MINUTE ITEM

This Calendar Item No. 45
was approved as Minute Item
No. 42 by the State Lands
Commission by a vote of 2-0
at its 12-16-80
meeting.

MINUTE ITEM

12/16/80
Thompson

45. SIXTH MODIFICATION OF THE 1980-81 PLAN OF DEVELOPMENT AND OPERATIONS AND BUDGET, LONG BEACH UNIT, WILMINGTON OIL FIELD, LOS ANGELES COUNTY

During consideration of Calendar Item 45 attached, Mr. W. M. Thompson, Chief, Long Beach Operations, showed slides of the types of drilling rigs currently being used on the Long Beach oil islands, and he explained the type of rigs proposed to be purchased which is the subject of this Calendar item. Mr. Thompson stated the main purpose in purchasing the rigs is to continue the subzone development for which 200 to 500 more wells are to be drilled. He explained that unless a certain number or rigs are used, the drilling time would be extended far into the future. A major benefit in purchasing the rigs as opposed to using contract rigs is that the payout on the rigs will be approximately three years.

Commission-Alternate Susanne Morgan asked various questions regarding the economics of purchasing the rigs. Mr. Cory was willing to approve the purchase, but because Ms. Morgan had some concerns, he suggested that the Commission approve the recommendation as presented subject to the staff submitting to the Commissioners on the following day a detailed cost analysis justifying the purchase. If this analysis satisfied the Commissioners' concerns, their approval at this meeting would be upheld. Mr. Northrop, however, wanted to make sure that the Commission's confirming approval of the staff's analysis was in writing so there would not be any confusion in the approval of the purchase of the rigs. The Commission, therefore, approved the staff's recommendation as presented by a vote of 2-0 subject to Commissioners Cory's and Morgan's written confirmation of the staff's detailed analysis dated December 17, 1980 (see Exhibit "A" attached for written confirmation).

Attachment: Calendar Item 45

State of California

EXHIBIT "A"

State Lands Commission

Memorandum

To : MS. SUSANNE MORGAN
Commission-Alternate
State Lands Commission
State Capitol, Room 1145
Sacramento, California 95814

Date : December 17, 1980

File No.:

From : EXECUTIVE OFFICE
1807 13th Street, Sacramento 95814

Subject: SIXTH MODIFICATION OF THE 1980-81 PLAN OF DEVELOPMENT AND OPERATIONS AND BUDGET, LONG BEACH UNIT (CALENDAR ITEM 45, DECEMBER 16, 1980 STATE LANDS COMMISSION MEETING)

Enclosed are specific details as to the payout of the purchase of two drilling rigs covered in Calendar Item 45 at the December 16, 1980, State Lands Commission meeting. This is in response to your request for additional information so as to sustain your approval of this budget augmentation at that meeting.

When the Long Beach Unit uses a drilling rig, either contract or unit owned, for the drilling of new wells and the redrilling or workover of existing wells, it furnishes the following items:

> Blow-out prevention equipment; drilling bits; scrapers; hole openers; reamers; stainless steel drill collars; directional survey tools and services; electric logging surveys; cementing tools and services; fishing tools and services; drilling muds and mud services; completion fluids; mud cleaners; and mud centrifuges; gravel packing and liner washing tools and services; and moving costs between well locations.

For the payout calculation of Unit owned vs. contract rig, the following tangible items are considered:

1. Labor Costs

   The labor costs are comparable between both types of rigs as the same number of men are used and wages are comparable.

2. Rig Fuel

   The Unit-owned rigs are electric powered whereas the contract rigs are diesel engine powered. As part of the

CALENDAR PAGE
MINUTE PAGE 2935

contract, the Unit furnishes the diesel fuel for the rental rigs. An analysis of current energy costs escalated to January 1982 indicates a $360 per day electric power cost for Unit-owned rigs vs. a $845 per day diesel fuel cost for contract rigs.

3. Rig Rental

The rental cost of a contract rig is for the sub-base, drilling mast, mud pumps, shaker screens, mud tanks, draw works, rotary table, swivel, kelly drill pipe, and the maintenance of this rented equipment. The current rental rate is $3,700 per day with an escalation based on the Oil Field Equipment Wholesale Price Index Code 1191-02 which is currently increasing at 2.8 percent per quarter. Based on that escalation, the daily contract rig rental in January 1982 would be $4,130 per day.

4. Maintenance Cost - Unit-Owned Rig

The current operating cost experience of maintaining the comparable equipment provided in the rig rental for the six Unit-owned rigs escalated to January 1982 is $460 per day.

5. Moving Costs

A specific part of the rig design of Unit-owned equipment is portability. This is important because with well locations close together, six feet apart, and on a limited surface area, each move between wells must be made as rapidly as possible to save money and to avoid interference with other production operations at the same surface location. Also, the sub-base of the rig and the associated equipment should cover as few well locations as possible as they cannot be serviced while a well is being drilled. The contract rigs cost $20,000 per move compared to $3,000 for a move of Unit-owned rigs.

As can be seen on the attached sheet, the payout for purchase of Unit-owned rigs is three years.

The actual case expenditure schedule for these augmented funds shows that the following percentages will be spent during the next four quarters:

First Quarter 1981	= 7%
Second Quarter 1981	= 15%
Third Quarter 1981	= 38%
Fourth Quarter 1981	= 40%

CALENDAR PAGE
MINUTE PAGE 2936

There are also some intangibles for which a dollar amount cannot be quantified which favor the Unit-owned equipment. The equipment is newer and has less down time; being electric powered they are quieter and more reliable; there is reduced air pollution with electric powered rigs compared to diesel engines; they will not interfere as much with surface operations involving other wells; there are some well locations which cannot be drilled using contract equipment; and there is a potential loss of income from new wells if the contractor were to not renew the contract and move the rigs out or had labor union problems. The prospect of losing a contract rig is real due to the worldwide demand for drilling rigs. The domestic use of rigs is at an all-time high. There is a current delivery time for this equipment but it would be extended by a year if the decision is delayed at an escalation cost of 1.5% per month.

W. M. Thompson
W. M. THOMPSON
Chief, Long Beach Operations

cc: Hon. Kenneth Cory
David Ackerman

Confirmation of approval of Calendar Item 45, December 16, 1980, State Lands Commission meeting:

SUSANNE MORGAN
Commission Alternate
State Lands Commission

Kenneth Cory
KENNETH CORY
Chairman
State Lands Commission

CALENDAR PAGE
MINUTE PAGE 2937

TO: M. M. THOMPSON

CORRECTED COPY

COVER SHEET OF BOTH BIG-O DRILLING, INC.
AND
THUMSCO DRILLING RIG
YEARLY COSTS

	January 1982
Big-O Drilling, Inc.	
Rig rental and fuel	$1,816,034.00
Rig moves	321,595.00
	$2,137,659.00
THUMSCO Drilling Rigs	
Rig moves	$ 41,975.00
Maintenance drilling tools	298,935.00
	$ 340,910.00

Big-O Drilling Inc.	
Yearly operating costs	$2,137,659.00
THUMSCO Drilling Rigs	
Yearly operating costs	$ 340,910.00
Difference	$1,796,749.00

Cost of rig January 1982 $5,300,000.00
Annual savings (THUMSCO rig) 1,796,749.00 = 2.94 year payout

CALENDAR PAGE
MINUTE PAGE 2938

TO: W. M. THOMPSON

CORRECTED COPY

DAILY AND YEARLY RIG COST COMPARISON BETWEEN LEASED BIG O DRILLING INC. RIG NO. 4 AND THUMSCO PROPOSED RIGS T-7 AND T-8

	November 1980	January 1982
Daily rental cost of Big O Drilling Inc. equipment which is escalated according to the Wholesale Price Index Code 1101-02, which is averaging 2.5% per quarter year (11.2%)	$ 3,699.04	$ 4,[illegible]1.96
~~$[illegible] / 365 days = $1,467,250.00~~		
$4,131.96 x 365 days = $1,508,161.75		
Daily diesel fuel cost to power drawworks, pumps and generator engines	733.61	Calc. 15% 843.65
$840.65 x 365 days = $30,733.22		
= $307,032.2%		
Total Daily Cost		4,975.60
Total yearly cost		$1,816,[illegible]94.00

THUMS RIG COST

Daily Maintenance of Drilling Tools	$ 400.00	$ 460.00

This account includes all consumable goods and all maintenance of rig and equipment. This figure is based on actual charges to the account over a period of time.

Electric Power	312.00	359.00

By actual measurement of power consumption over an extended period, these rigs used an average of 5174 KWH per day @ 6.00 cents per KWH as of November 13, 1980.

Total Daily Cost	$ 819.00
Total Yearly Cost	$ 298,935.00

CALENDAR PAGE

MINUTE PAGE 2939

To: W. M. Thompson
Page 4 Of 4

	November 1980	January 1982 Calendar Year
Rig moves for T-7 and T-8:		
THUMSCO rigs are equipped with removable rubber-tired Logies which allow for quicker and cheaper moves than the contract rigs which require house moving services and more trucks.		
The average move per rig is every 30 days or 12 per year with an average cost of $3,000 per move, or $100 per day	$ 100.00	$ 115.00
Rig moves for contractor:		
Using the additional services mentioned above and based on 30 day moves, the average move costs $19,930.00, or $665 per day.	665.00	766.00
	$ 765.00	$ 881.00
Accrued move costs for contractor using January 1982: Cost = $881 x 365 days		$321,565.00
Accrued move costs for THUMSCO drilling rigs using January 1982: Cost = $115 x 365 days		$ 41,975.00
	Difference	$ 279,590.00

CALENDAR PAGE
MINUTE PAGE 2940

CALENDAR ITEM

45

12/80
Thompson

APPROVAL OF THE SIXTH MODIFICATION OF THE
1980-1981 PLAN OF DEVELOPMENT AND OPERATIONS
AND BUDGET, LONG BEACH UNIT, WILMINGTON OIL FIELD

The Sixth Modification of the 1980-1981, Plan and Budget, Long Beach Unit, provides for augmenting the Budget by $11,024,000 and modifying the Plan in order to authorize the purchase of two portable drilling rigs. The affected Budget Items are PART III, A.2.f.(2) Field Equipment, Drilling Equipment, increased by $10,600,000 and C. ADMINISTRATIVE OVERHEAD increased by $424,000. The new total Budget for 1980-1981 would be $167,272,000.

The Commission's staff has recommended this augmentation to provide for the purchase of two additional portable drilling rigs, with delivery in the first part of 1982. At that time additional drilling locations will be completed at three of the four island drill sites. These rigs will be similar to the two other portable rigs approved by the Commission and now in service. The purchase of another rig mover system will allow these rigs to be moved between locations in a matter of hours and to operate on three of the five drilling locations in the Unit. Replacement of contract rigs with Unit-owned equipment is economically justified.

Additional development of the Long Beach Unit is now possible in view of current crude oil prices. In order to carry out this future development within a reasonable time frame and continuing the required reworking of existing wells, at least the current number of drilling rigs, eight, will be required. A full scale redevelopment program of subzoning and infill drilling has been under way since mid-1980.

Production and injection data from these new wells and those to be drilled by mid-1981 will allow the finalization of future drilling requirements. The delivery of these two rigs in early 1982, will provide the flexibility to: maintain eight drilling rigs in the event of the loss of the contract rigs, substitute for contract rigs if only eight rigs are required in the future, or expand to nine

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CALENDAR PAGE 201
MINUTE PAGE 2941

or ten rigs if required. Purchase of these rigs will be part of the plan for the expanded development of the Unit, resulting in the economic production of additional crude oil.

IT IS RECOMMENDED THAT THE COMMISSION:

1. APPROVE THE SIXTH MODIFICATION OF THE PLAN OF DEVELOPMENT AND OPERATIONS AND BUDGET, LONG BEACH UNIT, JULY 1, 1980 THROUGH JUNE 30, 1981.