

February 11, 2022

Matt Pearson, PE, MBA
Facilities Manager
CaINRG
1746 F South Victoria Avenue #245
Ventura, CA 93003

21-698 CaINRG Tenby Lease Oxnard Rig Overview

Dear Mr. Pearson,

Per our discussion, California Natural Resources Group, LLC (CaINRG) has taken possession of the old Asphalt Topping plant in Oxnard on 5th and Del Norte from California Resources Corporation (CRC) or its affiliates. The CaINRG project includes the removal of any remaining contents from the existing tanks and vessels onsite; demolition and removal of tanks, vessels, mechanical and electrical equipment, piping, facility structures, and utilities; and recycling/removal of scrap metals. The attached site plan shows the derrick in proximity to the other tank farm and related equipment which are a part of County CUP 186. Additionally, all the wells will be plugged and abandoned including one well equipped with an existing standard derrick. Because this well requires abandonment, this old drilling derrick will need to be removed and a safe, modern rig brought in to complete the well work. Thomas & Beers, LLC was tasked to make a high-level assessment of the old derrick to determine if the mast should be taken down and recycled or if it is a candidate for historical or cultural preservation purposes.

The derrick is old and there are no known drawings or engineering documents. Based on the nameplate, this is an Ideco derrick and was likely fabricated in Bakersfield. Ideco stands for International Derrick Equipment Company. A photo of the nameplate is included below.

Additionally, there is no safe access within the derrick, thus we completed a limited field audit as possible for the low zones and a drone survey for the higher zones. The initial drone survey was completed on January 17, 2022, by our drone technician. For this study phase, the drone survey included photography/video with limited accuracy GPS elevations and approximate dimensions. The drone survey provided a reasonable audit method to view the physical condition of the mast and to gather rough dimensions for very high-level rough calculations if needed. The drone survey included multiple photos of key structural joints and overall derrick with the elevation noted for each photograph.

Representative photographs are included below. Additionally, we have close to 200 drone shot photos and videos stored on our master file system if you are interested in more detail and documentation (Approximately 12GB). This data can be made available to you per your request.

In addition to the baseline drone flight, we completed a second series of flights generating an additional 500 photos. The goal of this flight is to generate a 3D photo rendering type photo document. The data processing for this study is in progress with the outcome to be determined.

Survey Summary

Based on the site visit, drone photographs, drone video and limited research, we have the following comments and recap for the CalNRG derrick:

- 1) The derrick was built by Ideco and most likely fabricated in Bakersfield. Ideco is now owned by NOV. I was able to speak with the NOV representative in Bakersfield. He noted that anyone who would have information about the derrick is no longer around. If we could find a serial number, it is possible that some history could be resurrected. We do not have a nameplate or serial number currently.
- 2) The age of the derrick is unknown. CalNRG has not been able to locate any documentation on the mast or well drill dates.
- 3) Although it is relatively old, it appears to be a standard derrick and not a unique or custom derrick.
- 4) Based on the bolt style (square head) and general condition, the derrick may be from the 1940's or 1950's. This is just an estimate. Further research would be required to get an exact date.
- 5) Based on the GPS drone data, the top of the A-Frame on the crown is 152 feet (+-) to the ground.
- 6) The derrick is near both the Oxnard and Camarillo airports. No warning lights are installed on the mast.
- 7) The condition of the steel is in fair condition. There is a uniform corrosion layer on all the steel and no apparent major corrosion damage. The bolts are in a similar condition with surface corrosion. The condition of the bolts in the shear plane is unknown. It is probable that the mast is coated with a lead paint product. The derrick was not tested for lead paint.
- 8) The ladders, mid height landings, and racking level do not meet OSHA standards. Additionally, they appear questionable for structural safety.
- 9) There are numerous loose scaffold planks throughout the derrick which create a falling object safety hazard. You may want to rope off the base of the derrick for the near term.
- 10) There are missing critical (for wind & seismic) structural braces at the base of the back of the mast.
- 11) The derrick is fabricated from very light bracing members. Although a structural assessment has not been completed, it is likely that the derrick would fall short of meeting any current seismic or wind standards. The structure for the most part is an X brace system with Warren trusses and knee braces at the base. An item of note is the long slender horizontal element (single angle) which would be very difficult to calculate for compression. The second item is the square head bolts, which are corroded to some degree and are a standard machine bolt with lower bolt capacities. This is a subjective comment only. No calcs were completed.

Summary

Below are key considerations for your decision making.

- As a part of a larger demolition project that includes the proposed demolition of all of the tank farm and equipment, the derrick needs to be taken down to plug and abandon the well below it. All other wells in the nearby agricultural fields that used the tank farm and equipment are also proposed for abandonment.
- This a standard derrick and not a unique or special derrick.
- The derrick is old and corroding. Condition of the bolts & grade is not certain.
- It is probable that the paint system contains lead paint.
- The ladders & platforms are not safe and do not meet OSHA requirements.
- There is missing bracing at the base and possible more within the derrick.
- It is unlikely that the derrick will meet current structural requirements.
- Once the derrick is taken down it likely will be required to meet current building codes if reassembled.
- The derrick is in Camarillo Airport Class D airspace. (See attached airspace maps.)
- The derrick is adjacent the Oxnard Airport Class D airspace.
- The derrick does not have warning lights and there is no safe access the crown.

Because of these issues, we recommend that you take the derrick down when the timing is right and do not reinstall the derrick as historical or cultural landmark. Reinstalling the derrick could pose structural risk, airport height issues, ongoing maintenance, and liability. An alternate solution would be to document the mast with quality photography and save key components such as the crown, sheaves, nameplates and perhaps the top derrick section. This approach would reduce risk and maintenance issues while still respecting the history.

Please call if you have questions or comments.

Best Regards,



Rick Beers, PE

1:24 ↗

Search

Oxnard Airport Airspace

Camarillo Airport Airspace

Saticoy

400

300

400

118

200

200

CaINRG Facility

100

100

101

0

Cama



Oxnard

100

200

0

100

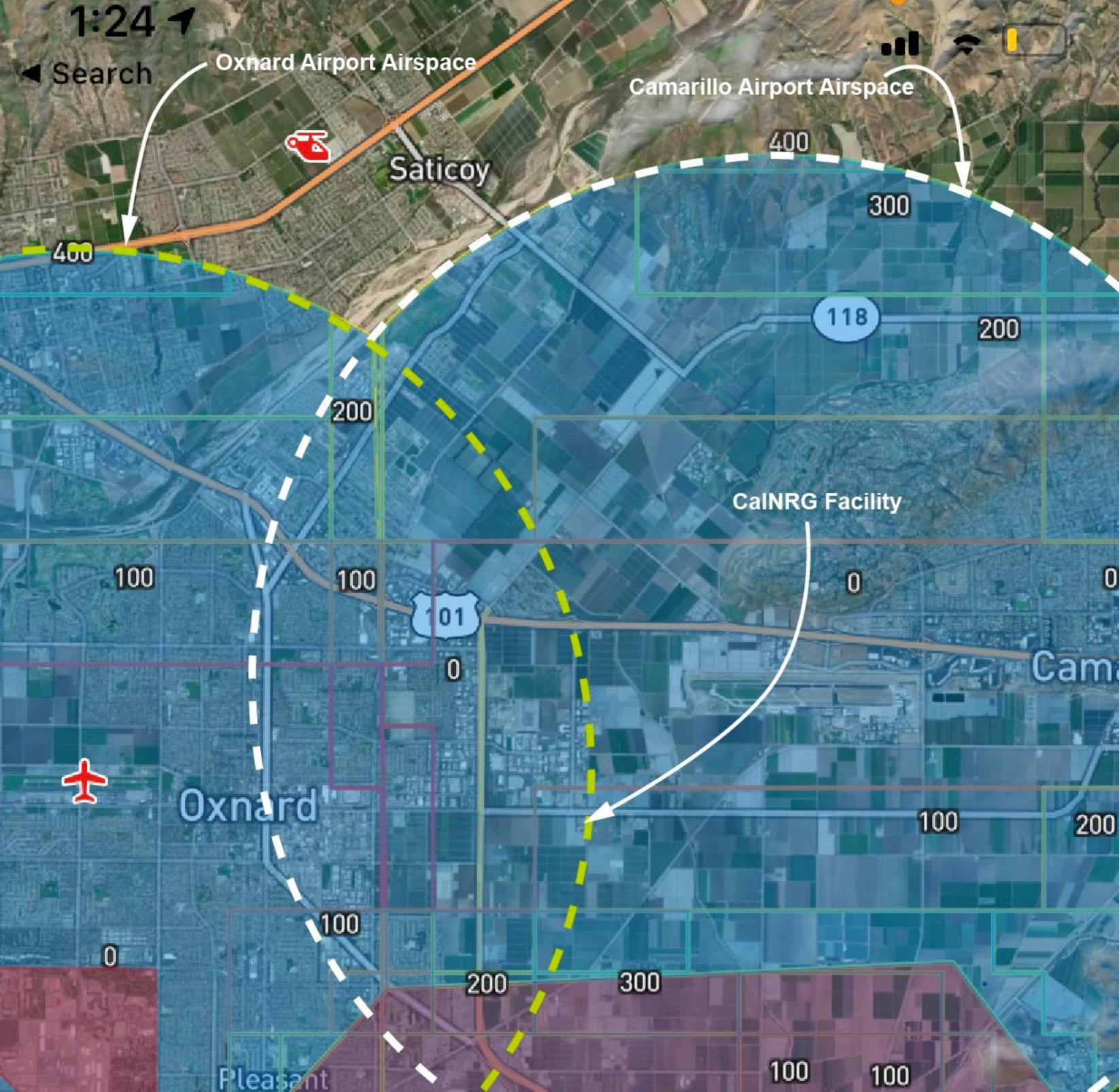
200

300

Pleasant

100

100



Tenby Lease
Ideco Standard Derrick



Tenby Lease
Ideco Standard Derrick





Derrick Crown



Derrick Crown

Racking Level



Typical Joint and
Construction

Poor Condition Landing and
Ladder System





Typical Joint and
Construction

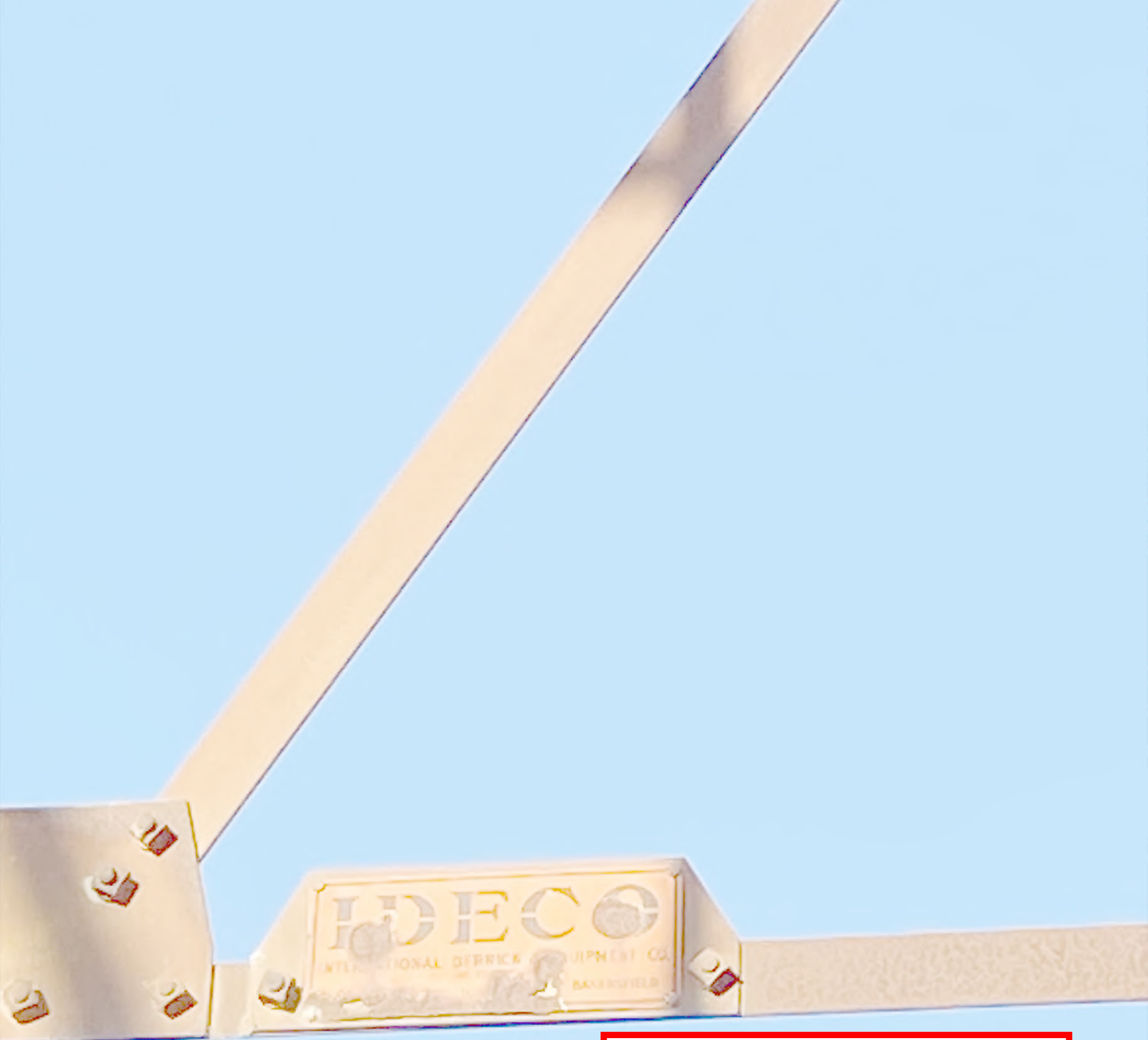
Poor Condition Landing and
Ladder System



Typical Joint and Construction
Racking Board Level
Poor Condition Landing and
Ladder System
Loose Scaffolding

Typical Joint and Construction
Poor Condition Landing and Ladder System





**IDECO NAME PLATE
BAKERSFIELD**



TYPICAL LEG BASE

TENBY DERRICK





TENBY DERRICK



TENBY DERRICK



TENBY MAST
TYPICAL JOINT



MISSING BRACE
TYP 2 PLACES



TENBY DERRICK -
TYPICAL LOWER SECTION

DERRICK CROWN
SIGNIFICANT CORROSION





RACKING LEVEL
LOOSE SCAFFOLD BOARDS



LOOSE SCAFFOLD BOARDS



TYPICAL STANDARD DERRICK.
(NOT TENBY LEASE)