

**C-3**

March 17, 2020

HONORABLE MAYOR AND CITY COUNCIL  
City of Long Beach  
California

**RECOMMENDATION:**

Approve and adopt the Long Beach Unit Annual Plan (July 1, 2020 to June 30, 2021).  
(Citywide)

**DISCUSSION**

In accordance with Chapter 138 of the Statutes of 1964, First Extraordinary Session, an Annual Plan of Development and Operations and Budget for the Long Beach Unit (LBU) must be adopted by the City of Long Beach (City) and approved by the State Lands Commission (SLC).

Chapter 941, California Legislature, 1991 Sessions, amended Chapter 138 and requires the City and the Contractor, California Resources Long Beach, Inc. (CRLBI), to prepare a one-year Annual Plan, which includes an itemized budget of intended expenditures.

The Annual Plan provides for the further development of the LBU through the Agreement for Implementation of an Optimized Waterflood Program that was entered into in November 1991 as part of the above legislation. Preparation is a joint effort by staff from the City's Energy Resources Department (Unit Operator), CRLBI (Field Contractor), and THUMS Long Beach Company (Agent for Field Contractor). A copy of the Annual Plan is attached.

This matter was reviewed by Deputy City Attorney Richard F. Anthony on February 18, 2020 and by Revenue Management Officer Geraldine Alejo on February 27, 2020.

**TIMING CONSIDERATIONS**

Chapter 941, California Legislature, 1991 Sessions, also requires that the City submit formal copies of the Annual Plan to the SLC for approval no later than March 23, 2020. To meet that requirement, City Council approval is requested on March 17, 2020.

**FISCAL IMPACT**

This recommendation has no staffing impact beyond normal budgeted scope of duties and is consistent with existing City Council priorities. There is no fiscal or local job impact associated with this recommendation.

HONORABLE MAYOR AND CITY COUNCIL  
March 17, 2020  
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SUGGESTED ACTION:

Approve recommendation.

Respectfully submitted,



ROBERT M. DOWELL  
DIRECTOR OF ENERGY RESOURCES

ATTACHMENT: LONG BEACH UNIT ANNUAL PLAN

APPROVED:



THOMAS B. MODICA  
ACTING CITY MANAGER

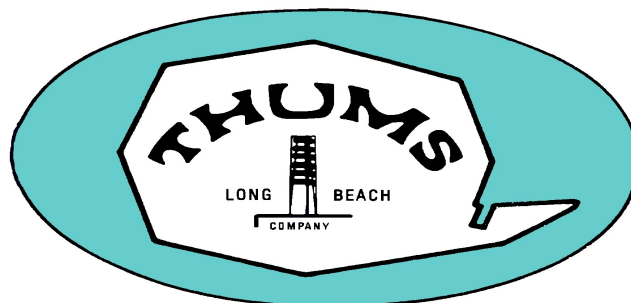
# Long Beach Unit

## THUMS Long Beach Company (Agent for Field Contractor)



# ANNUAL PLAN

July 1, 2020 through June 30, 2021



# ANNUAL PLAN

July 1, 2020 through June 30, 2021

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# Part I

## Introduction

This Annual Plan (“Plan”) was developed to reflect anticipated activity levels during the fiscal period from July 1, 2020 through June 30, 2021 (“FY21”). It is being submitted as required by Section 5(a) of Chapter 138, Statutes of 1964, First Extraordinary Session, and as revised by passage of Assembly Bill 227 (Chapter 941, Statutes of 1991) and the Optimized Waterflood Program Agreement executed by the State of California, the City of Long Beach, and California Resources Long Beach, Inc. (“CRC”), the Field Contractor.

This Plan provides for drilling, producing, water injection, and other associated activities from offshore and onshore locations. The budget for these activities is grouped into the following five major categories:

<b>Plan Category</b>	<b>Fiscal Year 2020 – 2021 (\$ Million)</b>
Development Drilling	\$ 76.9
Operating Expense	\$ 90.2
Facilities, Maintenance, and Plant	\$ 56.4
Unit Field Labor and Administrative	\$ 39.7
Taxes, Permits, and Administrative Overhead	\$ 26.2
Total	<u>\$289.4</u>

## **A. Plan Basis**

This Plan was developed based on the parameters outlined in the Program Plan for the period July 2019 through June 2024 and provides current and updated estimates of volumes, activity levels and expenditures for FY21.

### **Volumes**

Oil and gas production volumes are predicted to average 17.3 Mbopd and 6.9 MMcfd, respectively, in FY21. Water production for the period is expected to average 1,111 Mbwpd and water injection is expected to average 1,156 Mbwpd.

### **Revenue and Expenses**

A projected realized oil price of \$55.00/bbl and gas price of \$2/mcf will result in revenues of \$352.9 million. Budgeted expenses for FY21 total \$289.4 million. Projected net profit in FY21 is \$63.4 million.

### **Drilling**

This Plan allows for drilling 39 new and redrilled development and/or replacement wells from existing cellars. The plan sets a drilling pace equivalent to approximately one and one half drilling rigs over the fiscal year. The rig utilization could potentially change due to variations in oil price and program performance. Workover rigs will perform drilling preparation and completion work.

The locations of production and injection wells to be drilled or redrilled are consistent with those given in the Program Plan (see attached Part II, Schedule 2B). Injection support for the drilling program will be provided through a combination of capital workovers (add pays and conversions), return to injection of idle injectors, and 6 new drill injectors. As per current operational and regulatory practices, injection support will continue to maintain adequate Injection-to-Gross (I/G) ratios to prevent subsidence and improve waterflood sweep efficiency.

## **Maintenance**

The majority of the facility projects anticipated during the Plan period are required to maintain current equipment capabilities or to increase efficiency of current operations. Other projects will be necessary to take advantage of technological and other improvement opportunities and to address changes in the oil field operating environment.

CRC has a Mechanical Integrity and Quality Assurance (“MIQA”) program to assess and maintain critical equipment in order to protect the environment. The MIQA program is designed to meet internal and regulatory requirements and provide a high level of equipment integrity to reduce risk and increase reliability. Key elements include:

- Identification, evaluation, and determination of what equipment and/or process components are critical (i.e. their failure or malfunction could adversely affect the safety of personnel, operations, and/or the environment).
- A process to ensure equipment and components comply with material specifications, design and construction codes or standards thus providing a measure of safety and reliability.
- Methodologies for inspecting, testing and maintaining the equipment and documenting such action.

The MIQA program is an integral piece of the overall flow of maintenance, from inspection/testing through maintenance and, when necessary, repairs or replacement. The program is supported through the use of a comprehensive database and work order system that provides control and management of all maintenance activities.

Projects will be undertaken to repair or replace equipment that has outlived its useful life. Items needing to be repaired or replaced include, but are not limited to, facilities piping, tanks, and vessels. These projects are consistent with past activities to keep the Long Beach Unit (“Unit”) facilities in safe operating condition and reflect a forecasted field life of over 30 years.

## **Abandonment**

Wells and facilities with no further economic use will be abandoned to reduce the long-term Unit liability. This Plan provides funds for plugging wells to surface, in-zone, and conditional abandonments to maintain compliance with the CalGEM Idle Well Management Plan program (PRC 3206).

## **Safety, Environmental, and Regulatory Compliance**

CRC is committed to conducting all aspects of its business in a manner that provides for the safety and health of employees, contractors and the public, and safeguards the environment in which it operates. In 2019, the National Safety Council awarded CRC THUMS Operations with an Occupational Excellence Achievement Award for achieving a lost workday case incident rate better than 50 percent of the industry average. The National Safety Council also awarded CRC THUMS the Perfect Record Award which recognizes an operating area completing at least 12 consecutive months without a company employee receiving an occupational injury or illness that resulted in days away from work. These achievements are further demonstrated in the key safety programs, which include incident reporting and investigation, safety meetings and training, Management of Change (MOC), Process Hazard Reviews (PHR's), emergency response planning and drills, and a behavior-based safety observation program. Key aspects of the environmental program include compliance with all laws and regulations, including South Coast Air Quality Management District ("SCAQMD") requirements, waste management and minimization, spill prevention plans and Business Emergency Plans (BEP's).

The effectiveness and compliance of the above programs are assured through various internal audit programs. In addition, numerous agencies conduct periodic audits, including the CA State Lands Commission, Department of Transportation, State Fire Marshal, SCAQMD, Environmental Protection Agency, Long Beach Fire and Health Departments, Port of Long Beach and City of Long Beach Energy Resources Department. CRC THUMS is participating in the re-occurring 5-year Safety and Oil Spill Audit, the main objective of which is to ensure that oil and gas production facilities are operated in a safe and environmentally sound manner. The current audit, which started in 2017, is nearing completion and will show that CRC THUMS has had continuous improvement in reducing findings and risk from



previous audits and embraces the responsibility to provide and maintain a safe and healthy work environment for all employees, and the community.

Emergency response planning and preparedness is bolstered by partnering with Marine Spill Response Corporation (MSRC). MSRC is an independent, non-profit, national spill response company dedicated to rapid response to environmental incidents. MSRC has a major west coast base of operations in the Port of Long Beach and its equipment and expertise are readily available for emergencies and are incorporated in onsite training exercises. The training exercises also involve a close working relationship with the United States Coast Guard and the California Department of Fish and Wildlife.

Environmental and community outreach is also a fundamental part of operations and each of the Islands received a Conservation Certification Silver Tier in 2018 by the Wildlife Habitat Council (“WHC”). This designation is awarded to facilities that provide for public education and involvement through wildlife related projects and learning opportunities on the facilities. In 2016, the Islands were presented by the WHC with the “Landscaping Project Award.” These certifications and the national award received by the WHC demonstrate the Unit’s continuing commitment to environmental stewardship and habitat conservation.

Projects relating to safety, environmental issues, or other situations necessary for meeting compliance with code, permit, or regulatory requirements will continue to be implemented under this Plan in accordance with all Unit agreements. In addition, CRC places additional emphasis on risk and system reviews and operational safeguards to assure reliable and compliant environmental performance.

### **Economic Review**

Project expenditures during the Plan period are subject to economic review through the Determination and Authority for Expenditure (“AFE”) processes. All existing wells are frequently reviewed in light of changing crude prices to determine if they are economic to operate. Well servicing work is justified on economics and other conditions consistent with good engineering, business, and operating practices.

CRC remains committed to careful prevention of subsidence through strict adherence to existing regulations and voidage-driven injection requirements.

## B. Economic Projections

(Data in Millions of Dollars)

	BUDGET FIRST QUARTER <u>FY21</u>	BUDGET SECOND QUARTER <u>FY21</u>	BUDGET THIRD QUARTER <u>FY21</u>	BUDGET FOURTH QUARTER <u>FY21</u>	BUDGET TOTAL <u>FY21</u>
<b><u>ESTIMATED REVENUE</u></b>					
Oil Revenue	\$87.4	\$87.6	\$85.9	\$87.0	\$347.8
Gas Revenue	\$1.3	\$1.2	\$1.3	\$1.3	\$5.1
<b>TOTAL REVENUE</b>	<b>\$88.6</b>	<b>\$88.8</b>	<b>\$87.1</b>	<b>\$88.3</b>	<b>\$352.9</b>
<b><u>ESTIMATED EXPENDITURES</u></b>					
Development Drilling	\$19.2	\$19.2	\$19.2	\$19.2	\$76.9
Operating Expense	\$22.6	\$22.6	\$22.6	\$22.6	\$90.2
Facilities & Maintenance	\$14.1	\$14.1	\$14.1	\$14.1	\$56.4
Unit Field Labor & Administration	\$9.9	\$9.9	\$9.9	\$9.9	\$39.7
Taxes, Permits & Overhead	\$6.6	\$6.6	\$6.6	\$6.6	\$26.2
<b>TOTAL EXPENDITURES</b>	<b>\$72.4</b>	<b>\$72.4</b>	<b>\$72.4</b>	<b>\$72.4</b>	<b>\$289.4</b>
<b><u>NET PROFIT</u></b>	<b>\$16.3</b>	<b>\$16.5</b>	<b>\$14.8</b>	<b>\$15.9</b>	<b>\$63.4</b>

## C. MAJOR PLANNING ASSUMPTIONS

	BUDGET FIRST QUARTER <u>FY21</u>	BUDGET SECOND QUARTER <u>FY21</u>	BUDGET THIRD QUARTER <u>FY21</u>	BUDGET FOURTH QUARTER <u>FY21</u>	BUDGET TOTAL <u>FY21</u>
<b><u>OIL PRODUCTION</u></b>					
PRODUCED (1000 BBL)	1,588	1,593	1,561	1,581	6,324
(AVERAGE B/D)	17,266	17,314	17,344	17,375	17,325
<b><u>GAS PRODUCTION</u></b>					
PRODUCED (1000 MCF)	635	600	646	649	2,530
(AVERAGE MCF/D)	6,900	6,516	7,179	7,136	6,931
<b><u>WATER PRODUCTION</u></b>					
PRODUCED (1000 BBL)	98,311	100,736	101,518	104,956	405,521
(AVERAGE B/D)	1,068,596	1,094,957	1,127,981	1,153,360	1,111,016
<b><u>WATER INJECTION</u></b>					
INJECTED (1000 BBL)	102,326	105,061	105,443	109,229	422,058
(AVERAGE B/D)	1,112,235	1,141,964	1,171,585	1,200,320	1,156,324
OIL PRICE (\$/BBL)	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00
GAS PRICE (\$/MCF)	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00

## Part II

### Program Plan Schedules

#### Schedule 2A

#### Range of Production and Injection

#### Fiscal Year 21

#### Long Beach Unit Program Plan, July 2019-June 2024

FISCAL YEAR	RANGE OF PRODUCTION AND INJECTION RATES											
	OIL MBOPD			WATER MBWPD			GAS MMCFPD			INJECTION MBWPD		
<b>2020/21</b>	16.5	-	18.2	1,055	-	1,167	6.6	-	7.3	1,099	-	1,214

FISCAL YEAR	RANGE OF INJECTION PRESSURES			
	TAR PSI	RANGER PSI	TERMINAL PSI	U. P./FORD PSI
<b>2020/21</b>	1500	2500	2500	2500

# Schedule 2 B

## Anticipated New and Redrilled Wells

### Fiscal Year 21

#### Long Beach Unit Program Plan, July 2019-June 2024

Reservoir	CRB	Producers					Injectors					
		Grissom Min - Max	White Min - Max	Chaffee Min - Max	Freeman Min - Max	Pier J Min - Max	Grissom Min - Max	White Min - Max	Chaffee Min - Max	Freeman Min - Max	Pier J Min - Max	
SG Tar Ranger West		0-1	0-0	0-0	0-0	0-0	0-1	0-0	0-0	0-0	0-1	
	1	0-2	0-0	0-0	0-0	0-0	0-1	0-0	0-0	0-0	0-0	
	2	0-2	0-0	0-0	0-0	0-0	0-1	0-0	0-0	0-0	0-0	
	3	0-3	0-0	0-0	0-0	0-0	0-1	0-0	0-0	0-0	0-0	
	4	0-5	0-0	0-0	0-0	0-0	0-1	0-0	0-0	0-0	0-0	
	5	0-5	0-0	0-0	0-2	0-2	0-1	0-0	0-0	0-1	0-1	
	6	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	7	0-0	0-0	0-0	0-4	0-0	0-0	0-0	0-0	0-1	0-0	
	8	0-0	0-0	0-0	0-4	0-0	0-0	0-0	0-0	0-0	0-1	0-0
	9	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-0	0-1	0-0
	10	0-0	0-4	0-0	0-2	0-0	0-0	0-0	0-1	0-0	0-1	0-0
	11	0-0	0-4	0-0	0-2	0-0	0-0	0-0	0-1	0-0	0-1	0-0
	12	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-0	0-1	0-0
Ranger East	13	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	36	0-0	0-0	0-0	0-1	0-2	0-0	0-0	0-0	0-0	0-0	
	37	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-1	0-0	
		0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	14	0-0	0-3	0-0	0-0	0-0	0-0	0-1	0-0	0-0	0-0	
	15	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-1	0-0	
	16	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-1	0-0	
	17	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	18	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	20	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-1	0-0	0-0	
	21	0-0	0-0	0-4	0-2	0-0	0-0	0-0	0-0	0-1	0-1	
	22	0-0	0-0	0-4	0-0	0-0	0-0	0-0	0-0	0-1	0-0	
	33	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
Terminal		0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	24	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	38	0-3	0-0	0-0	0-0	0-4	0-1	0-0	0-0	0-0	0-1	
	39	0-3	0-0	0-0	0-0	0-0	0-1	0-0	0-0	0-0	0-0	
	40	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	41	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	42	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-1	0-0	
	43	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-0	0-0	
UP Ford	47	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
		0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	26	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	27	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-0	0-0	
	30	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	31	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	44	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	45	0-0	0-0	0-2	0-1	0-0	0-0	0-0	0-1	0-0	0-0	
46	0-0	0-0	0-0	0-2	0-0	0-0	0-0	0-0	0-1	0-0		
237		0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	
	30											
		Total					Total					
		0-97					0-32					

## Part III

### Itemized Budget of Expenditures

#### **A. Development Drilling** **\$76.9MM**

The Development Drilling category of expenditures encompasses all new well and replacement well drilling activity, as well as maintenance and replacement of drilling equipment within the Unit. Funds for development drilling are based on the assumption that 39 wells will be developed and/or replaced during the Plan year using a drilling pace equivalent to approximately 1.5 drilling rigs.

Drilling and completing wells, as well as re-drilling and recompleting existing wells, account for 97 percent of the funding provided in this Category. Included in these activities is funding for rig move-in, drilling and casing, completion activities, drilling rig in-zone plugs and conditional abandonments, and unscheduled activity (fishing operations, cement squeezing, special logging, contract drilling services).

Exact specifications regarding the distribution of wells, bottom hole locations, and completion intervals will be determined by CRC. These decisions will be influenced by contributions from reservoir engineering personnel, results from ongoing engineering studies, and well performance. This information will be reviewed and approved in accordance with the various unit agreements during regularly scheduled meetings.

#### **B. Operating Expense** **\$90.2MM**

The Operating Expense category of expenditures encompasses the ongoing costs of day-to-day well production and injection operations necessary for producing, processing, and delivering crude oil and gas, and for all electric power charges. Expenses for this category are based on estimated oil production of 17.3 Mbopd, estimated gas production of 6.9 MMcfpd, water injection requirement of 1,156



Tank and Vessel maintenance program and the remaining investment is focused on inspection, maintenance and repair in support of the MIQA program. This work includes regulated pipeline inspection surveys and evaluation, inspection and repair of cathodic protection systems, and infrastructure piping integrity inspections not covered by regulatory control. Projects include expenditures related to replacement, relocation, or minor expansion of existing injection piping, oil and water pumps and other infrastructure related investments.

**D. Unit Field Labor and Administrative \$39.7MM**

The Unit Field Labor and Administrative category of expenditures encompasses costs for Unit personnel and other Unit support activities.

Funding for Unit personnel includes costs of salaries, wages, benefits, training, and expenses of CRC employees. These costs represent approximately 82 percent of the Category total.

Funding for Unit support activities includes, but is not limited to, costs for professional and temporary services necessary for the completion of support activities; charges for data processing; computer hardware and software; communications; office rent; general office equipment and materials; drafting and reprographic services; DOT drug and alcohol testing; special management projects; and other miscellaneous support charges.

**E. Taxes, Permits, and Administrative Overhead \$26.2 MM**

The Taxes, Permits, and Administrative Overhead category of expenditures includes funds for specific taxes, permits, licenses, land leases, and all administrative overhead costs for the Unit.



Funding is provided for taxes levied on personal property, mining rights, and oil production; for the Petroleum and Gas Fund Assessment; annual well permits and renewals; Conservation Committee of California Oil and Gas Producers Assessment; California Oil Spill Response, Prevention, and Administration fee; land leases; and pipeline right-of-way costs. These costs represent approximately 55 percent of the Category total.

Funding is also provided in this Category for all Administrative Overhead (including Unit Operator billable costs and CRC billable costs) as called for in Exhibit F of the Unit Operating Agreement.

## **PART IV**

### **Definitions**

This Annual Plan may be Modified or Supplemented after review by the State Lands Commission for consistency with the current Program Plan. All Modifications and Supplements to this plan will be presented by the Long Beach Energy Resources Department, City of Long Beach, acting with the consent of CRC, to the State Lands Commission in accordance with Article 2.06 of the Optimized Waterflood Program Agreement.

In addition, on or before October 1, 2020 the City of Long Beach shall present to the State Lands Commission a final report and closing statement of the FY21 Annual Plan, in accordance with the provision in Section 10 of Chapter 138.

## **A. Modifications**

The City of Long Beach, acting with the consent of CRC, has the authority to cause the expenditures of funds for Unit Operations in excess of the amount set forth in the budget included in the Annual Plan, provided, however, that no such expenditure shall be incurred that would result in any category of expenditures set forth in the budget to exceed 120 percent of the budgeted amount for that category. A budget modification would be required for any expenditures which would cause a budget category to exceed its budgeted amount by 120 percent.

Any transfer of funds between budget categories or an augmentation or decrease of the entire budget may be accomplished by a budget modification in accordance with section 5(g) of Chapter 138 and Article 2.06 of the Optimized Waterflood Program Agreement.

Investment, facilities, and management expense projects commenced in prior budget periods, which are to be continued during the current budget period, may be added to this budget by a modification in accordance with Article 2.06 of the Optimized Waterflood Program Agreement.

## **B. Supplements**

This Annual Plan contains all the investment and expense projects reasonably anticipated at the time the Plan was drafted and for which adequate detailed studies existed. Any significant and uncommon expenses not originally contemplated may be added to this budget or transferred by a supplement in accordance with Article 2.06 of the Optimized Waterflood Program Agreement. The amount of the supplement shall include sufficient funds to complete the projects.

## **C. Final Report and Closing Statement**

The final report and closing statement for FY21 shall contain a reconciliation by category as finally modified and the actual accomplishments, including:

1. New wells and redrills by zone.
2. Facilities and capital projects.
3. Production by zone.
4. Injection by zone.