

Memorandum

To : Michael Martin, Associate Water Quality Biologist
Monterey

Date: January 7, 1975

From : Department of Fish and Game - Monterey - Diablo Canyon Ecological Studies

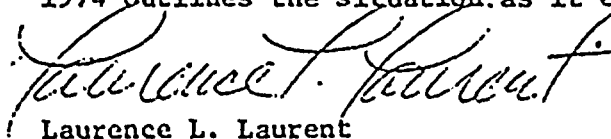
Subject: Intake Cove Sediment Survey

This is to confirm that on December 13, 1974, two members from the ecological studies project dove in Intake Cove with Wardens Martin, Thomas and Mahon to perform an inspection of that area. Transects performed over portions of the Cove indicate that it is little changed from a survey performed May 23, 1974 by project members.

Silt depths recorded on the December dive ranged from a light 'dust' covering over rocky pinnacles to depths of over 20 inches in interstices. Recorded depths during the May dive ranged from one to 36 inches of silt. Visibility during the December dive was extremely poor, ranging from 1 inch to 6 inches in most of the eastern portion of the Cove to 4 feet to 10 feet in the western end. Most life forms have been affected by suffocation by silt and by limitation of light penetration and many benthic forms have been removed by dredging operations. The only common macroinvertebrate seen during the dive in the eastern portion of the Cove was the bat star, Patiria miniata, and many tests of dead sea urchins and shells of dead abalone were observed. Benthic frondose algae were present only in sparse amounts and only in shallow depths in the eastern section. As we proceeded toward the western half, where dredging was being conducted, visibility gradually improved and more invertebrate, algal and fish life forms were seen, especially along the tribars of the western break-water.

We feel that dredging has not been proven adequate for correcting the unfortunate situation in Intake Cove. Even if 90% of the silt could be removed, we feel the remaining 10% would cause the same problems which are presently affecting the flora and fauna. With time, the silt may be compacted to form a mud-bottom substrate. In fact, we have seen indications of this occurring already in a limited area during our inspection dives. Although conjectural, it is possible that, due to its appendix shape and nature, the Intake Cove may have evolved to a sand or mud-bottom community eventually.

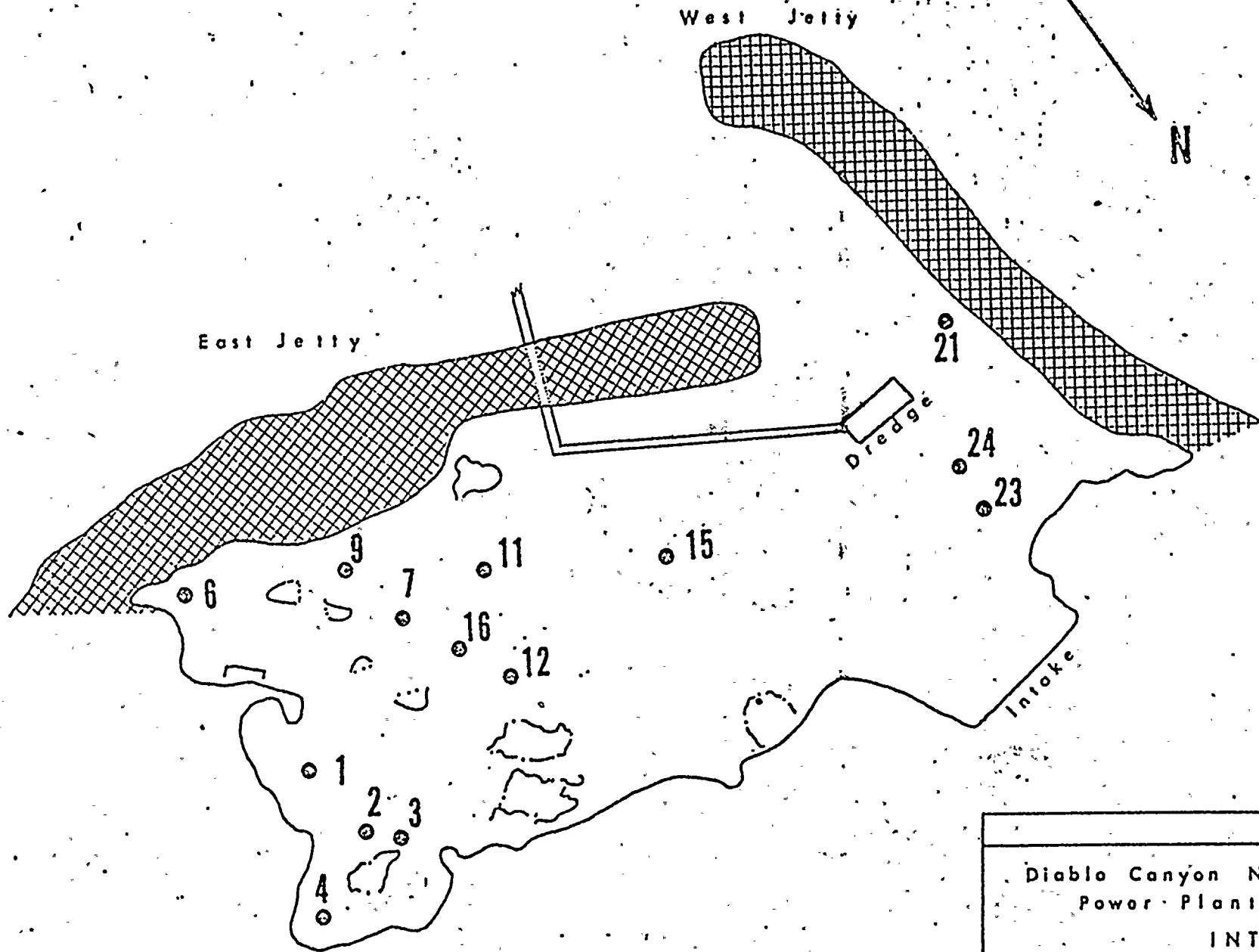
It was for these reasons that our project agreed with P.G. & E. biologists to closely watch for development of epifaunal communities and conduct sedimentation rate studies in the eastern portion of Intake Cove, while allowing dredging activities to be concentrated and restricted to an area immediately in front of the intake structure and behind the primary intake screens. Our Annual Report 1974 outlines the situation as it existed at that time.



Laurence L. Laurent
Associate Marine Biologist

LLL:mh

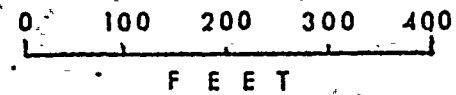
MAP 1 - Data Sampling Points for Dive Survey.



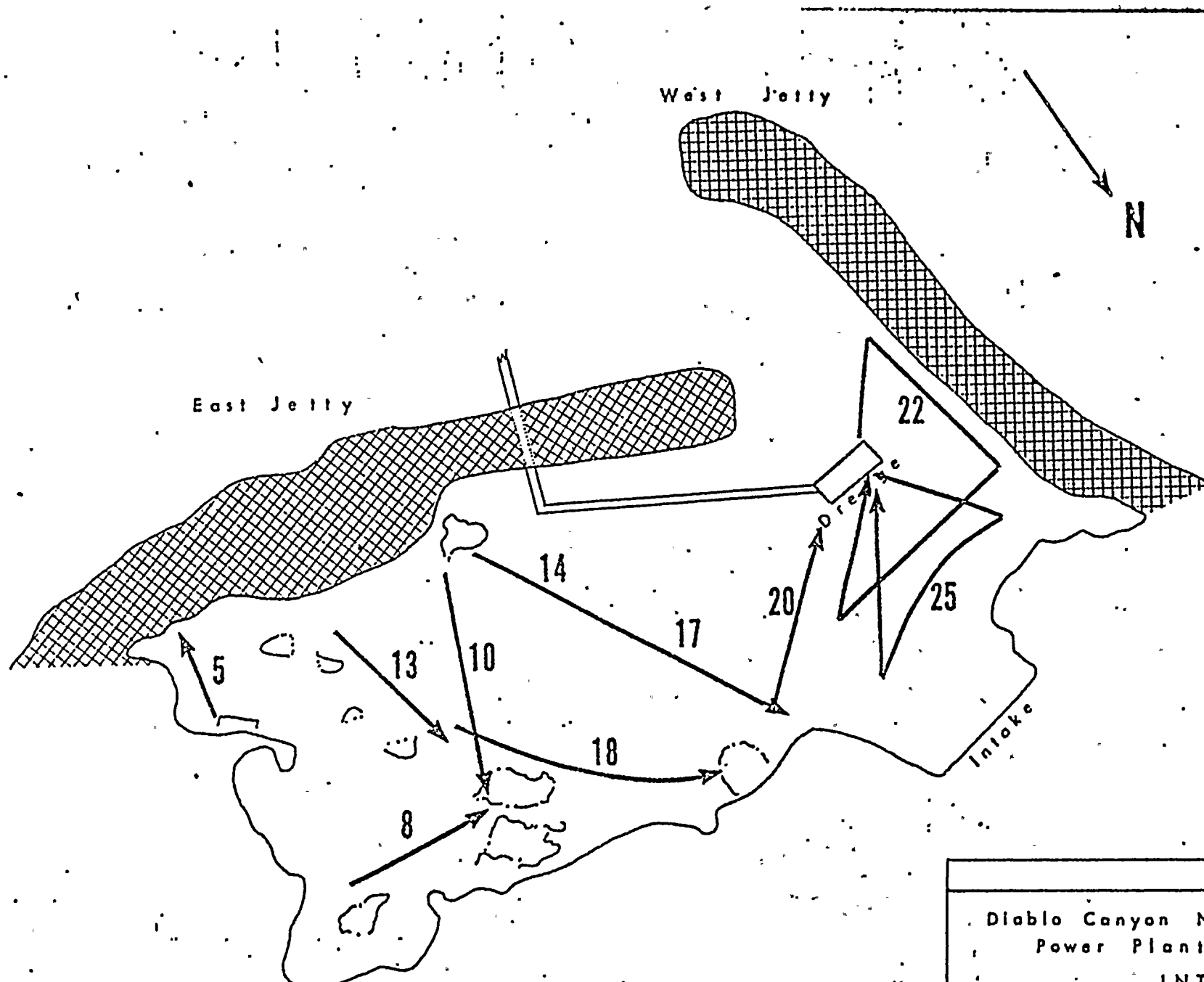
Diablo Canyon Nuclear
Power Plant

INTAKE

DATA POINT



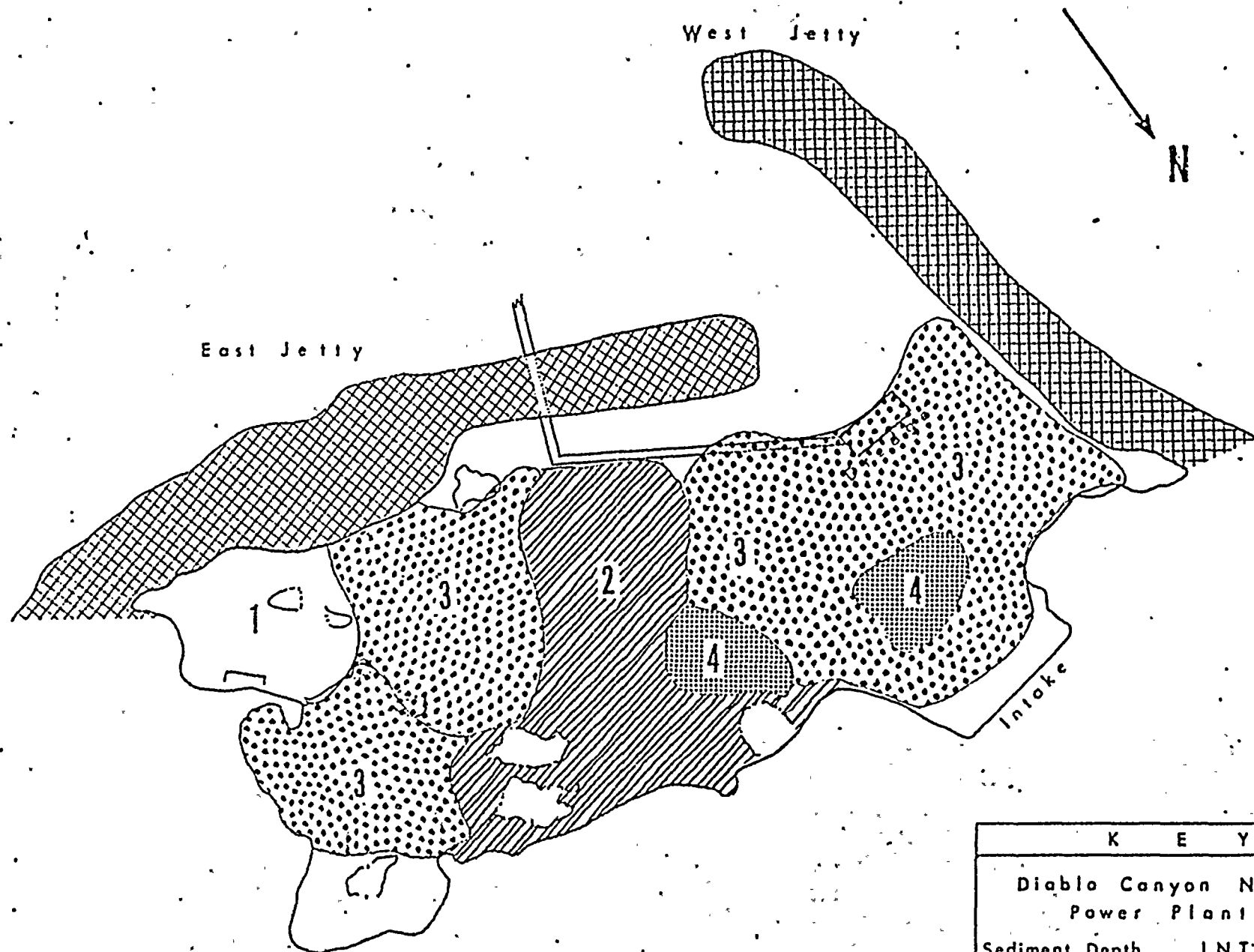
MAP 2 - Transect Line Direction, Position, and Distances



Diablo Canyon Nuclear ²
 Power Plant
 INTAKE
 TRANSECT

0 100 200 300 400
 FEET

MAP 3 - Composite Diagram of Estimated Silt Depths in Diablo Cove.



| K E Y | |
|-----------------------------------|------------|
| Diablo Canyon Nuclear Power Plant | |
| Sediment Depth INTAKE | |
| 1. < 8" | 3. 12"-24" |
| 2. 8" - 12" | 4. > 24" |
| 0 100 200 300 400 | |
| F E E T | |