Sentinel Peak Resources California, LLC
Las Cienegas Field
Jefferson Drill Site
Abandonment Plan

INTRODUCTION

This plan is being prepared in compliance with the California Statutes and Regulations for Conservation of Oil, Gas & Geothermal Resources Publication, Article 3, Section 1776 - Well Site and Lease Restoration requirements (Publication No. PRC10 dated March of 2015). The plan is intended to provide a forecast schedule and an outline of the methods and procedures that will be employed for the abandonment of the Jefferson Drill Site upon completion of well abandonments.

BACKGROUND

The Jefferson Drill Site is operated by Sentinel Peak Resources California, LLC (SPR) located within the Las Cienegas Field. It is located at 1371 W Jefferson Boulevard between S. Budlong Avenue and Van Buren Place within the City of Los Angeles, California. The site is approximately 1.75 acres in size with 36 well bores (both previously abandoned and proposed to be abandoned) located within a common well cellar. Equipment including tanks and vessels are located on the property and were utilized for the processing of crude oil production. A Plot plan of the well and equipment locations are provided as Figure 1.

The abandonment of remaining wells as well as the abandonment of all site facilities is currently being contemplated by SPR upon approval from the DOGGR. This plan provides the details of the facility abandonment as required by DOGGR.

WELLS

The Jefferson Drill Site currently has 36 wells, 34 active and two (2) abandoned. There are twenty-seven (27) production wells and nine (9) injection wells. Currently, sixteen (16) of the production wells are active and six (6) of the injection wells are active. The remaining 11 are idle wells. The following is a listing of the total number of wells, including active and idles wells at the Site:

#	API#	WELL NAME	WELL TYPE	WELL STATUS
1	3700294	Jefferson 1	Producer	Active
2	3700274	Jefferson 2	Producer	Active
3	3700275	Jefferson 3	Producer	Active
4	3700295	Jefferson 4	Producer	Active
5	3700276	Jefferson 5	Producer	Active
6	3700296	Jefferson 6	Producer	Active
7	3700297	Jefferson 7	Producer	Active
8	3700277	Jefferson 8	Producer	Active

#	API#	WELL NAME	WELL TYPE	WELL STATUS
9	3700298	Jefferson 9	Producer	Idle
10	3700299	Jefferson 10	Producer	Idle
11	3700300	Jefferson 11	Producer	Idle
12	3700278	Jefferson 12	Producer	Idle
13	3700301	Jefferson 13	Injector	Active
14	3700279	Jefferson 14	Producer	Active
15	3700302	Jefferson 15	Producer	Active
16	3700303	Jefferson 16	Producer	Active
17	3700304	Jefferson 17	Producer	Active
18	3700280	Jefferson 18	Injector	Active
19	3700281	Jefferson 19	Producer	Active
20	3700282	Jefferson 20	Producer	Idle
21	3702026	Jefferson 21	Jnjector	Active
22	3700046	Jefferson 22	Jnjector	Active
23	3700283	Jefferson 23	Jnjector	Active
24	3700284	Jefferson 24	Jnjector	Active
25	3700285	Jefferson 25	Producer	Active
26	3720091	Jefferson 26	Producer	Idle
27	3720099	Jefferson 27	Producer	Active
28	3720098	Jefferson 28	Injector	Active
29	3720054	Jefferson 29	Producer	Active
30	3720048	Jefferson 30	Producer	Idle
31	3720143	Jefferson 31	Producer	Abandoned
32	3720274	Jefferson 32	Producer	Idle
33	3720244	Jefferson 33	Producer	Idle
34	3720187	Jefferson 34	Injector	Abandoned
35	3720201	Jefferson 35	Injector	Active
36	3720233	Jefferson 36	Producer	Active

PRODUCTION EQUIPMENT

Onsite production equipment includes a crude oil, gas, and water separation system consisting of:

1. Four separators
2. Two free water knockouts
3. Crude oil shipping tank, produced water tank and standby tank
4. Two scrubbers
5. Six vapor compressors
6. Glycol contactor
7. Pressure relief stack with a line scrubber

8. Skim oil tank, 50 bbls capacity
9. Gas oil floatation unit

SITE WORK

The site is currently in operation with well abandonment to commence shortly. No sumps are present onsite, and the site is relatively flat and therefore no unstable slopes are present. Access roads are from City Streets and will not be restored as part of this plan.

All tanks, above ground pipelines, debris and other facilities and equipment will be removed from the site as part of the abandonment plan. These facilities are shown in Figure 1. All below ground pipelines will be removed from the property and capped at the property line. Remaining offsite pipelines will be purged with water and filled will heavy mud prior to capping (1776 (f)).

The site has been subject to environmental investigation and will be surveyed for asbestos containing materials (ACM) and lead based paint (LBP). Prior to commencing demolition of the facilities, identified ACM and LBP will be abated by a licensed abatement contractor in compliance with California State Laws and the South Coast Air Quality Management District rules (SCAQMD). This will include obtaining all permits as required by the City of Los Angeles and the SCAQMD. Upon completion of ACM and LBP abatement, an abatement clearance letter will be obtained from a Certified ACM/LBP Consultant.

A site demolition permit will be obtained from the City of Los Angeles and the SCAQMD. The City requires the posting of a 30-day notice prior to commencing demolition and release of the demolition permit. All tanks, vessels, structures, well cellars and concrete pads will be removed as part of the demolition process. All demolition materials will be hauled offsite for disposal and/or salvage. The existing exterior block wall will remain in place for security purposes.

Upon completion of demolition activities, the well casings will be cut off and plated per DOGGR regulation approximately 17ft below current surface grade. The well locations shall be surveyed prior to burying the well. Latitude, longitude and elevation shall be in decimal degrees, to six decimal places, in NAD83. The survey information shall be filed with the DOGGR Division 1 office in Cypress, California. Excavations will be backfilled with onsite soil, and wheel rolled to prevent any settling of soils. As part of the common well cellar demolition process, any rat holes (or other auxiliary holes) present will be backfilled with onsite soil and properly compacted. The site will be left in a relatively flat condition, backfilled to a depth that is approximately 2-3ft below current grade.

Forecast Schedule

It is forecasted that the abandonment of the drill site will occur within a maximum of 36 months. The following table provides the forecast for well abandonments. The forecast is subject to change.

Well Abandonment Forecast Schedule

Wells and Well Types to be Abandoned (as numbered, #, in the WELLS Section)	Forecast Percent Complete	Forecast Benchmark Period from Initiation
7, 10, 11, 12, 20, 32, 33, 34	23%	5 months (in 2019)
1, 2, 3, 4, 5, 6, 8, 9, 13, 14, 15, 16, 17, 18, 23, 25, 26, 30	74%	17 months (in 2020)
19, 21, 22, 24, 27, 28, 29, 35, 36	100%	25 months (in 2021)

Assuming an approved project start date of 7/31/2019, the tentative schedule forecast is provided in the table below, which identifies and includes the well abandonment forecast schedule; abandonment process activities; and compliance activities, submittals, and associated agency approvals.

Overall Project Forecast Schedule

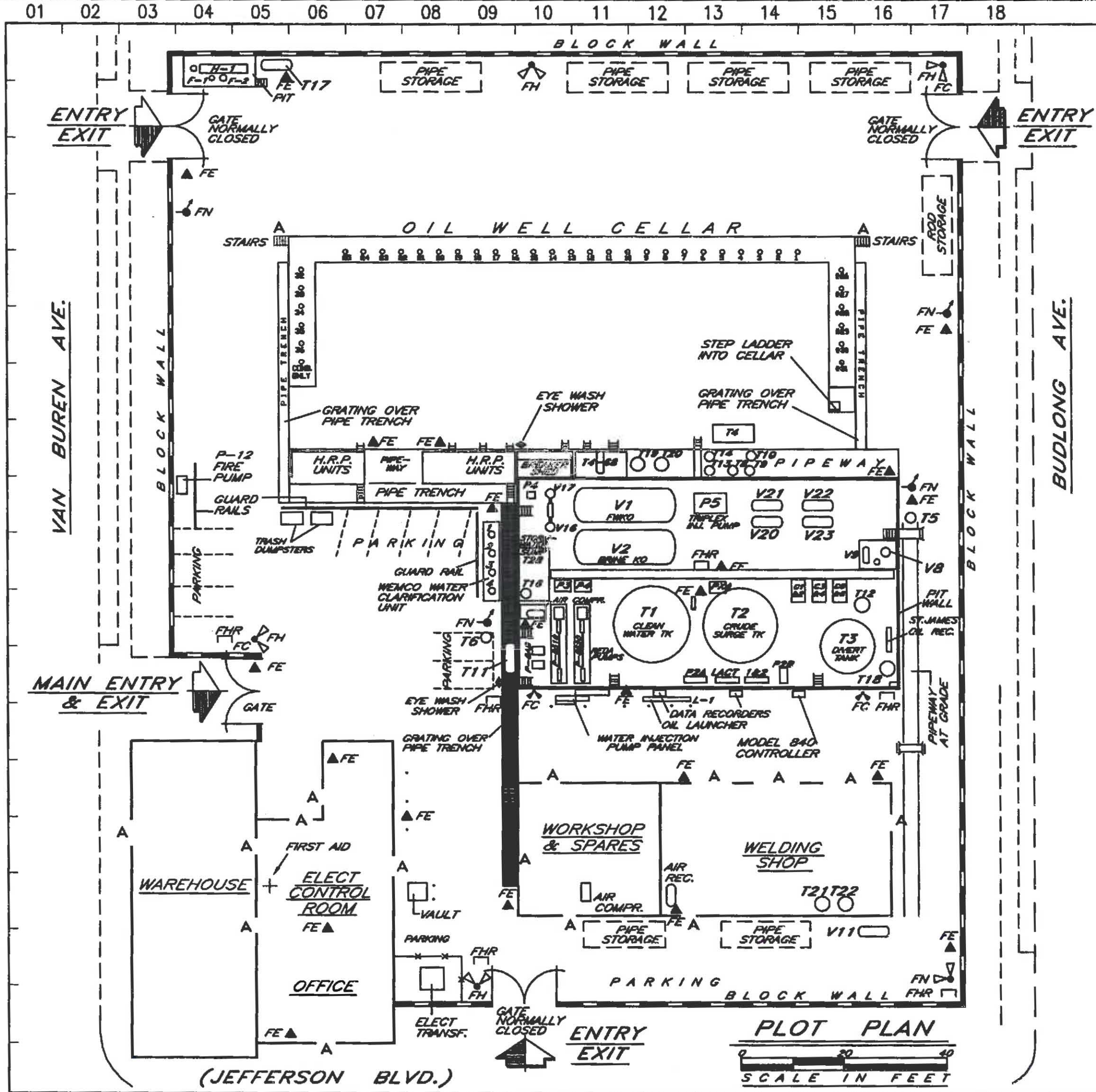
TASK NAME	PROJECTED		
	DURATION	START	FINISH
City of Los Angeles, Plan Approval Determination (ZA-1965-17528(PA6)	0 days	Thu 5/30/19	Thu 5/30/19
PROJECT INITATION	0 days	Wed 7/31/19	Wed 7/31/19
WELL ABANDONMENTS	**503 days**	**Thu 8/1/19**	**Mon 7/5/21**
Phase 1 for 2019 (23% Completion, 5 months forecast)	113 days	Thu 8/1/19	Mon 1/6/20
Phase 2 for 2020 (74% Completion, 17 months forecast)	250 days	Tue 1/7/20	Mon 12/21/20
Phase 3 for 2021 (100% Completion, 25 months forecast)	140 days	Tue 12/22/20	Mon 7/5/21
COMPLIANCE ACTIVITES	**654 days**	**Fri 5/31/19**	**Wed 12/1/21**
Truck Transportation Circulation Plan (9.k)	20 days	Fri 9/6/19	Thu 10/3/19
Asbestos Containing Materials (ACM) and Lead Assessment	10 days	Thu 10/10/19	Wed 10/23/19
SPCC Plan Reviews and Updates (28.a)	530 days	Thu 8/1/19	Wed 8/11/21
Noise and Vibration Monthly Reports (29.a.vi, 1st 24 months)	502 days	Wed 8/28/19	Thu 7/29/21
Covenant Acknowledgement to T&Cs (36.a)	21 days	Fri 5/31/19	Fri 6/28/19
DOGGR and LACounty Fire Dept Well Abandonment Review and Approval	60 days	Tue 7/6/21	Mon 9/27/21
ACM and Lead Abatement Permit/Notifications	10 days	Tue 6/22/21	Tue 7/6/21
SCAQMD Rule 1166 Notification, Monitoring, and Reporting	102 days	Tue 7/13/21	Wed 12/1/21
DEMOLITION	**88 days**	**Tue 7/6/21**	**Thu 11/4/21**
Abatement of ACM and Lead	15 days	Tue 7/6/21	Mon 7/26/21
Removal and Transfer of Remaining Oil and Produced Water	10 days	Tue 7/6/21	Mon 7/19/21
Demolition and Offsite Management of Above Grade Infrastructure	35 days	Tue 7/20/21	Mon 9/6/21
Demolition, Removal, and Offsite Management of Below Grade Infrastructure	35 days	Tue 8/24/21	Mon 10/11/21
Offsite Management of Impacted Soils	25 days	Tue 9/28/21	Mon 11/1/21
Rough Grading of Site for Drainage and Property Transfer to Developer	3 days	Tue 11/2/21	Thu 11/4/21

SPR forecasts completion of the abandonment of the project Site by May 5, 2022. If approval of the permit for the Site is received by July 22, 2019, abandonment of wells is anticipated to be complete by January 24, 2022.

Regulatory Agency Approvals

A listing of the primary regulatory compliance activities and associated approvals are identified in Figure 2, Jefferson Drill Site Abandonment Forecast Schedule. California's Dept of Conservation, Division of Oil, Gas & Geothermal Resources is the permit agency for well abandonments. City of Los Angeles Fire Department permits. Identified asbestos containing materials (ACM) and lead based paint (LBP) will be abated in compliance with California State Laws and the SCAQMD rules. A site demolition permit will be obtained from the City of Los Angeles and the SCAQMD. Demolition activities will be conducted per Los Angeles City ordinances and permitting framework and per SCAQMD Rule 1166 soil mitigation requirements.

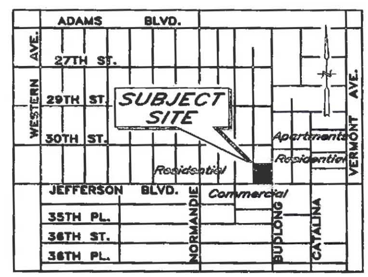
Submitted: July 12, 2019



PLOT PLAN

0 20 40
SCALE IN FEET

ITEM	DESCRIPTION	CAPACITY	CONTENTS (VOLUME %)
T1	STORAGE TANK	1000 BBL	PRODUCED WATER 99%, CRUDE OIL 1%
T2	STORAGE TANK	500 BBL	CRUDE OIL 20-80%, NAT.GAS 20-80%
T3	STORAGE TANK	380 BBL	PRODUCED WATER 99%, CRUDE OIL 1%
T4	STORAGE TANK	500 BBL	PRODUCED WATER 100%
T5	STORAGE TANK	55 GALL	AQUEOUS FOAM
T6	STORAGE TANK	55 GALL	AQUEOUS FOAM
T7	STORAGE TANK	300 GALL	RYKON LUBE OIL
T8	STORAGE TANK	200 GALL	W 9508 WATER CLARIFIER
T9	STORAGE TANK	200 GALL	D 4914 DEMULSIFIER
T10	STORAGE TANK	200 GALL	C 3892 WATER CLARIFIER
T11	STORAGE TANK	1000 GALL	SOLVIT WB 2240 DEGREASER
T12	STORAGE TANK	60 GALL	LUBE OIL
T13	STORAGE TANK	200 GALL	OXYGEN SCANVENGER 7905
T14	STORAGE TANK	200 GALL	SOLVIT 6678 CLARIFIER
T16	STORAGE TANK	200 GALL	WC 9353 WATER CLARIFIER
T17	STORAGE TANK	1000 GALL	GLYCOL STORAGE
T18	STORAGE TANK	200 GALL	SOLVIT 3890
T19	STORAGE TANK	200 GALL	SCANVENGER OS 7905
T20	STORAGE TANK	200 GALL	BIOCIDE MPA 7747
T21	STORAGE TANK	220 CUFT	CYLINDER OXYGEN
T22	STORAGE TANK	220 CUFT	CYLINDER ACETYLENE
V1	F.W.KNOCKOUT DRUM	500 BBL	CRUDE OIL 25% PRODUCED WATER 70% GAS 5%
V2	BRINE KO	500 BBL	
V20 THRU V23	TEST SEPARATORS	20 BBL EA	
V8	GAS SCRUBBER	–	NATURAL GAS, TRI-ETHYLENE GLYCOL
V9	SEPARATOR	15 BBL	NATURAL GAS
V11	SCRUBBER	15 BBL	NATURAL GAS
V16	SCRUBBER	5 BBL	NATURAL GAS
V17	SCRUBBER	5 BBL	NATURAL GAS



VICINITY MAP

0 1000 2000 3000
SCALE IN FEET

LEGEND

FH	FIRE HYDRANT
FE ▲	FIRE EXTINGUISHER
FHR	FIRE HOSE REEL
FN	FIRE NOZZLE
A	ACCESS DOORWAY
FA +	FIRST AID KIT
FC	FIRE CONNECTION
◇	EYE WASH SHOWER

Business Name: SENTINEL PEAK RESOURCES LLC
Business Address: 1371 W.JEFFERSON BLVD., LOS ANGELES, CA 90007
Major Business Activity: OIL AND GAS PRODUCTION

NUMBER	SH.	REFERENCE DRAWINGS

LAS CIENEGAS FIELD
JEFFERSON SITE
FIGURE 1

PLOT PLAN

SENTINEL PEAK RESOURCES