

Cook Inlet Energy

7 November 2016

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Alaska District, U.S. Army Corps of Engineers
Regulatory Division
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Soldotna, Alaska 99669-7915

USACE, Alaska District, Regulatory

Subject: POA-2016-171, Trading Bay, Request for Additional Information and Revision of Sabre Project Location

Ms. Katherine A. McCafferty,

This letter is in response to your email of 19 October 2016 requesting additional information regarding the proposed Sabre Project. Since the submittal of our application on 4 October 2016, a new location approximately 2,000 feet to the northeast was selected for the project. The components of the application that require modification to reflect the new location are described below. The responses to the additional project information you requested are numbered equivalently to your email.

Application Revisions for New Location

Block 15: The new coordinates of the Jack-up Rig, Subsea Tree, and Protective Cap are: 60°49'14.75"N and 151°41'24.62"W (NAD 83 coordinates).

Block 16: The new location lies within Segment 1 of Alaska Division of Lands (ADL) number 18758, which is located north of the West McArthur River Unit (WMRU). This lease segment is owned by the State of Alaska. CIE is a 70% working interest owner and Hilcorp is a 30% working interest owner in the lease segment. The new location is within Section 36, Township 9N, Range 14W.

Block 18: Under the heading "Natural Gas Subsea Tree Design" the water depth is given as 30-feet below mean lower low water (MLLW). Based on the bathymetry at the new location the depth is 45 feet below MLLW.

Block 25: Because the new location is no longer within the WMRU, the owners of properties adjoining the WMRU listed in Table 1 of the application are no longer adjacent to the project area. Table 2, listing the onshore properties adjacent to the WMRU, is also no longer applicable. Table 1 is revised to reflect the new location as follows:

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Table 1
Lessee Properties Adjoining Segment 1 of ADL 18758

ADL Serial No.	Owner	Lessee	Lessee Mailing Address
18758 Segments 2, 3, A, and B	State of Alaska	Hilcorp Alaska, LLC	3800 Centerpoint Dr., Suite 1400 Anchorage, AK 99503
17602 Segment 1	State of Alaska	Cook Inlet Energy, LLC	601 W 5 th Ave., Suite 310 Anchorage, AK 99501
17602 Segments 2, 3, A, and B	State of Alaska	Hilcorp Alaska, LLC	3800 Centerpoint Dr., Suite 1400 Anchorage, AK 99503
21068	State of Alaska	Hilcorp Alaska, LLC	3800 Centerpoint Dr., Suite 1400 Anchorage, AK 99503
18777	State of Alaska	Hilcorp Alaska, LLC	3800 Centerpoint Dr., Suite 1400 Anchorage, AK 99503
17594	State of Alaska	Hilcorp Alaska, LLC	3800 Centerpoint Dr., Suite 1400 Anchorage, AK 99503

Other adjacent lease areas (ADL 391600, 391601, and 391602) are listed on Alaska State documents as leased by Apache Alaska Corporation, but these leases have been terminated.

Figures: The new well location was revised in the information box on each of the six figures provided with the original application. Additional changes made to the figures are described below based on the request for additional information.

Responses to Request for Additional Information

1.0 Figures and Exhibits

1.1 The figure shading in Sheet 1 of 6 was amended and unnecessary features were removed to allow for improved scanning and copying. The Sabre well location was moved approximately 2,000 feet to the northwest to the new position: 60° 49' 14.75" N and 151° 41' 24.62" W. The location was also updated in the information box on each figure.

1.1 a) On Sheet 1 of 6 the coastline of the West Foreland was identified as the mean high water mark based on NOAA data. No additional information on a separate "high tide line" was located. The name of the waterbody, Cook Inlet, was added to the figure image. An approximate tidal direction (based on aerial images of lines of turbulence off of nearby platforms) was added to the figure. The oil and gas pipelines were altered so they can be differentiated more easily in a black and white image.

1.1 b) The protective structure (cap) that covers the subsea tree, wellhead, and guide base is shown in Sheet 6 of 6. The thickness of the material connecting the guide posts to the subsea tree is not known specifically, but most components are made from 3/8-inch plate steel. The protective plates (shown on Sheet 6 of 6) are also 3/8-inch steel. The well casing at the surface is a 30-inch diameter structural drive pipe and is presented on sheet 4 of 6. No structures (other than the drive pipe) extend below the

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substrate. The feet of the protective structure rest on the seafloor and may be slightly covered by sediment.

Sheet 4 of 6 has been revised with a new figure showing the relative dimensions of the subsea tree and how it attaches to the drive pipe and guide base. The guide base does not rest on the seafloor as depicted in the previous figure Sheet 6 of 6.

1.1 c) Sheet 5 of 6 was revised to show the feet of the protective cap as the widest dimension of the structure on the seafloor. The width of the tree (about 8-feet) is indicated on the figure, but is not displayed as the final orientation within the cap is unknown at this time. The diameter of the guideposts, 6 inches, was added to the figure.

1.1 d) All of the elevation view, cross sectional drawings were updated with the depths of each feature below MLLW.

1.1 e) The feet of the protective structure may settle into or be covered by sediment to some degree; otherwise, the drive pipe is the only component expected to extend below the substrate surface to a significant degree.

2.0 Description and Narratives

2.1 The cap will be pinned or bolted to tree. There will be no welding and the sound generated from the installation would be minimal.

2.2 After consultation with United Cook Inlet Drift Association fisherman, it was determined that they would prefer a no marking buoy be attached to the structure. The final as-built survey will be provided to the National Oceanic and Atmospheric Administration's (NOAA) Office of Coast Survey to update nautical charts in the area.

2.3 Cathodic protection in the form of galvanic anodes will be attached to the protective structure to minimize corrosion.

2.4 The protective structure will have 3/8-inch plates of steel for protection. The structure is also made of tubular steel and steel beams. Openings within the structure will also allow water to flow through to minimize horizontal loads from the current.

2.5 The subsea tree and protective structure will remain on the seafloor until the gas reservoir is depleted below production targets. At that point, the components on the seafloor will be removed and the well will be plugged and abandoned according to the Alaska Oil and Gas Conservation Commission regulations. Abandonment includes cutting all casings at least 10 feet below the seabed. The total lifespan of the well is difficult to predict, but would typically be expected in the range of 10 to 20 years.

2.6 The four feet of the protective cap will rest on the seafloor. The initial figure (sheet 6 of 6) incorrectly depicted the guide base resting on the seafloor. The guide base will be attached to the drive pipe, which will stick up from the seafloor approximately 3 to 5 feet. Both the subsea tree and the protective cap will connect to the guide base. No pile driving, other than for installation of the drive pipe, is required for the guide base or protective structure.



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2.7 The protective cap will have panels and hatches to allow divers to access and service and control components of the subsea tree.

2.8 The installation of the subsea tree and protective cap is expected to take approximately three days and is included in the estimated 70 days needed for the entire project.

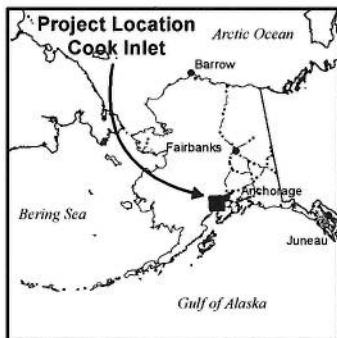
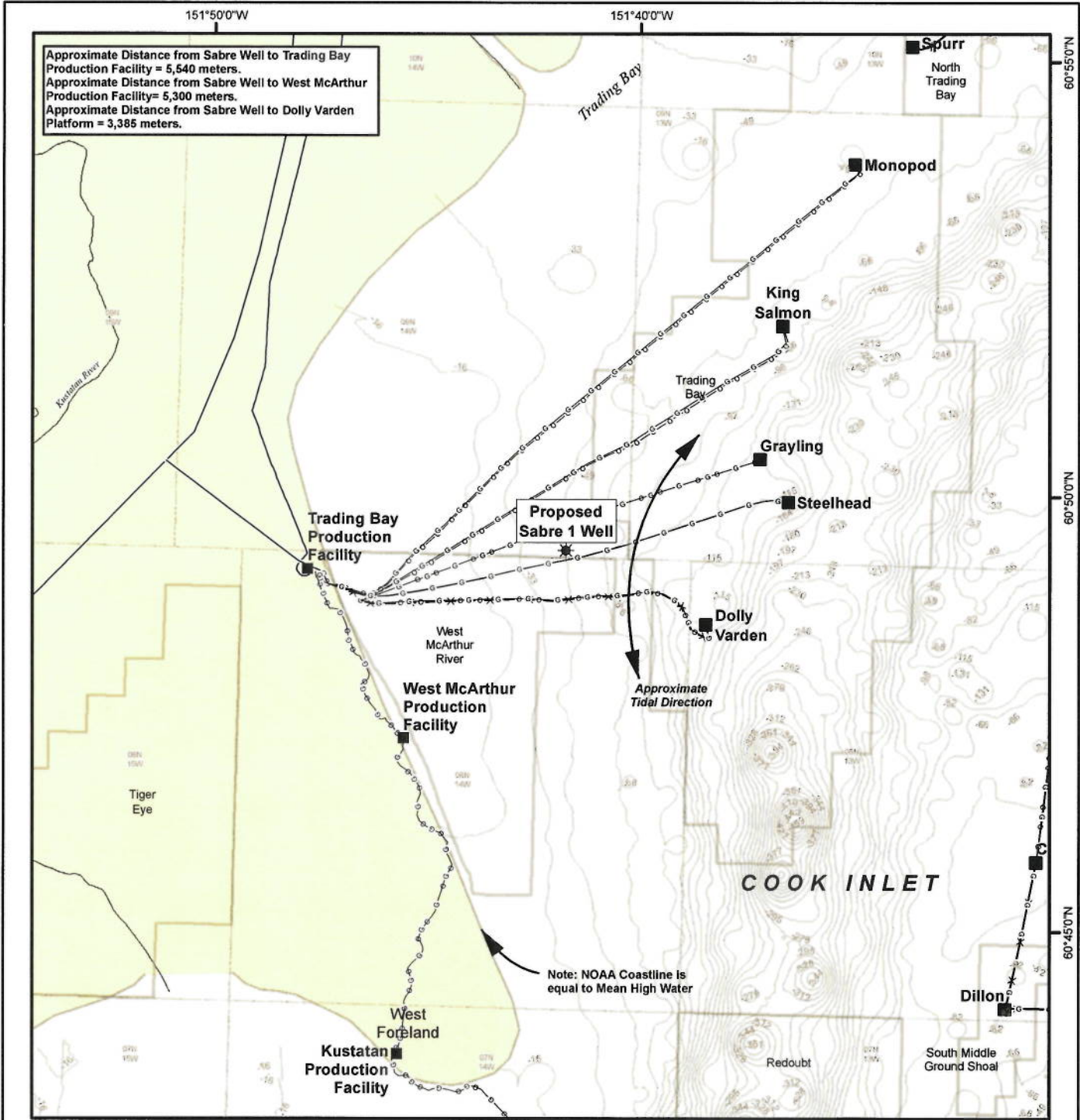
Thank you.

A handwritten signature in blue ink, appearing to read "Conrad Perry".

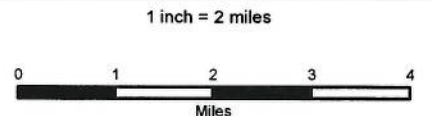
Conrad Perry
Senior Vice President of Drilling
Cook Inlet Energy, LLC.

cc: Kristina Neptun, Project Manager, Jacobs Engineering Group

Attachment 1 – Revised Figures Sheets 1 through 6.



- ★ Proposed Sabre 1 Well Location (Oct. 2016)
- Platform
- Onshore Facility
- Non-Common Gas Pipeline
- Non-Common Oil Pipeline
- Common Carrier Pipeline
- ✕ Inactive Pipeline
- ⊞ Unit Boundaries
- NOAA Contours (ft)
- River

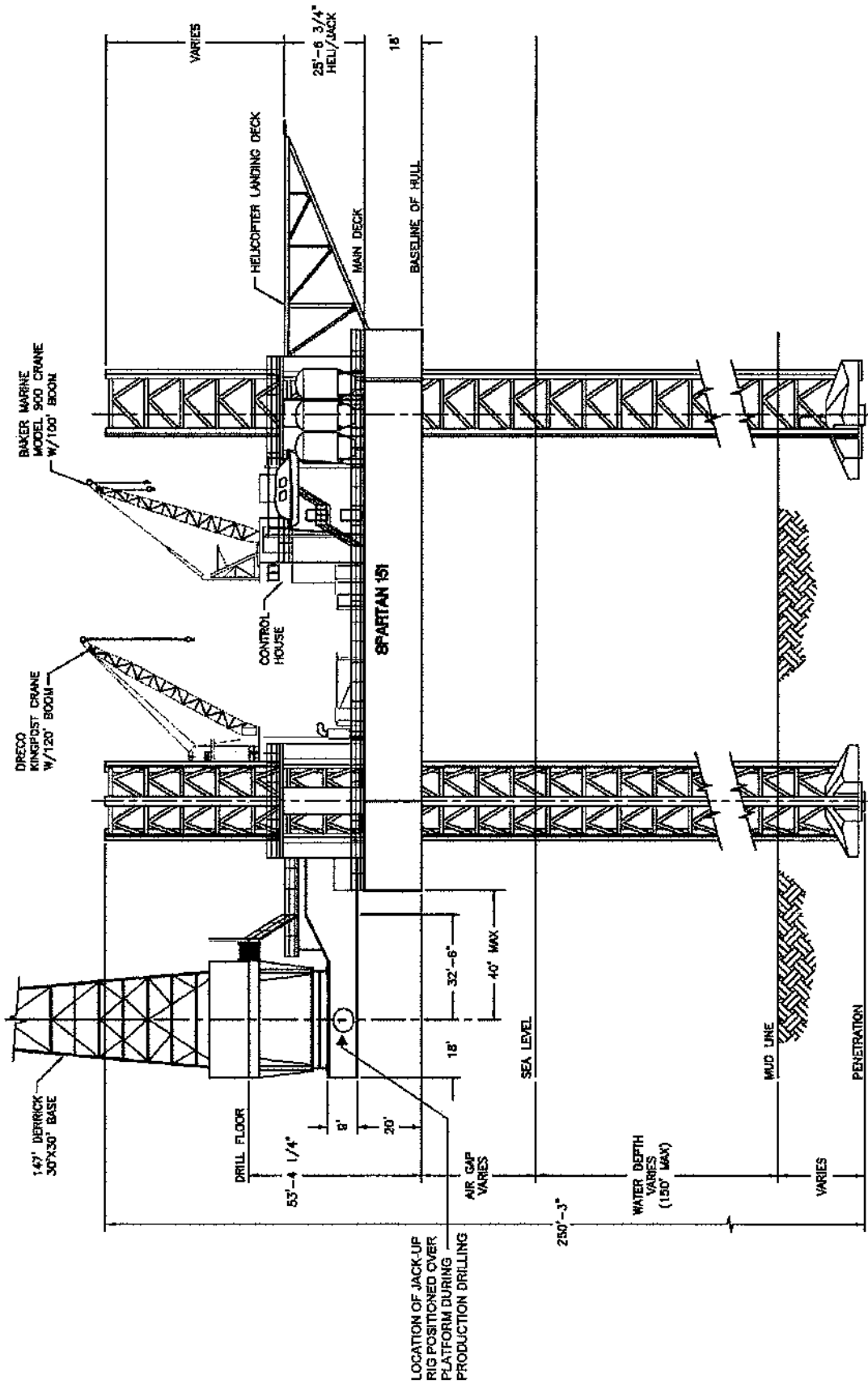


NAD 1983 2011 StatePlane Alaska 4 FIPS 5004 Feet

Cook Inlet Energy Sabre Well Location

Applicant: Cook Inlet Energy
 File No.:
 Waterway: Cook Inlet
 Proposed Activity: Proposed Sabre Well
 Sec.: 36 T.: 9N R.: 14W M.: Seward
 Lat.: 60°49'14.75"N Long.: 151°41'24.62"W
 Sheet 1 of 6 Date: 11/1/2016

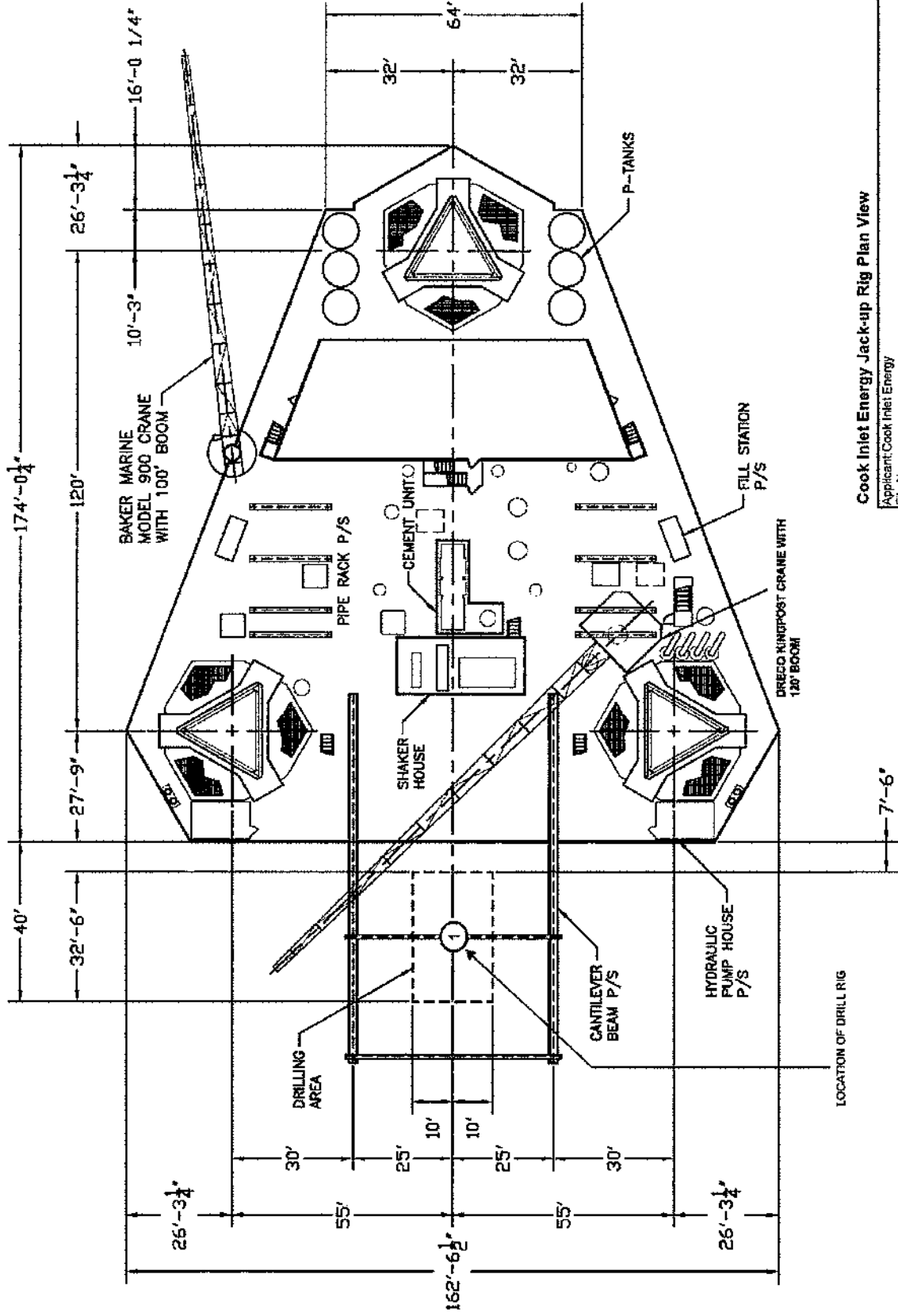




Cook Inlet Energy Jack-up Rig Elevation View

Applicant: Cook Inlet Energy
 File No.:
 Waterway: Cook Inlet
 Proposed Activity: Exploration Drilling & Well Head Installation
 Sec.: 36 T.: 9N R.: 14W M.: Seward
 Lat.: 60°49'14.75"N Long.: 151°41'24.62"W
 Sheet 2 of 6 Date: 11/1/2016



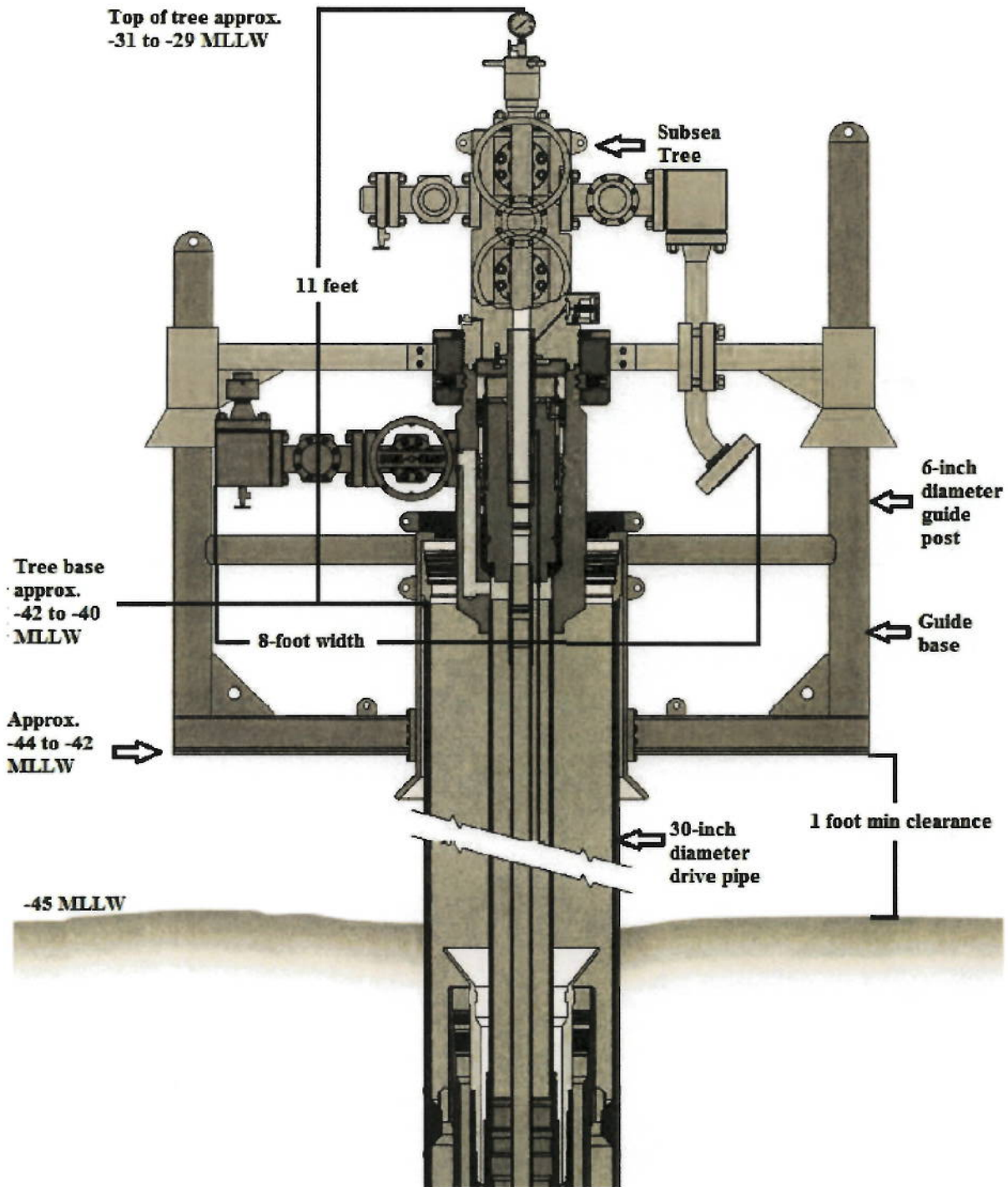


Cook Inlet Energy Jack-up Rig Plan View

Applicant: Cook Inlet Energy
 File No.:

Waterway: Cook Inlet
 Proposed Activity: Exploration Drilling & Well Head Installation
 Sec.: 36 T.: 9N R.: 14W M.: Seward
 Lat.: 60°49'14.75"N Long.: 151°41'24.62"W
 Sheet 3 of 6 Date: 11/1/2016

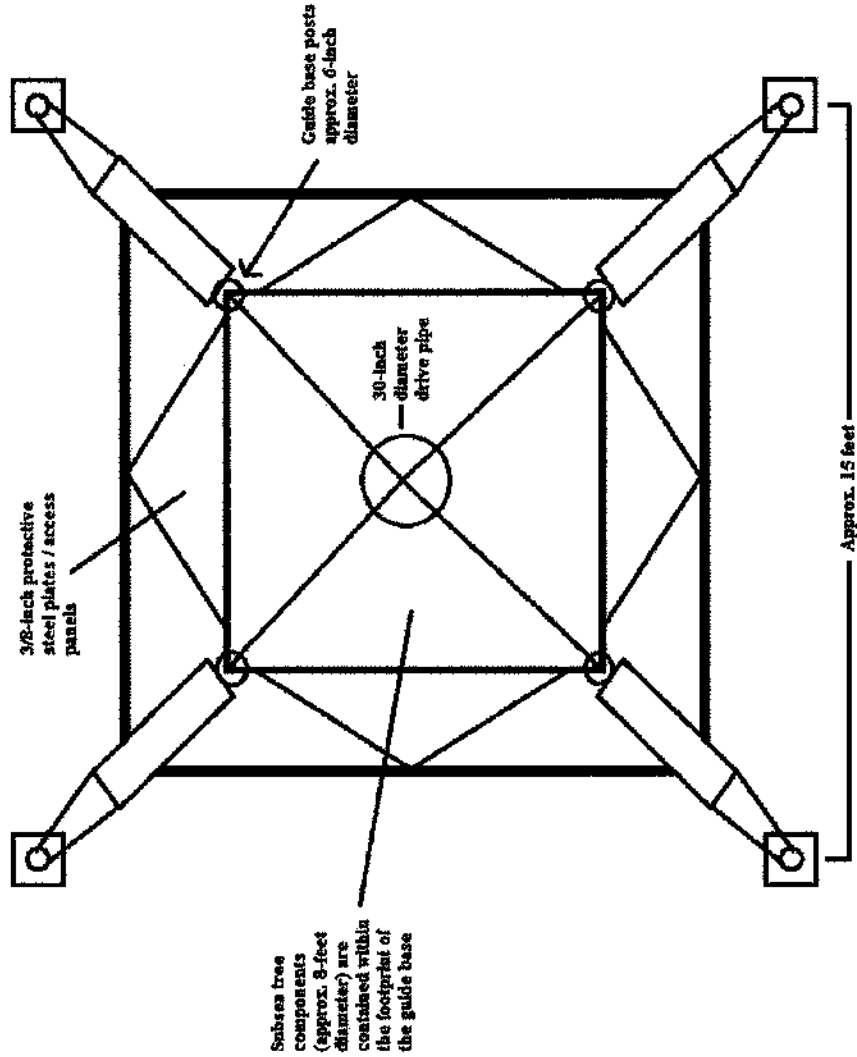




Cook Inlet Energy Sub-sea Tree Elevation View

Applicant: Cook Inlet Energy
 File No.:
 Waterway: Cook Inlet
 Proposed Activity: Exploration Drilling & Well Head Installation
 Sec.: 36 T.: 9N R.: 14W M.: Seward
 Lat.: 60°49'14.75"N Long.: 151°41'24.62"W
 Sheet 4 of 6 Date: 11/1/2016

JACOBS

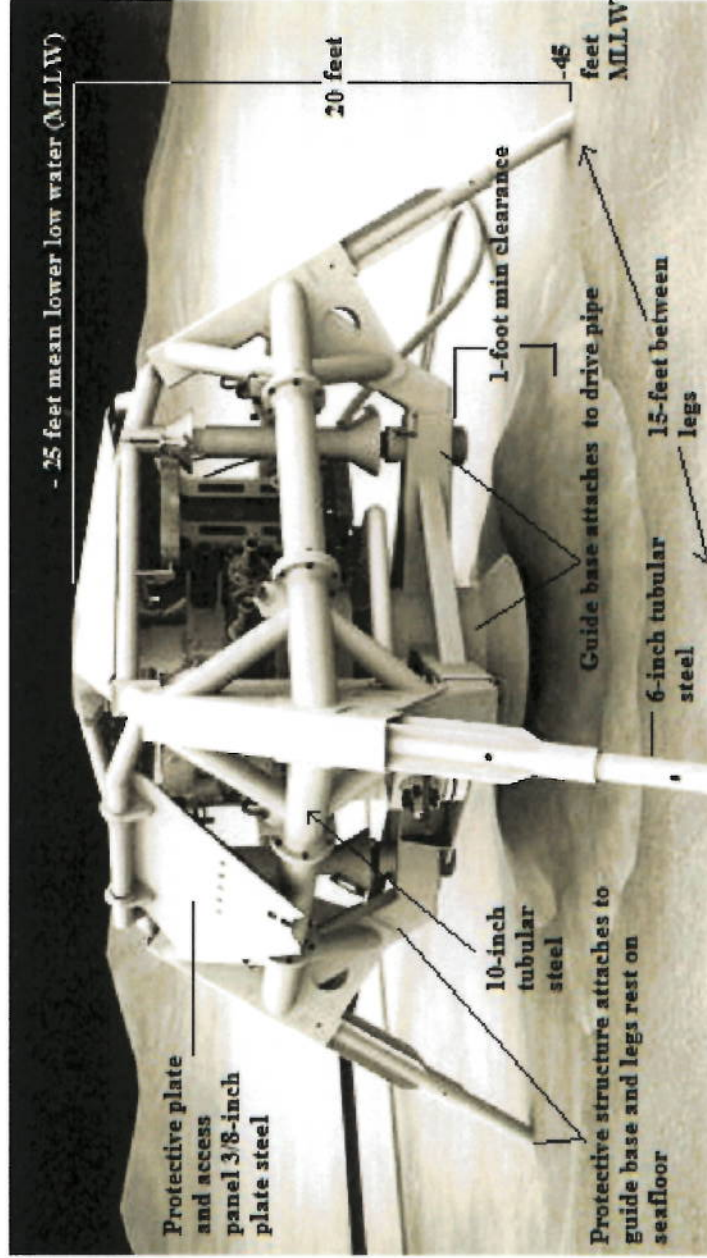


Cook Inlet Energy Protective Cap Plan View

Applicant: Cook Inlet Energy
 File No.:

Waterway: Cook Inlet
 Proposed Activity: Exploration Drilling & Well Head Installation
 Sec.: 38 T.: 9N R.: 14W M.: Seward
 Lat.: 60° 49' 14.75" N Long.: 151° 41' 24.62" W
 Sheet 5 of 6 Date: 11/1/2016





Cook Inlet Energy Protective Cap Elevation View

Applicant: Cook Inlet Energy

File No.:

Waterway: Cook Inlet

Proposed Activity: Exploration Drilling & Well Head Installation

Sec.: 36 T.: 9N R.: 14W M.: Seward

Lat.: 60°49'14.75"N Long.: 151°41'24.62"W

Sheet 6 of 6 Date: 11/1/2016

