital Cost Estimating Program

Attendees:

Chevron	Fluor Daniel
Laszlo Bakonyvari	Ray Baytala
Mike Schwimmer*	Kris Murdia
	Peter Gambaro
	Peter Harper
	Jim Russell
	Emil Machrone*

* Part Time

The following summarizes the key points from the meeting regarding the Fluor Daniel Capital Cost Estimating Program. The attached agenda was prepared and used to facilitate the discussions.

ITEM	ACTION	DISCUSSION
1.		Fluor Daniel presented the attached estimating schedule indicating the estimates are targeted for Chevron and Pertamina review the latter part of the week of December 14.
2.	Chevron/ Pertamina	Fluor Daniel noted that completion of the estimates will require cost information from Chevron and Pertamina (Owner's costs, license fees, etc.)

3. Fluor Daniel presented the methodology to be used for the estimates which is essentially equipment factored estimates for Cases 1 and 2 and capacity factoring for Cases 3 and 4.

4. FD A discussion was held on the estimated time frame for the project, and the following preliminary schedule was discussed:

- "EPC" Phase III Contract Award after Completion of a Phase II Project Definition Document (PDD) phase.
- A with mechanical completion approximately 4th quarter 1996.
- Full product production

Fluor Daniel will prepare an overall master schedule for the project which will be the basis for the capital cost estimates and financial evaluations.

5. The estimates will be prepared on an instantaneous 1st quarter 1993 basis and at the Dumai site location.

6. FD Fluor Daniel will prepare the estimates at a summary direct field cost level for each of the major process units to allow for line item unit adjustments. Adjustments will be required based on the results of Chevron's yield confirmation study.

7. Fluor Daniel will prepare a cost estimating basis to support the capital cost estimates. It was suggested that the Chevron El Segundo Clean Fuel Program estimating basis be used as a starting point for this document.

8. Chevron Chevron plans to conduct an Independent Project Analysis (IPA) to determine the appropriate contingency levels to be included. The Chevron IPA program is based on the extent of engineering to date, facility definition, estimate assumptions, use of new versus old technology, etc. IPA will conduct a group interview of key project management, process engineering, cost/schedule etc. as part of their efforts. Chevron will arrange for the IPA interview (scheduled for December 1st, 8:30 a.m. - 11:00 a.m.)

9. FD Fluor Daniel shall also prepare its own contingency analysis and the

10. Chevron emphasized that the objectives of the Capital Cost Estimates are to:

- Determine the true costs and economic viability of the project.
- Select the most usable Case under consideration.
- Facilitate anticipated necessary adjustments.
- Facilitate various sensitivity analysis.

11. Chevron — Fluor Daniel will prepare an estimate reconciliation between the Chevron and Fluor Daniel cost estimates. Chevron will provide back-up cost information as required.

FLUOR DANIEL	CHEVRON
R.J. Baytala	Laszlo Bakonyvari

PERTAMINA / CHEVRON
DUMAI, INDONESIA
BASE OILS PROJECT FEASIBILITY STUDY

FLUOR DANIEL, INC.
CONTRACT No. 422700
10-Nov-92
PRG

AGENDA FOR CHEVRON / FLUOR DANIEL ESTIMATE DISCUSSIONS

(SCHEDULED FOR TUESDAY, NOVEMBER 10, 1992 @ 2:00 PM)

- ESTIMATE SCHEDULE
- ESTIMATE BASIS PREVIEW
- FLUOR DANIEL ESTIMATE METHODOLOGY
  - Cases 1 & 2
  - Cases 3 & 4
- TIMEFRAME (ie: Instantaneous 1st Quarter 1993)
  - U.S.G.C. / Location
- CHEVRON / PERTAMINA INPUT (Owner's Costs, etc.)
- CHEVRON / FLUOR DANIEL ESTIMATE RECONCILIATION
- RISK ANALYSIS (Contingency Development)
- ESTIMATE PRESENTATION FORMAT
- MASTER SCHEDULE

file: DUMESTAG

DUMAI BASE OILS PROJECT
FEASIBILITY STUDY

CONFERENCE NOTE: CN.002

Purpose of Meeting:	Discuss technical issues to expedite commencement of projecess engineering activities for the study.	
Date of Meeting:	July 28, 1992	
Place of Meeting:	Irvine office of Fluor Daniel	
Attendees:	Pertamina:	IR. H. Ariffi Nawawi
	Chevron:	Laszlo Bakonyvari
		Paul Davis
		Tom Winterton
	P.T. Indhasana:	Wisnu Suhardono
	Fluor Daniel:	Bish Batra
		Ray Baytala*
		Scott Christian
		Kris Murdia
		*Part time

ITEM	ACTION	DISCUSSION
1.	Chevron	A list of critical information that Fluor Daniel requires from Chevron during the first month of the study was presented and discussed (see attachment). The following additional information was requested and/or clarifications were made for each item:

1. No comments.

2. Rates and cut points will be provided for the first four streams. Chevron will also provide crude tower product cut points and rates as well as the rate and cut point for the LSWR from the Sungai Pakning Refinery.

   For the lube hydrocracker products, Dewax and H-Finish products and byproducts, and the DAO from the SDA Unit, Chevron will provide rates, gravities, viscosities, storage conditions and storage requirements, as available. Information for similar services can be taken from EXOR IV data for preliminary uses.

3. No comments.

4. For intermediate product storage requirements, Fluor Daniel is to use data from EXOR IV, unless Chevron supplies different data.

5. No comments.

6. No comments.

7. Fluor Daniel is to ratio utility data from EXOR IV for preliminary work. Chevron will verify the ratioed numbers and correct any significant discrepancies.

It was agreed that Chevron would provide the information for Item 1 and the first four streams in Item 2 as soon as possible in order to facilitate Fluor Daniel's study work. The information requested in the remaining items will be provided by Chevron no later than August 14, 1992.

2. Chevron/FD Chevron pointed out that during the course of the study it may become apparent that under some of the cases certain refinery units may not be operating at full capacity, thereby presenting opportunities for producing more products by increasing the incremental SPK LSWR being fed to the HVU. However, it was agreed that a detailed look at these type of occurrences is beyond the scope of the feasibility study. If any obvious cases are uncovered, they will be identified and referred to the Study administrative committee for review and possible inclusion into the Study scope of work.

3. Chevron stated that they felt that the Consortium would at some point ask for a sensitivity analysis of lube oil production capacity versus overall project cost in order to select the optimum design capacity for the new and revamped facilities.

4. Chevron Issues concerning the scope of study work for Cases 3 and 4 were discussed. It was noted that Case 4 may potentially involve three separate blocked-mode operations. These requirements will be further defined by Chevron at a later date.

ITEM	ACTION	DISCUSSION
5.	Chevron	A discussion was held concerning the extent that Fluor Daniel was to make use of information and data from EXOR IV (Chevron facility only). Chevron stated that much of the EXOR IV information and data was sufficient for use in preliminary work. However, they pointed out that the proposed Dumai Base Oil Project facilities are not as complex as those proposed for EXOR IV. Therefore, Chevron will review the EXOR IV data and revise it, as required, for use in this feasibility study. Chevron stated that considerable work went into developing the hydrogen management schemes used in EXOR IV, and that consideration should be given for utilizing this information as much as possible in this feasibility study in order to reduce capital costs.

FLUOR DANIEL	CHEVRON	PERTAMINA
B.N. Batra	Laszlo Bakonyvari	Ir. H. Ariffi Nawawi

List of critical information required from Chevron during the 1st month of the study.

1. Provide stock balances for the four cases.

2. Provide characterization and specs for the following streams:

   - HVU Feedstock
   - HVGO from HVU
   - VAC DSL from HVU
   - VAC Residue
   - Lube Hydrocracker Products
   - Dewax & H-Finish Products & Byproducts
   - DAO from SDA Unit

3. Provide feed, intermediate products and final products maximum and normal flow rates. These include:

   - Feeds/Products to/from Lube Hydrocracker
   - Feeds/Products to/from Dewax & H-Finish Units
   - Feeds/Products to/from SDA Unit

4. Define criteria for feedstocks, intermediate and final products storage or provide storage capacity for each product/feedstock.

5. Provide appropriate product shipping information on items such as parcel size, frequency of shipping, vessel characteristics, loading rate, type of products, etc.

6. Provide preliminary H_2 requirements for the new units.

7. Provide preliminary utility requirements for the new units.

DUMAI BASE OILS PROJECT
FEASIBILITY STUDY

CONFERENCE NOTE CN:001

Purpose:	Kickoff Meeting for the Dumai Base Oils Project Feasibility Study
Date of Meeting:	July 28, 1992
Place of Meeting:	Fluor Daniel Offices, Irvine, California
Attendees:	See attached list.

ITEM	ACTION	DISCUSSION
1.		The Kickoff Meeting was opened with a welcome by Fluor Daniel and introduction of participants by Pertamina, Chevron, and Fluor Daniel.
2.		Chevron updated the current status of work interface with UOP including the future plans. UOP is expected to submit its work proposal during the first week of August.
3.		UOP is expected to provide the Consortium with input on whether or not Pertamina Dumai plant tests will be required and suggested procedures for conducting these tests.
4.		According to the current plans, Cases 3 and 4 are expected to be developed to a lesser degree of detail than Cases 1 and 2. However, Chevron is already in touch with Kerr McGee should it become necessary to obtain the design package on the SDA unit associated with Cases 3 and 4.
5.		In discussing the study budget, Chevron pointed out that the Yield Confirmation study and related work is not a part of the study budget. The expense of this study is being entirely borne by Chevron.
6.		Chevron presented the Feasibility Study contracting plan (see attached handout). Chevron and Pertamina will be jointly responsible for administering the study agreement. However, Fluor Daniel will also be a participant for decisions relating to public communiques.

7. Chevron proposed formation of committees for handling of the administration and technical issues. Each committee will consist of representatives from Pertamina, Chevron and Fluor Daniel. The designated committee members are as follows:

		Technical Committee	Administrative Committee
Pertamina:	Primary:	Ir. H. Ariffi Nawawi	Dr. Ir. H. Tabrani
	Alternate:	Ir. H. Hariadi Soemantri	None
Chevron:	Primary:	Laszlo Bakonyvari	Steve Schneider
	Alternate:	To be named	To be named
Fluor Daniel:	Primary:	Ray Baytala	Dave Cole
	Alternate:	Bish Batra	Will Hebert and/or Jake Easton

8. In all communications, the appropriate committee members will be included.

9. Fluor Daniel discussed the proposed work invoice flow (see attached Invoice Flow Diagram). In principle, Fluor Daniel will forward invoices to Chevron and Pertamina for their approval concurrently. Pertamina will forward the approval invoice to TDP Washington for disbursement to designated Fluor Daniel bank accounts. The Chevron portion of the invoice will be disbursed by Chevron directly into designated Fluor Daniel bank accounts.

10. The confidentiality requirements on the project were discussed. The current secrecy agreement between UOP and Fluor Daniel is already in place. The secrecy agreement between Chevron and UOP will be evolved if required. The secrecy agreement between Fluor Daniel and Chevron executed for the EXOR IV project is adequate. Chevron will confirm if any changes are required to the EXOR IV project secrecy agreement between Fluor Daniel and Chevron. The agreement between UOP and Pertamina is already in place.

11. The content of the study report will be segregated due to confidentiality and secrecy requirements prior to distribution to the various consortium members and TDP.

12. Fluor Daniel discussed the plans for the future meetings. The Fluor Daniel representative, Gunter Hillebrand, will be in Dumai during the first week of August for UP II data gathering. The Jakarta/Dumai technical meetings are planned for August 31, 1992 commencement. The "Midpoint of Study" meeting is planned for the second week of November at Fluor Daniel Irvine offices. In addition, other meetings as appropriate will take place. Chevron's representative will be in Irvine every week on a mutually convenient day.

Pertamina will nominate a representative who will be in residence at Irvine. The expected arrival date for this representative will be at approximately the study midpoint, when meaningful information on the study will be available.

13. FD — Fluor Daniel briefly explained the nature of the data required for the financial evaluation of the project. Fluor Daniel will provide a sample report indicating needed information on the financial evaluations for the Consortium's input and review.

14. Chevron addressed technical issues of the study project. The preliminary unit material balance summaries for the base case and the other four cases were discussed (see attached handout). It was understood by all parties that the balances shown for the base case (current operation) are to be used in the study rather than the original "name plate" unit capacities.

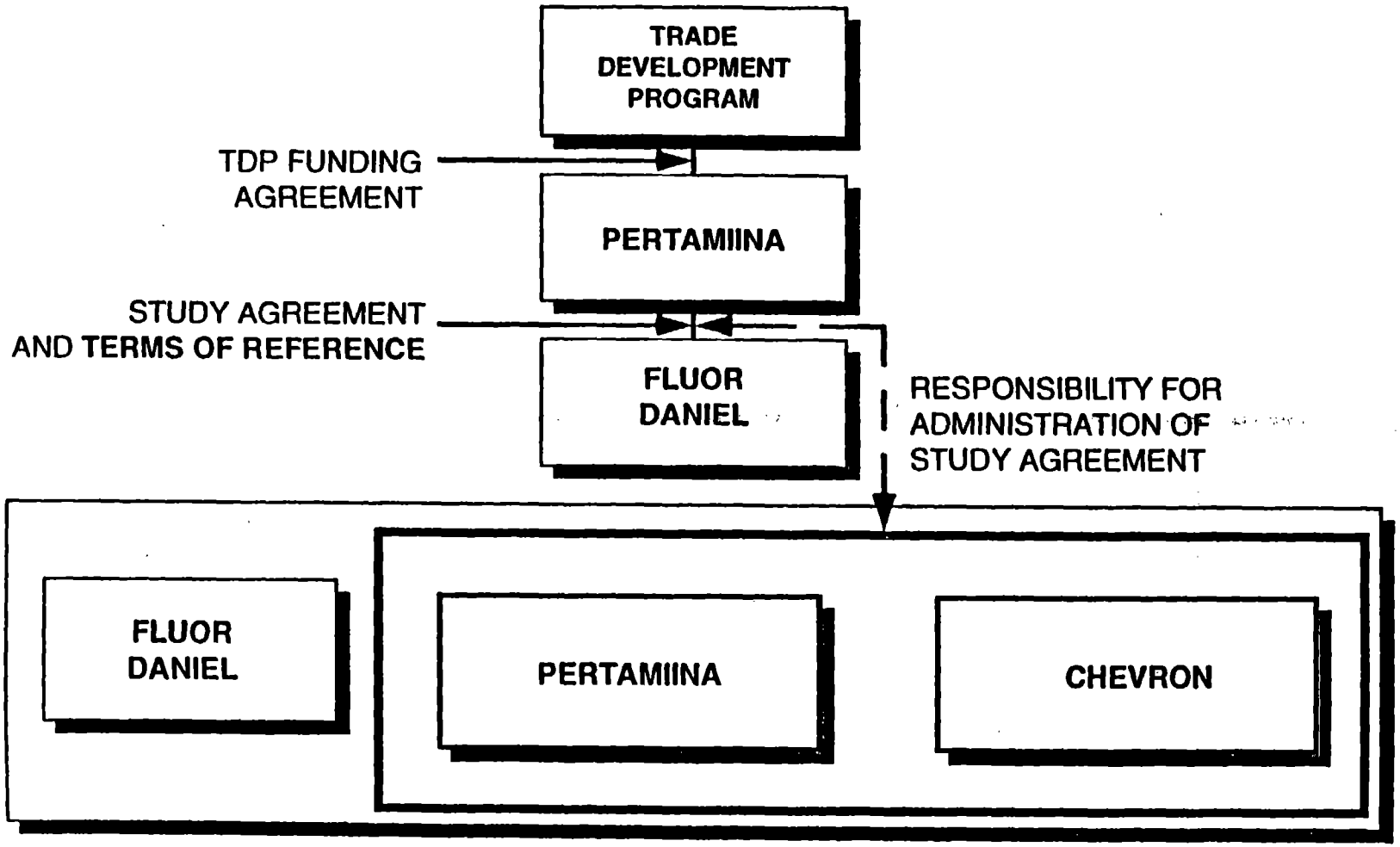
FLUOR DANIEL	CHEVRON	PERTAMINA
E.D. Cole	Steve Schneider	Dr. IR. H. Tabrani Ismail

DUMAI BASE OILS PROJECT KICK-OFF MEETING

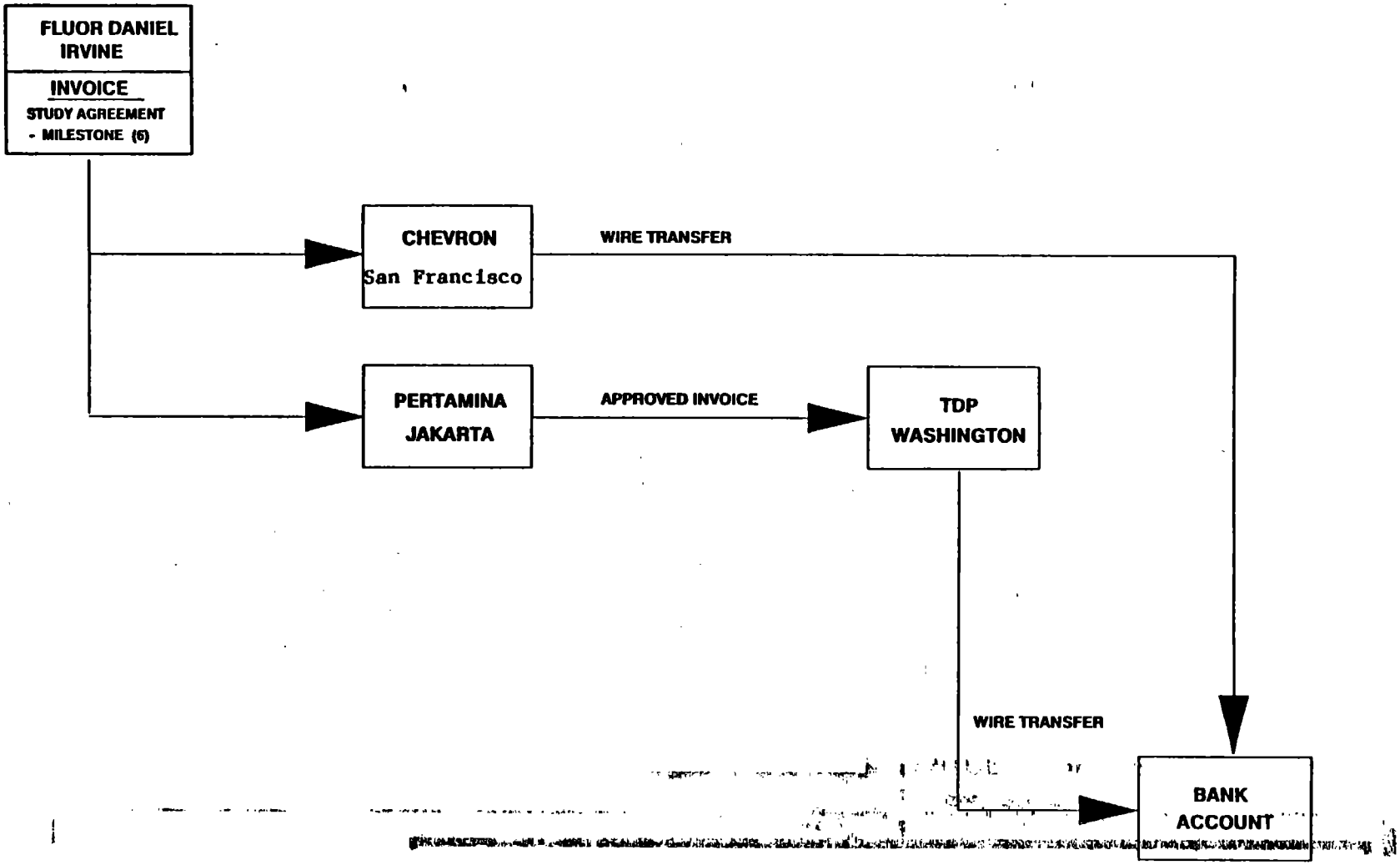
FLUOR DANIEL	CHEVRON	PERTAMINA
Bish Batra	Laszlo Bakonyvari	Dr. Ir. H. Tabrani Ismail
Ray Baytala	Jim Boots	Ir. H. Ariffi Nawawi
Scott Christian	Paul Davis	Amhar Moelia
Dave Cole	Herb Long	B. Pitoyo
Jake Easton	Steve Schneider	
Will Hebert	Tom Winterton	
Scott Heffley		
Gerry Lezama		
Kris Murdia		
Jim Russell		
Bill Trammell		

DUMAI BASE OIL PROJECT

FEASIBILITY STUDY-CONTRACTING PLAN



PROPOSED INVOICE FLOW



DUMAI LUBE BASE OILS PROJECT

TECHNICAL ISSUES

Base Case Assumptions

Stock Balance & Processing

Lube Processing Options

Light Neutral Oils — Cases 1 and 2

Stock balance changes and processing

Light/Heavy/Bright Stock — Cases 3 and 4

Stock balance changes and processing

DUMAI LUBE BASE OILS PROJECT

Base Case Assumptions

- Crude rate — 120.0 MBPSD

  82.5% SLC
  17.5% Duri

- LSWR — To fill conversion capacity

Conversion Capacity

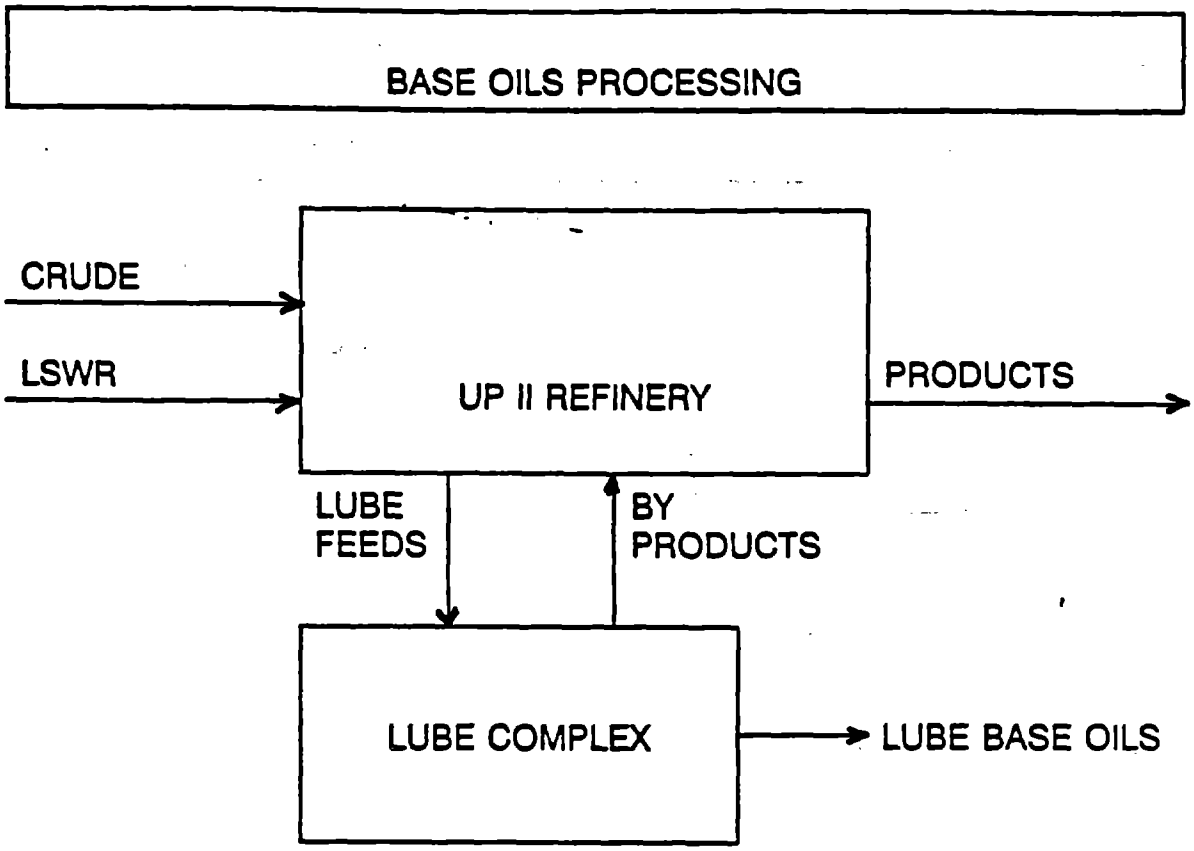
- Coker
- Hydrocracker
- HVU
- Distillate HT

Internally generated fuel and hydrogen plant feed

Lube Process Assumptions

- Incremental LSWR
- Produce 6 MBPSD base oils
- Maintain light product rate

DUMAI LUBE BASE OILS PROJECT



LUBE PROCESSING	CASES			
	1	2	3	4
LUBE HCR	✓	*	✓	*
DISTILLATION	✓	✓	✓	✓
DEWAX/HYDROFINISHER	✓	✓	✓	✓
SDA			✓	✓
LUBE PRODUCTS				
LIGHT/MEDIUM	✓	✓	✓	✓
HEAVY/BS			✓	✓

*Lube HCR Reactor Integration

DUMAI BASE OILS PROJECT
CONFERENCE NOTES

Date of Meeting: July 21, 1992
Place of Meeting: UOP Offices, Des Plaines, Illinois

Attendees:

Chevron	Fluor Daniel	UOP
Laszlo Bakonyvari	Bish Batra	Ralph Martel
	Ray Baytala	Mark Reno*
		Greg Thompson
		Ed Yuh*
		* Part time

Purpose of Meeting: **Dumai Base Oils Project - UOP participation during Feasibility Study**

ITEM	ACTION	DISCUSSION
1.		After introductions, Chevron/FD tabled the following agenda for project/technical discussions: • Project background • Review Chevron's fax (July 22, 1992) to UOP defining cases • Review cases • Impact of cases on the Hydrocrackers • Role of Coker in this setup • Confidentiality • UP II performance test • UOP's work scope/schedule/depth • UOP's cost estimate and proposal • Next meeting
2.		Chevron provided the project background, noting that the project has been through the conceptual phase, and is about to enter the feasibility phase (six months). If the project is deemed feasible, at the conclusion of feasibility study, it will enter the Project Definition Document (PDD) phase in 1993.
3.		Chevron reviewed fax sent to UOP listing the four cases and briefly reviewed the cases, identifying technical issues. Pertamina's requirement for protecting quantity and quality of middle distillates was restated as one of the objectives in addition to the primary objective of producing the base oils.

4.	UOP	Since the Coker and Hydrocrackers are intimately intertwined in the Dumai refinery configuration, and since UOP has an intimate knowledge of the refinery, UOP was asked to evaluate modifications required to the Coker/Hydrocracker combination. It was agreed that products from the Coker/Hydrocrackers and byproducts from the new lube facilities will be routed to the appropriate existing processing facilities which will also be evaluated by UOP.
5.	UOP	Chevron stated that while evaluating the Coker/ Hydrocrackers, UOP should define heavy coker gas oil (HCGO) quality and rate as deemed appropriate.
6.	Chevron	The "Red Hat"/"Typhoid Mary"-third party consultant concept was discussed. It was agreed that UOP's confidentiality requirements necessitate the services of a third party consultant. The third party could be an outside consultant or Fluor Daniel assuming that role.
7.	UOP	UOP stated that FD's existing nondisclosure agreements with them are acceptable. UOP will confirm in writing.
8.	UOP	Based on UOP's evaluation, UOP will advise if a plant performance test is required. It was noted by Chevron/FD that a plant performance is contemplated for October 1992. It also was discussed and agreed that Chevron, without appropriate confidentiality agreements, will not be a participant in any plant tests. Testing, if required, will be conducted by Pertamina/UOP and "Red Hat" and/or Fluor Daniel.
9.	UOP	UOP was requested to complete their work scope in 6-8 weeks after being commissioned (no later than the first week in August 1992) in order to meet study schedule. UOP explained that the completion date will be dictated by the engineering lead-in time, and the as-yet-to-be-determined scope of changes to the unit.

Chevron/FD emphasized that this is a feasibility study, and therefore, UOP's study depth should be adequate to support a ± 25-35% cost estimate by FD.

Chevron stated and stressed the importance of differential (delta) investment between the cases.

UOP's work scope is as follows:

- List of new or modified equipment
- Key equipment descriptions including physical dimensions for vessels; duties for exchangers; pumping rates and heads for pumps and compressors, etc.; design temperature and pressure; and metallurgy.
- Narrative and marked up PFDs
- Gross hydraulics for critical high pressure circuits
- Utilities, catalysts and chemicals summary over and above current usage

Catalyst life will be approximately the same as is for the present catalyst.

UOP was requested to work cases 1 and 2 first when commissioned. UOP will be advised when work on cases 3 and 4 should commence.

Based on the foregoing, UOP will estimate cost and schedule, (separately for cases 1 and 2, and 3 and 4), and advise Chevron/FD as soon as possible. UOP's services will be covered by an agreement between Chevron and UOP.

10. Chevron

By July 23, 1992, Chevron will provide feed rate and characteristics which will enable UOP to submit a proposal. UOP emphasized the importance of receiving this information not later than July 23, 1992, so as to take advantage of an existing window to promptly start the preparation of yield estimates. On this basis, the yield estimates are expected to become available by July 29, 1992, whereupon the preparation of an engineering time and cost estimate can be initiated.

DUMAI BASE OILS PROJECT
CONFERENCE NOTES
July 21, 1992

11.	UOP/Chevron/ FD	It was agreed to explore the ways work may be started before formal agreements are in place. The participants agreed to meet again on or before August 6, 1992.

CHEVRON	FLUOR DANIEL	UOP
L. Bakonyvari	R.J. Baytala	R.Martel

DUMAI BASE OILS PROJECT
CONFERENCE NOTES
July 21, 1992

11.	UOP/Chevron/ FD	It was agreed to explore the ways work may be started before formal agreements are in place.
		The participants agreed to meet again on or before August 6, 1992.

CHEVRON	FLUOR DANIEL	UOP
L. Bakonyvari	R.J. Bayuda	R.Martel

DUMAI BASE OILS PROJECT
CONFERENCE NOTES

Date of Meeting: May 15, 1992

Place of Meeting: Pertamina, Jakarta

Attendees: See Attachment 1

Subject of Meeting: Feasibility and Screening Study
See Attachment 2

ITEM	ACTION	DISCUSSION
1.		Pertamina opened the meeting by introducing Pertamina attendees. Pertamina stated that Bappenas approval was turned over to TDP and enquired about the current status of the grant.
2.		Fluor Daniel (FD) introduced Caltex Trading, Chevron and FD participants. FD stated that TDP has verbally approved the grant and the formal approval is expected today.
3.		
4.		Chevron concurred with FD statements.
5.		FD introduced and reviewed the Agenda (see Attachment 2). All participants concurred with the Agenda.
6.		After a quick overview of the project, Pertamina requested discussion of the following topics during the morning session of the meeting due to Ir. Ariffi's unavailability for the afternoon session: • Cases to be studied; • Third party participation; • Study work schedule.
7.	Chevron/FD	Chevron briefly reviewed the project objectives and then reviewed the case summary for the four cases that are being considered for the Feasibility Study. Pertamina requested that the study scope include qualitative effect, if any, that the proposed project may have on process units other than those listed in TOR.

ITEM	ACTION	DISCUSSION
	Chevron	Stock balances will be available for review with Pertamina at the time of the kickoff meeting in the first or second week of July. Pertamina requested integration of new utilities and offsites systems with the existing facilities after the feasibility of the project has been established. Pertamina would like to remain appraised on the study progress.
8.	Chevron/ Pertamina	Chevron discussed **"Third Party Participation"** - which relates to participation of licensors such as UOP; Kerr-McGee; etc., especially that of UOP since Cases 2 and 4 in TOR involve conversion of one of the existing Fuels Hydrocrackers using UOP Technology to Lube Oils Hydrocracker.

ITEM	ACTION	DISCUSSION

9. FD reviewed 6 month study work schedule provided as Figure 2 in TOR. No comments were made.

10. After having discussed the items above, a thorough review of the proposed TOR commenced. The item numbers below correspond with item numbers in the TOR:

1. **Project Description**

   No comments.

2. **Feedstock**

   The following comments were made:

   2.1 Crude slate at Dumai will be 80% (+)(volume) Minas/plus SLC 20% (volume) x maximum Duri crude oils. LSWR from Sungai Pakning will be derived from 70% (+)(volume) Minas/plus SLC 30% (volume) maximum Pedada crude oils. The proportion of Minas/in LSC the feed to Sungai Pakning refinery may increase in the future.

   2.2 Pertamina provided the crude assays and specifications of LSWR from Dumai and Sungai Pakning.

3. **Product Slate**

   In response to Pertamina's commented on flexibility of the Lube Base Oils complex, Chevron commented that it can not be turned down to produce only conventional quality products.

ITEM	ACTION	DISCUSSION

4. **Study Constraints**

FD

- The first item from the top will be modified to read as follows:

  "Current UP II middle distillate production rates and quality will not be adversely affected by this project."

- The second sentence of the third item discussing debottlenecking will be replaced by the following:

  Pertamina will be advised if current feed rates or quality of products are adversely affected in the other processing units.

- The rest of the Study Constraints were reviewed with no comment. Pertamina provided the latest environmental standards to be used.

FD

5. **Layout Considerations**

Considering the plot plan alternatives presented by FD, the following comments were made:

- Tanks will not be relocated.
- New facilities will be located within UP II fence.

Pertamina requested that the plot plan alternatives be discussed with UP II Refinery personnel for their input.

6. **Participants/Responsibilities**

6.1 **Consortium Responsibilities**

No comments

ITEM	ACTION	DISCUSSION

6.2 Pertamina Responsibilities

The following comments were made and documents were provided:

- Pertamina provided crude assays.
- Pertamina provided crude slate as shown under Item 2.1 above.
- Pertamina provided current UP II product specification and block flow diagram.

Chevron

-
-
-

Pertamina

- Revamp work will be made consistent with UP II refinery 5-year turnaround schedule. Pertamina to provide turnaround schedule.

6.3 Caltex Trading Responsibilities

Caltex Trading

It was emphasized that Caltex Trading will need to expedite providing product specifications for Consortium review.

6.4 Chevron Responsibilities

No comments.

6.5 Fluor Daniel Responsibilities

No comments.

ITEM	ACTION	DISCUSSION

7. **Study Costs**

The sentence will be replaced with the following one:

"The study cost will be in accordance with the guidelines provided in the consortium agreement.

8. **Work Schedule**

No comments.

9. **Confidentiality**

No comments.

FD

10. **Study Report Contents**

New processing units will be listed under a main title of **"Lube Base Oils Complex".**

The following comments were made on the Attachments:

FD

Attachment 5

Delete previous information and replace it with new information provided by Pertamina.

The following additional subjects were discussed:

ITEM	ACTION	DISCUSSION
	Chevron	•
		• It was agreed to have a follow-up meeting in Jakarta next Friday (May 22, 1992) after the team returns from the visit to Dumai.
	Chevron/ Pertamina	• Chevron and FD will discuss and agree with Dumai UP II refinery on the quantity and quality of desired samples required for yield confirmation program.

Ir. H. Ariffi Nawawi
Pertamina

L. Bakonyvari
Chevron

Caltex Trading

W.J. Hebert
Fluor Daniel

ATTACHMENT 2

DUMAI BASE OILS PROJECT

JAKARTA MEETING
MAY 15, 1992

- Dumai Base Oils Project Overview (Chevron)

- Terms of Reference Document

  - Objectives (Chevron)
  - Product Slate (Caltex/Chevron)
  - Feedstock (Chevron)
  - Cases to be studied (Chevron)
  - Third party participation (Chevron)
  - Study Work Schedule (Fluor Daniel)
  - Pertamina, Caltex, Chevron, Fluor Daniel responsibilities (Fluor Daniel)
  - Study Constraints (Fluor Daniel)
  - Location of new facilities (Fluor Daniel)
  - UP II Performance testing program (Chevron/Fluor Daniel)

- Yield Confirmation Study (Chevron)

ATTACHMENT 1

ATTENDANCE LIST

DATE : 15 MAY 1992
SUBJECT : FEASIBILITY STUDY LUBE BASE OIL DUMAI
TIME : 09.30 TO 11.30

NO.	NAME	DEPARTMENT	PHONE	SIGNATURE
1	ARIFFI NAWAWI	KADIV RENBANG	5711	
2	HARIADI SOEMANTRI	BANGKIL	5714	
3	Asyhab	Rel Eng		
4	RAY BAYTALA	FLUOR DANIEL		
5	WILL HEBERT	FLUOR DANIEL		
6	ROD RIGAN	FLUOR DANIEL		
7	Jim Boots	Chevron		
8	LASZLO BAKONYAR	CHEVRON		
9	BISH BATRA	FLUOR DANIEL		
10	GUNTER H. HILLSBRAND	FLUOR DANIEL		
11	WISNU SUHARDONO	INCHARGE GEOTECHNIC		
12	KARIM KONO	-11-		
13	M. DRADJAT	DPSP		
14	ALIMIN S.N.	DPGP		
15	SUMARLAN	TEKNO. P.		
16	WIDYARTO WP.	BANGKIL		
17	Sumaryono. S	Bangkil		
18	NOERTJAHJANI SAROSA	"		
19	Budiey Rukmi	Hukum		
20	PAK WOTO	BANGKIL		

ATTENDANCE LIST

DATE :
SUBJECT :
TIME :

NO.	NAME	DEPARTMENT	PHONE	SIGNATURE
22	HADIONO SUTIRTO	G & P DIV	5433	
23	LIEW SENG KEE	CALTEX		
24				
25				
26				
27				
28				
29				
30				

DUMAI BASE OILS PROJECT

CONFERENCE CALL NOTES

Date of Meeting: April 23, 1992

Attendees:

CALTEX	
Simon Brown	Manager, Lubricant Supply & Sales
Tim Coombs	Manager, Refining (Strategic Planning/Business Groups)
CHEVRON	
Steve Schneider	Manager, Business Development (Asia)
Laszlo Bakonyvari	Project Manager, Projects Group
FLUOR DANIEL	
B.N. Batra	Process Engineering
R.J. Baytala	Project Management
W.J. Hebert	V.P. Operations
G.H. Hillebrand	Project Management

ITEM	ACTION	DISCUSSION
1.	FD	After introductions, FD presented an update on the TDP grant submittal effort from Pertamina's perspective. Bappenas approval is expected this week, or at the latest, next week. FD will distribute copies of the Bappenas letter after translation is made. Pertamina has also prepared a letter to the US Embassy in Jakarta regarding the TDP grant. Letter will be issued upon Bappenas approval. FD will continue to follow up with Pertamina and provide assistance as required.
2.	Chevron/ Caltex	After receipt of notification that Pertamina has submitted the TDP grant to the US Embassy, Chevron and Caltex will issue separate letters confirming their support of FD to perform the conceptual study work. Chevron will distribute copies of draft letter to FD and Caltex for information. FD will provide names, addresses, etc., on where letters should be sent. Letters should follow same path to TDP as Pertamina's TDP grant request.
3.	FD/ Chevron	All parties agreed that it would be beneficial to schedule another meeting with TDP in Washington with FD's Bill Trammel and Chevron's Dave Lind in attendance. Due to Bill Trammel's unavailability for three weeks after May 9, a May 6 meeting is tentatively scheduled.
4.	FD	FD will update Pertamina/Caltex/Chevron Study Proposal to reflect current understanding with Pertamina on cases to be studied. Proposal will formally be issued to Pertamina/Caltex/Chevron next week.
5.	FD	FD has begun preparation of the Terms of Reference (TOR) for the study. Target Milestone Schedule for the TOR is as follows: April 28: Irvine discussions (FD & Chevron) April 30: Irvine review (FD & Chevron w/conference call to Caltex) May 4-8: Finalize Caltex/Chevron/FD input to TOR May 8: Fax advance copy of TOR to Pertamina May 18-20: TOR discussions in Jakarta and Dumai with Pertamina
6.	FD	FD will issue to Caltex and Chevron by 4/27/92 preliminary drafts of FD/Pertamina study and TDP/Pertamina grant agreements. Drafts will be based on previous Cilacap Debottlenecking Project Study agreements.

7. FD/ Chevron — FD and Chevron will prepare an agenda for the May 18-20 meetings with Pertamina in Jakarta and Dumai. FD will transmit agenda to Pertamina. Jakarta meetings will focus on presentation/review of the Terms of Reference document. Dumai meeting with refinery operations/maintenance personnel should include the following topics:

- Base Oils Project overview (Chevron)
- Current Dumai Refinery operation
- Cases to be studied
- Refinery Performance testing program
- Location of new facilities
- Terms of Reference document
- Information (drawings, data, etc.) needed from the refinery
- Yield Confirmation Study sample collection program (Chevron)

8. FD — For planning purposes, Chevron has tentatively scheduled the week of June 8 for consortium agreement discussions in Jakarta. FD will continue development of the appropriate FD/Pertamina and Pertamina/TDP agreements so that all agreements are in place when TDP approval is obtained.

FLUOR DANIEL	CHEVRON	CALTEX
Will Hebert	Steve Schneider	Simon Brown

DISTRIBUTION:

Simon Brown - Caltex (fax)
Steve Schneider - Chevron (fax)
Laszlo Bakonyvari - Chevron (fax)

B.N. Batra, Irvine 534B
R.J. Baytala, Irvine 534Z
R.D. Carano, Irvine 338M
E.D. Cole, Irvine 534C
J. Easton, III, Irvine 53C
W.J. Hebert, Irvine 551X
G.H. Hillebrand, Irvine 471F
W.D. Trammell, Irvine 330G

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 4
To Rick Krause	From R.J. Baytala.
Co.	Co.
Dept.	Phone #
Fax #	Fax #

309

F. RELEVANT CORRESPONDENCE

This section of the Appendix contains correspondence from Chevron, Pertamina, UOP and Caltex that further defines the study design basis and/or scope of work.

Chevron Research and Technology Company
2400 Camino Ramon, San Ramon, California
Mail Address: PO Box 5045, San Ramon CA 94583-0945

Facsimile Message

To: **Name:** **Ir. H. Ariffi Nawawi**
Company: Pertamina
City: Jakarta
Tel No:
Fax No:

From: **Name:** **Laszlo Bakonyvari**
Tel No: 1-510-842-8504
Fax No: 1-510-842-8363

Date: **August 6, 1992**

Number of pages (including cover): 1

Subject: **UOP's Proposal for Coker Revamp**

Message:

Fluor Daniel and Chevron met with UOP on August 5, 1992. UOP indicated that their study and proposal for revamping UPII coker is applicable for some cases of the Dumai Lube Base Oils Project. Please authorize UOP for making a copy of their proposal available to Fluor Daniel and Chevron for use in the feasibility study.

Best regards,
Laszlo Bakonyvari

cc: R. J. Baytala
S. R. Schneider

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE PHONE 1-510-842-9499

RETURN ORIGINAL TO: Janice

FACSIMILE

KANTOR PUSAT
Jl. Medan Merdeka Timur 1A
JAKARTA 10110, INDONESIA.

*) Nomor : 69/E0240/F/92
Tanggal : 14 DES. 1992
J a m :

No. FACSIMILE : 343882 – 363554

KEPADA / TO : FLUOR DANIEL INC - IRVINE
FAC.NO. 714-975-4006
ATTN. IR. BAMBANG RISPANDRIO

No. FACSIMILE :

DARI / FROM : KADIN BANGKIL DIT.P.

PERIHAL / SUBJECT : DATA UP-II DUMAI UNTUK KEPERLUAN STUDY LUBE-BASE OIL.

JUMLAH HALAMAN BERITA YANG DIKIRIM / TOTAL NUMBER OF PAGES TRANSMITTED : LEMBAR / SHEETS

BERITA/MESSAGE

REFER FAX SAUDARA MENGENAI HAL TERSEBUT DIATAS, BERIKUT KAMI SAMPAIKAN DATA YANG SAUDARA PERLUKAN SEBAGAI BERIKUT :

1. SCHEDULE T/A UP II UNTUK 5 TAHUN MENDATANG.
2. LAND COST UNTUK PERUMAHAN DAN AREA KILANG.
3. OWNER COST DAN START-UP COST VERSI EXOR-1.
4. DATA-DATA UP II UNTUK 5 TAHUN TERAKHIR.
5. - PRODUCT CONTRIBUTION OF UP-II.
   - REALISASI HASIL PENGOLAHAN MINYAK MENTAH DARI KILANG MINYAK DALAM NEGERI.
6. UTILITY COST
7. ~~HASIL REVIEW MANPOWER REQUIREMENT~~.

DEMIKIAN KAMI SAMPAIKAN UNTUK DAPAT DITERIMA DENGAN BAIK.

KADIN BANGKIL DIT.P.

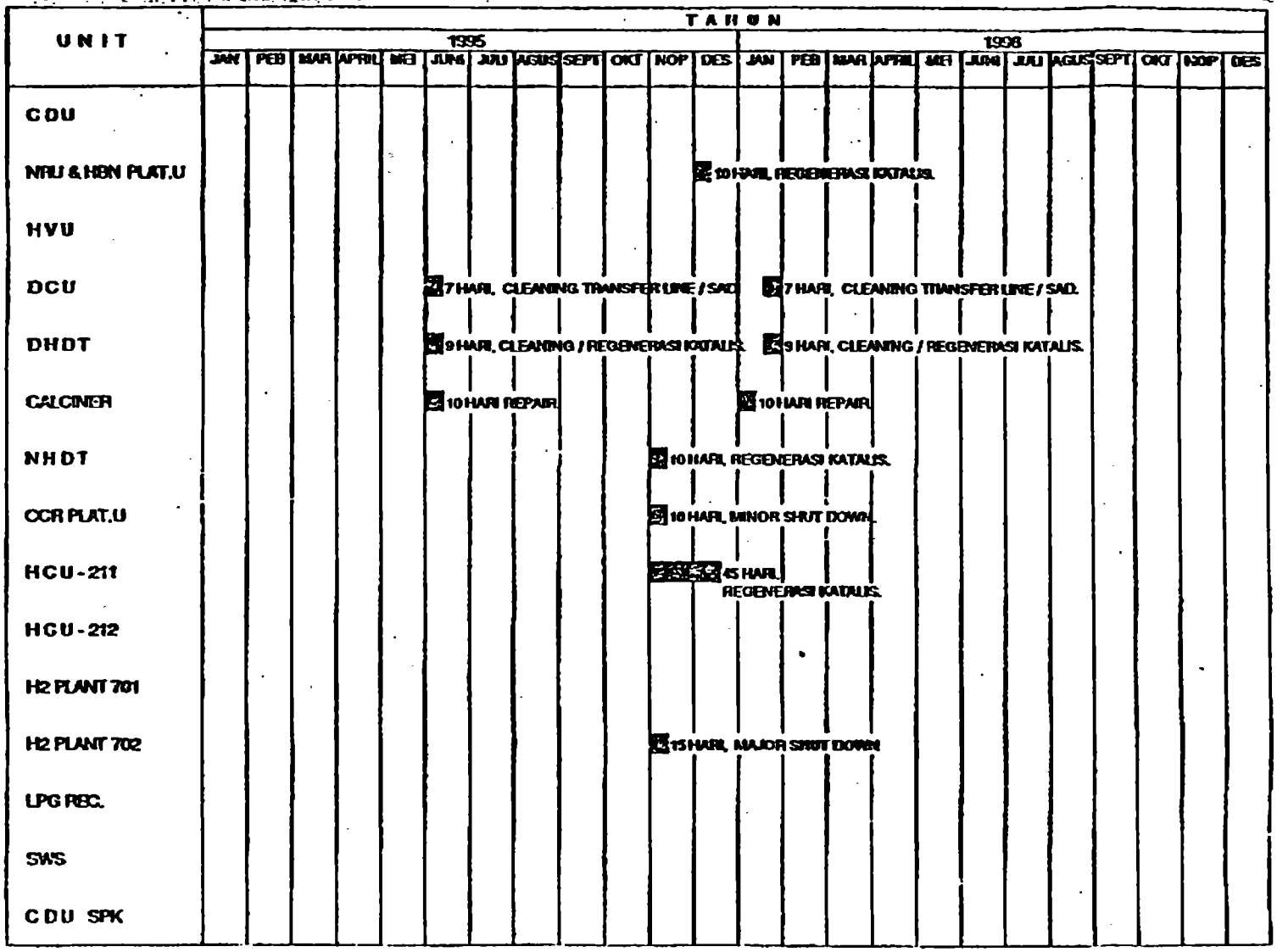
HARIADI SUMANTRI

TEMBUSAN :

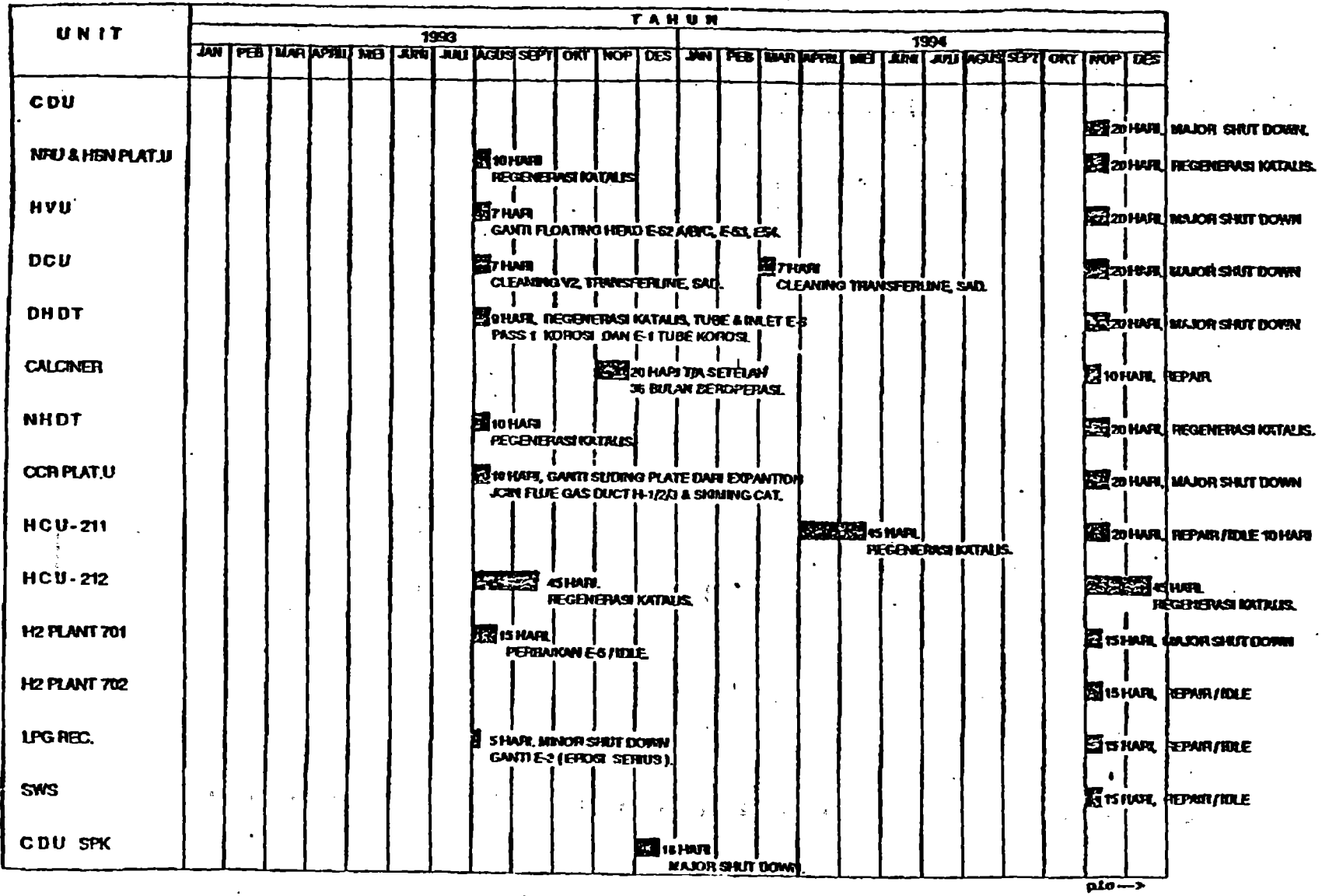
KADIV. RENBANG DIT.P (T/L).

SS/pdr.

REFINERY SHUTDOWN SCHEDULE PERTAMINA UP-II



1. REFINERY SHUTDOWN SCHEDULE PERTAMINA UP-II



p.to —>

2. Land cost - Tanah Perumahan Rp. 25.000,- / M²
   - Tanah Area Kilang Rp. 15.000,- / M²

3. Owner Cost & Start Up Cost versi EXOR-I.

DUMAI BASE OILS PROJECT FEASIBILITY STUDY
CASE 1 AND 2

No. of Persons	DUMAI BASE OILS COMPLEX - MANPOWER REQUIREMENTS CASE 1 AND 2						
		Chevron Basis	DUMAI BASIS				
No.	Position ID	(4 Shifts)	Staff	Non Staff	Total No. of People	Housing Benefits (Type of Housing)	Cost Wages & Burdens* (Rupias)
	Plant						
1	Plant Mgr.		1		1		
2	Superintendent	1	1		1		
3	Shift Superv	5	5		5		
4	Shift Supv. Assistant	--	5		5		
5	Plant Operators	28	--	65	65		
6	Plant Mgmt. Support	1	1	1	2		
7	Offsite/Jetty/ WWT. Operators	4	--	12	12		
8	Utility Operators	4	--	12	12		
9	Maintenance Eng/Tech	2+5	2	10	12		
10	Infrastructure Maintenance	--	--	1	1		
11	Electrical Eng/Tech	0+1/2	--	2	2		
12	Instrument Eng/Tech	0+1/2	1	3	4		
13	DCS Eng/Tech	1/2+1	1	1	2		

No. of Persons	DUMAI BASE OILS C[illegible]EX - MANPOWER REQUIREMENTS CASE 1 AND 2						
		Chevron Basis	DUMAI BASIS				
No.	Position ID	(4 Shifts)	Staff	Non Staff	Total No. of People	Housing Benefits (Type of Housing)	Cost Wages & Burdens* (Rupias)
14	Rotating Equipment Eng/Tech	0+1	1	1	2		
15	Equipment Inspectors	1/2	1	–	1		
16	Process Engineers	1	2	–	2		
17	Laboratory Supv/Tech	0+2	2	12	14		
18	Safety Inspectors	1	1	1	2		
19	Plan and Schedule	1	1	1	2		
20	Personnel Supv,	1/2	1	–	1		
21	Finance & Accounting	2	1	3	4		
22	Logistics Supv/Tech	1	1	1	2		
23	Trainer	1	1	–	1		
24	Trainee & Relief	4	–	–	–		
25	Security	1/2	–	8	8		
	TOTAL	69	29	134	163		

Note: Staffing for Cases 3 and 4 will require additional personnel as follows:

Plant Operators:	+25
Offsite Operators:	+ 4
	29

CASE I

DUMAI BASE OILS COMPLEX
MANPOWER REQUIREMENT
(TENTATIVE)

NO.	DEPARTMENT OPERATION	MANPOWER PERSONS STAFF	NON STAFF	TOTAL
1.	Refinery - Plant Manager - Superintendent - Shift Supervisor - Shift Superv. Asst. - Operators - Jetty/TK Operators - Utility Operators	13	66	79
2.	Maintenance	2	10	12
3.	Instrument/Electrical	1	5	6
4.	Process Engineer	2	-	2
5.	Equipment Inspector	1	-	1
6.	Laboratory	2	12	14
7.	Rotating Equipment	1	1	2
8.	DCS Engineer/Technician	1	1	2
9.	Safety Inspector	1	1	2
10.	Plan and Schedule	1	1	2
	SERVICES			
11.	Personnel/Logistic	2	1	3

12.	*Finance/Accounting/ Bookeeping*	*1*	*3*	*1*
13.	*Trainer*	*1*	*-*	*1*
14.	*Security*	*-*	*8*	*8*
		29	*134*	*163*

HOUSING REQUIREMENT & WAGES/BURDENS

12/3/92

1. Housing Requirement

- Senior Staff Housing Type "A" = 3 houses
- Junior " " "B" = 26 " "
- Senior Non-Staff Housing Type "C" = 32 " "
- Junior " " "D" = 20 " "

Total Housing Req'm = 81 houses

2. Wages/Burdens

- Senior Staff : 3 × MUSD 2.0 × 16 = MUSD 96
- Junior Staff : 26 × MUSD 1.5 × 16 = " 624
- Senior Non-Staff : 32 × MUSD 1.0 × 16 = " 512
- Junior Non-Staff : 102 × MUSD 0.5 × 16 = " 816

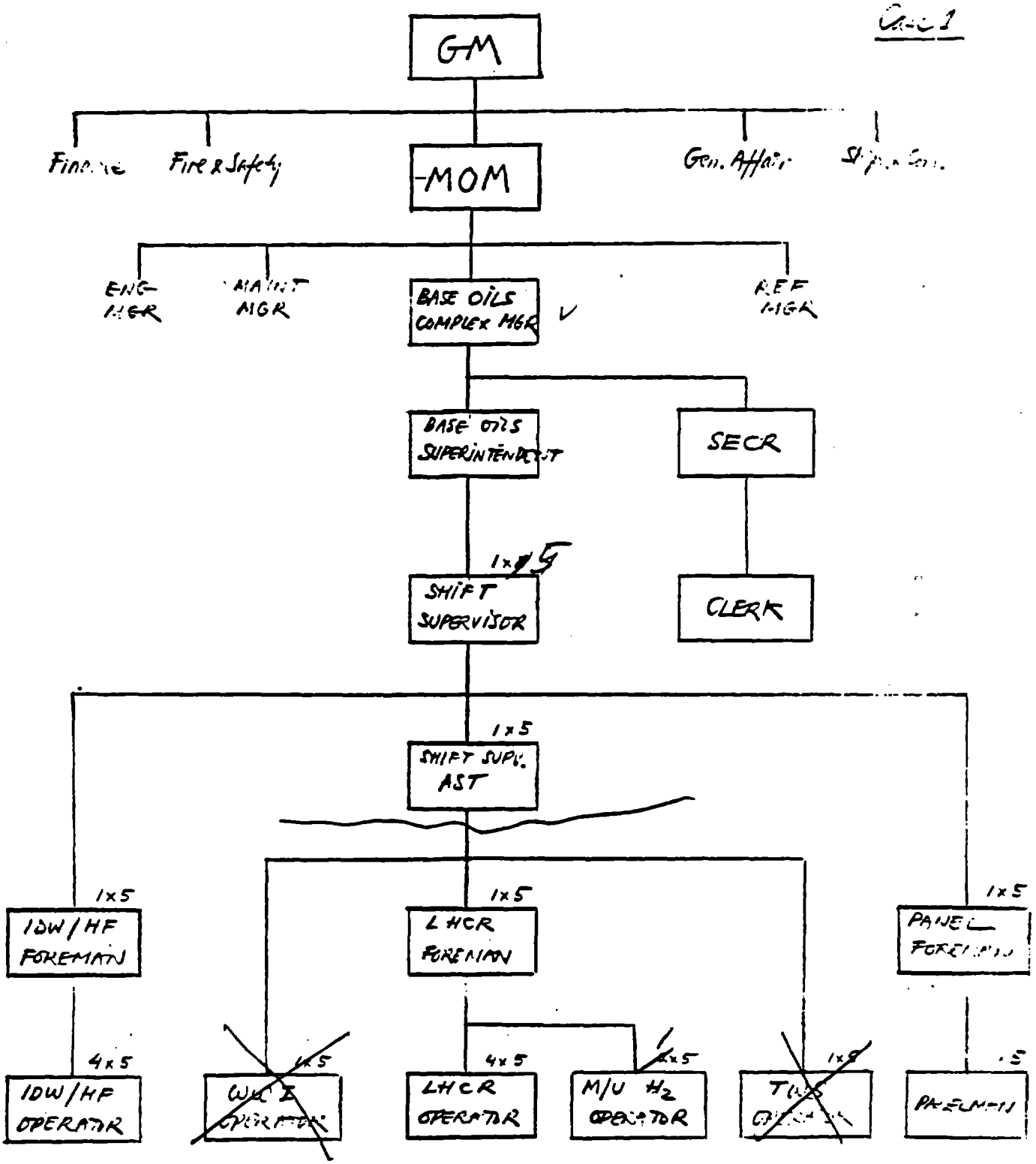
Total Wages/Burdens = MUSD 2,048

12/3/92

TENTATIVE

DUMAI BASE OILS COMPLEX ORGANIZATION

Ch-1



FLUOR DANIEL

INTEROFFICE CORRESPONDENCE

To:	Bish Batra	Date:	November 19, 1992
Location:	Irvine	Reference:	M-PNFD-002-92
From:	Bambang Rispandriyo		
Location:	Irvine	Client:	
Extension:		Subject:	**Dumai Base Oils Project Feasibility Study - LVGO/HVGO Data**

cc: R. J. Baytala

Referring to our discussion today, enclosed is the LVGO/HVGO data which was requested for your evaluation.

Your cooperation is highly appreciated.

P:PNDFM.002

FACSIMILE

KANTOR PUSAT
Jl. Medan Merdeka Timur 1A
JAKARTA 10110, INDONESIA.

*) Nomor : 647 /E0200/FAX/92
Tanggal : AUGUST 12 , 1992
J a m :

No. FACSIMILE : 343882 - 303884

KEPADA / TO : UNIVERSAL OIL PRODUCT (UOP)
ATTN. MR. ALEX D.DURDEVIC
MARKETING MANAGER
FAR EAST MARKETING DISTRICT
25 EAST ALGONQUIN ROAD
DES PLAINES, ILLINOIS
UNITED STATES OF AMERICA

No. FACSIMILE : 708-391-2253

FLUOR DANIEL JAKARTA AUG 13 '92 10 ROUTE RJR

JUMLAH HALAMAN BERITA YANG DIKIRIM / TOTAL NUMBER OF PAGES TRANSMITTED : LEMBAR / SHEETS

BERITA/MESSAGE

DEAR SIR,

IN RESPONSE TO CHEVRON'S FACSIMILE DATED AUGUST 6, 1992 REGARDING UOP'S PROPOSAL FOR COKER REVAMP (ATTACHED) AND REFERRING TO MEETING ON AUGUST 5, 1992 BETWEEN FLUOR DANIEL, CHEVRON AND UOP, WE WOULD LIKE TO REQUEST YOU AN ASSISTANCE IN PROVIDING FLUOR DANIEL SOME TECHNICAL INFORMATIONS.

WE THEREFORE AGREE AND AUTHORIZE UOP TO RELEASE TECHNICAL PROPOSAL AS WELL AS TECHNICAL INFORMATION RELATED TO UP II COKER REVAMPING AND OTHER DOCUMENT FOR THE FEASIBILITY STUDY OF DUMAI LUBE BASE OIL PROJECT.

YOUR KIND COOPERATION IS HIGHLY APPRECIATED.

P E R T A M I N A
HEAD OF PLANNING AND
DEVELOPMENT DIVISION,

IR. ARIFFI NAWAWI

FLUOR DANIEL JAKARTA AUG 13 '92 10 ROUTE RJR WJH DJB GS JM

CC. - FLUOR DANIEL EASTERN
ATTN. MR. R.J.RAGAN
- CHEVRON JAKARTA
ATTN. MR. JIM BOOTS
- DINAS BANGKIL
- UOP - INDONESIA
ATTN.MR.P.NAIR

MS/nk.

*) DIISI OLEH BAGIAN FACSIMILE

80 - 041 / 80

UOP 1/2

FAX TRANSMISSION COVER SHEET

TO:	FROM:
RECIPIENT'S NAME LASZLO BAKONYVARI	SENDER'S NAME RALPH F. MARTEL
COMPANY CHEVRON RESEARCH AND TECHNOLOGY COMPANY	DEPARTMENT/CENTER 01560730
LOCATION RICHMOND, CA	SENDER'S PHONE NUMBER 1-708-391.3116
FAX NO. 510-242.6691	DATE DECEMBER 7, 1992

Carbon copies to:

COMPANY NAME/LOCATION RAYMOND J. BAYTALA FLUOR DANIEL, INC. / IRVINE, CA	FACSIMILE NO. 714-975.4006 OR 976.8271
COMPANY NAME/LOCATION	FACSIMILE NO.
COMPANY NAME/LOCATION	FACSIMILE NO.

Total Pages Sent (including this cover sheet): 2

SUBJECT: PERTAMINA - DUMAI - CHEVRON'S LSD PROJECT - HYDROGEN PLANT

AS I MENTIONED TO YOU IN OUR TELCON THIS MORNING, THE ONLY H2 GENERATION YIELD ESTIMATING EXPERT WE HAVE IS HAROLD HAMMERSHAIMB. (YIELD ESTIMATES ARE ABSOLUTELY REQUIRED FOR RAJ VERMA TO BE ABLE AND DO ANYTHING.) UNFORTUNATELY, HAROLD DID NOT GET AN OPPORTUNITY TO WORK ON THE YIELD ESTIMATES LAST FRIDAY AFTERNOON. HE IS AWAY FROM THE OFFICE ON A FOUR-DAY TRIP NOW, SO THAT THE EARLIEST HE COULD START CRACKING ON THIS JOB WOULD BE FRIDAY, DEC. 11.

MARKETING FAR EAST
TELEFAX MESSAGE
(CONTINUATION)

WE FULLY REALIZE HOW SIGNIFICANT AND HOW URGENT IT IS FOR YOU TO RECEIVE OUR ADVICE WITH REGARD TO THE FOLLOWING TWO QUESTIONS CONCERNING THE EXISTING H2 PLANT AT DUMAI:

(A) WITHOUT ANY CHANGES TO THE UNIT, WHAT WOULD BE THE MAXIMUM H2 PRODUCTION CAPACITY? (THIS BASED ON USING DESIGN GAS FEEDSTOCK FOR THE DESIGN CAPACITY AND MIXED LPG FEEDSTOCK FOR ANY ATTAINABLE EXCESS CAPACITY.)

(B) WHAT CHANGES TO THE UNIT WOULD BE REQUIRED TO ACCOMPLISH A H2 PRODUCTION CAPACIT OF 125% OF DESIGN? (SAME FEEDSTOCK SET-UP AS IN (A) ABOVE.)

WE ALSO APPRECIATE THAT YOU, IN THIS FEASIBILITY PHASE, ARE NOT LOOKING FOR ANYTHING MORE FROM US THAN VERY PRELIMINARY INDICATIONS AND THAT FLUOR DANIEL ARE PREPARED TO HELP US WITH THEIR H2 GENERATION EXPERTISE, SHOULD THIS BE REQUIRED TO EXPEDITE SEPARATION OF THE TENTATIVE INFORMATION.

PLEASE REST ASSURED THAT WE WILL DO WHATEVER IS HUMANLY POSSIBLE TO SATISFY YOUR REQUIREMENTS.

BEST REGARDS,

RALPH F. MARTEL

UOP

UOP

FAX TRANSMISSION COVER SHEET

TO:	FROM:
RECIPIENT'S NAME Kris Murdia (S34-A)	SENDER'S NAME Dale Wong
COMPANY Fluor Daniel	DEPARTMENT/CENTER PDSG 826
LOCATION Irvine, California	SENDER'S PHONE NUMBER 708-391-2106
FAX NO. 714-975-5271	DATE Nov 9, 1992

Carbon copies to:

COMPANY NAME/LOCATION	FACSIMILE NO.
COMPANY NAME/LOCATION	FACSIMILE NO.
COMPANY NAME/LOCATION	FACSIMILE NO.

Total Pages Sent (including this cover sheet): 2

SUBJECT: Vendor Data Sheet for Pertamina's ~~Rec.~~ Makeup Compressor Turbine.

25 East Algonquin Road • Des Plaines, Illinois 60017-5017 • Telex 211442 • Fax 708-391-2253

UOP 1/6

FAX TRANSMISSION COVER SHEET

TO:	FROM:
RECIPIENT'S NAME LASZLO BAKONYVARI	SENDER'S NAME RALPH F. MIARTÈL
COMPANY CHEVRON RESEARCH AND TECHNOLOGY CO.	DEPARTMENT/CENTER 01560750
LOCATION RICHMOND, CA94802	SENDER'S PHONE NUMBER 1-708-391.3116
FAX NO. 510-242.5320	DATE OCTOBER 1, 1992

Carbon copies to:

COMPANY NAME/LOCATION RAYMOND J. BAYTALA FLUOR DANIEL/IRVINE, CA	FACSIMILE NO. 714-975.4006 OR 975.5271
COMPANY NAME/LOCATION P. NAIR UOP/JAKARTA, INDONESIA	FACSIMILE NO. 62.21.588.532
COMPANY NAME/LOCATION	FACSIMILE NO.

Total Pages Sent (including this cover sheet): 6

SUBJECT: PERTAMINA - DUMAI - CHEVRON'S LBO PROJECT

AS USUAL, IT WAS A GENUINE PLEASURE TO SEE YOU, RAY AND KRIS AGAIN. HOPE YOU RETURNED HOME IN ONE PIECE.

PLEASE FIND HEREWITH OUR PROPOSED LANGUAGE FOR THE BASIS AND SCOPE OF THE REVAMP FEASIBILITY STUDY TO BE CONDUCTED BY US. THE MUTUALLY APPROVED BASIS AND SCOPE WILL BE MADE PART OF A MISCELLANEOUS SERVICES AGREEMENT (MSA) BETWEEN OUR COMPANIES TO COVER OUR WORK AT A FIXED COST OF U.S. $60,000.00. AS WE ARE ANXIOUS TO INITIATE THE PREPARATION OF EXECUTION COPIES OF THE MSA, WE KINDLY

25 East Algonquin Road • Des Plaines, Illinois 60017-5017 • Telex 211442 • Fax 708-391-2253

UOP 17-8222A

SOLICIT YOUR REVIEWING THE ATTACHED LANGUAGE AND LETTING US HAVE YOUR COMMENTS/APPROVAL AT YOUR EARLIEST CONVENIENCE.

AS DISCUSSED WITH YOU ON SEPTEMBER 30, 1992, THE FOLLOWING ITEMS ARE NOT INCLUDED IN THE BASIS AND SCOPE BUT WILL, NEVERTHELESS, BE FURNISHED BY US:

(1) FULLY PAID ROYALTIES/TECHNIQUE & KNOW-HOW FEES;

(2) FIXED ENGINEERING COST FOR PREPARATION OF "SCHEDULE A" SPECIFICATIONS OF THE REVAMP;

(3) ESTIMATED CATALYSTS AND CHEMICALS CONSUMPTION COSTS; AND

(4) EXPECTED CHEMICAL H_2 CONSUMPTION OVER AND ABOVE THE CURRENT DESIGN CONSUMPTION.

BEST REGARDS

RALPH F. MARTEL

UOP
25 East Algonquin Road
Des Plaines, Illinois 60017-5017
Telephone: 708-391-2000
FAX: 708-391-2253
Telex: 211442

October 7, 1992

Fluor Daniel, Inc.
3333 Michelson Drive
Irvine, CA 92730

Attention: Mr. R.J. Baytala

Pertamina - Dumai- Chevron's LBO Project

Dear Sirs:

In accordance with your request made by fax of September 23, 1992 (letter No. 422700.046), we are forwarding herewith two (2) copies of the off-the-shelf "Schedule A" design package relative to the Delayed Coking Process Unit (Revamp) for Pertamina, Dumai, Sumartra, Indonesia - UOP Project No. 560000.

The enclosed material is furnished under the terms and conditions of the Contractors' General Nondisclosure Agreement in place between our two companies.

Very truly yours,
UOP

Ralph F. Martel
Manager, Business Development
Far East Marketing

Enclosure 2
RFM/rd

CALTEX PETROLEUM CORPORATION
125 E. JOHN CARPENTER FREEWAY
IRVING, TEXAS 75062-2794
(214) 830-1000

FAX TRANSMISSION COVER PAGE

TO: FLOOR DANIEL IRVINE FAX TEL NO. 1-714-975-4006

ATTENTION: R. J. BAYTALA

FROM: S. F. BROWN

OFFICE EXT. 3875 DEPT. LUBE SUPPLY

MESSAGE IS: URGENT XX ROUTINE

SUBJECT: DUMAI - PRODUCT SHIPPING DESIGN BASIS

DATE: 10/16/92 TOTAL NO. OF PAGES 3

If you do not receive all pages indicated, please call sender.

Fax Number: (214) 830-1190

Comments: INFORMATION AS REQUESTED YOUR 10/14 FAX. IF YOU HAVE ANY QUERIES, PLEASE ADVISE. AS I DO NOT HAVE LAZLO BAKONYVARI'S FAX NUMBER AT HAND, I WOULD APPRECIATE YOUR FORWARDING A COPY OF THIS FAX TO HIM. PLEASE CONFIRM.

COVSHT.FAX