

CULTURAL RESOURCE INVESTIGATION  
PROPOSED TELEPHONE CABLE INTO DIABLO CANYON PLANT SITE

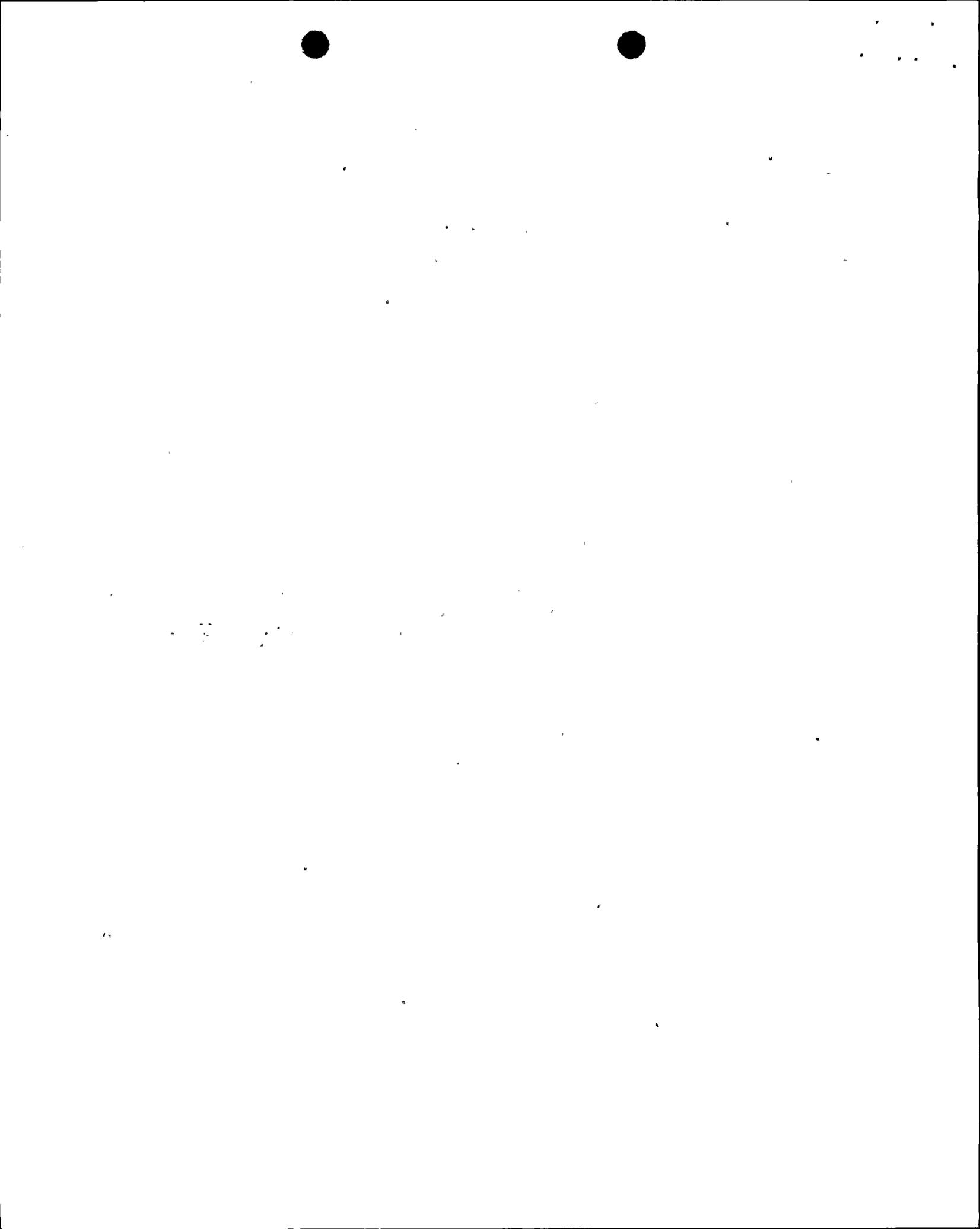
Prepared for  
Pacific Gas and Electric Company

Roberta S. Greenwood

December 1980

GREENWOOD AND ASSOCIATES  
725 JACON WAY  
PACIFIC PALISADES, CALIFORNIA 90272  
(213) 454-3091 OR 879-5791

8102180585



## CULTURAL RESOURCE INVESTIGATION

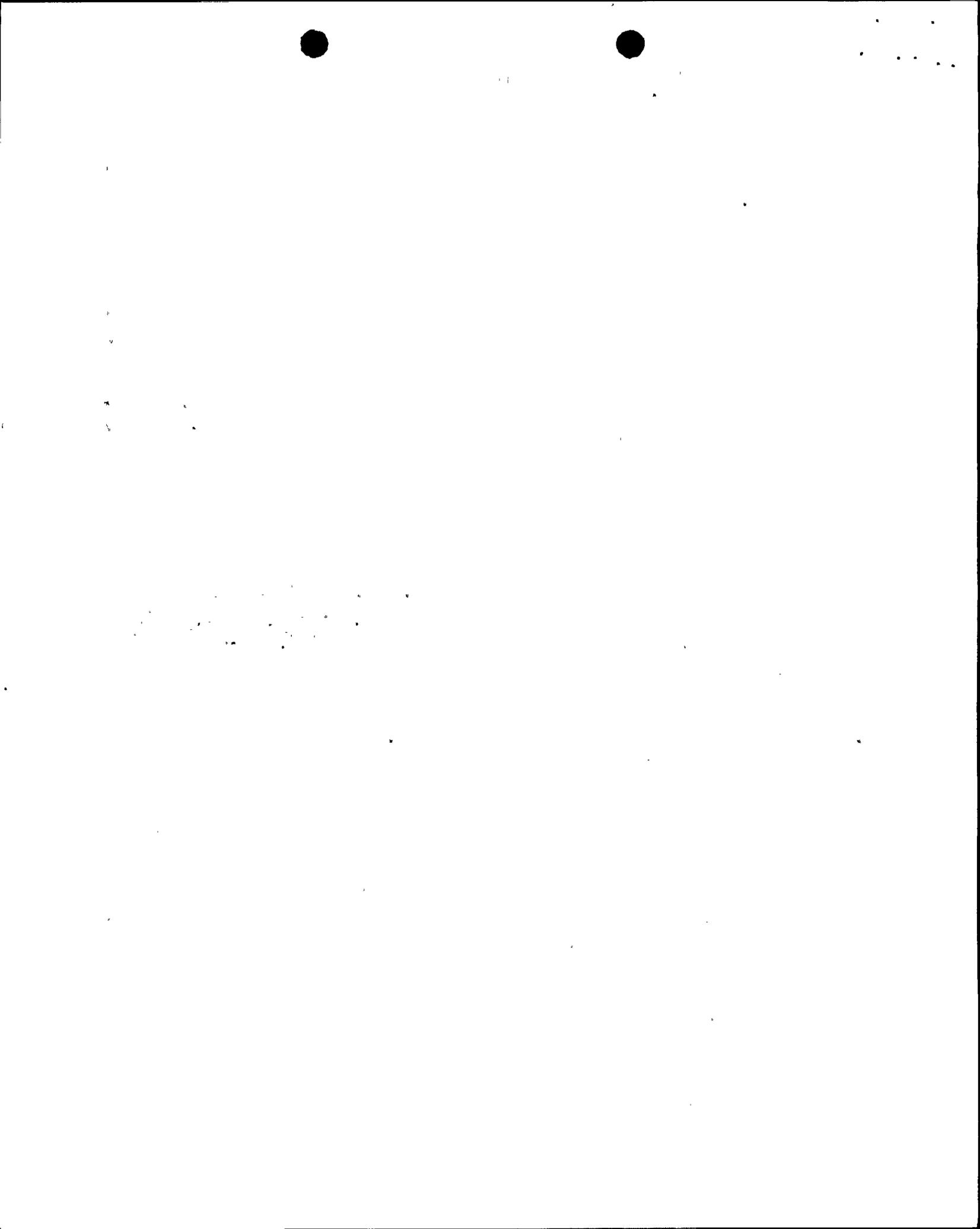
### Re Proposed Telephone Cable into Diablo Canyon Plant Site

At the request of Pacific Gas and Electric Company, a study has been conducted to assist in the planning of a route for the proposed telephone cable between the western property boundary and the nuclear power generating plant at Diablo Canyon, San Luis Obispo County. The investigation included both intensive surface survey and limited subsurface testing. The services were accomplished on December 9 and 10, 1980, by Roberta S. Greenwood with the assistance and cooperation of PG&E personnel.

#### Methodology

A tentative alignment of the proposed route of the telephone cable was marked on the Site Photo Plan (11-29-79) of Diablo Canyon, which also showed the upland boundaries of archaeological site Ca-SLO-2 as it had been defined in 1978. The entire route was then closely examined by a foot survey; all cuts, spoil from animal burrows, or other profiles and exposures were inspected, and where vegetation obscured the surface, trowel scrapes were conducted at regular intervals to permit visualization of the soil. As reported below, the western and easternmost portions of the proposed route could be cleared without additional investigation, but subsurface testing was required to determine the presence and depth of the cultural remains suspected in the central area. This area, called the "boneyard," has been used for storage of materials and a contractors' work area, has been subject to fill, and is within the boundaries of the archaeological site as previously mapped from surface indications alone.

A series of tests was conducted running west to east along the proposed route, using a two-man portable power auger (Stihl). The objective was to examine the soil removed and the sidewalls of



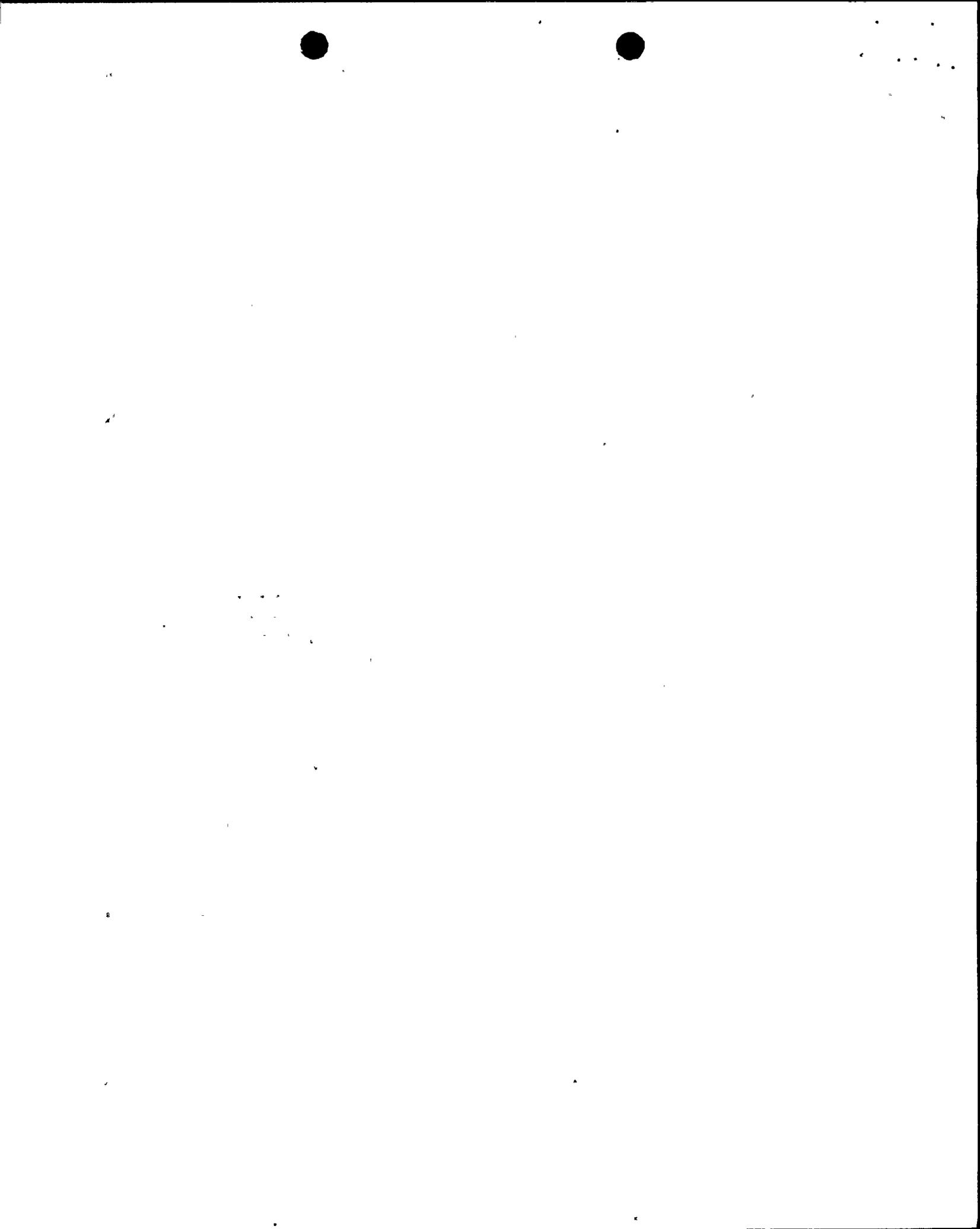
the bores to a depth of at least 18 inches, the projected depth of the underground cable installation. All earth was spread and examined, and notes made concerning color, texture and presence of shell or other cultural materials. As necessary, the sidewalls were cleaned with a trowel to inspect profiles and color change. The areas tested were marked with flagged, numbered stakes, and all locations were surveyed and mapped.

Some of the auger tests could not penetrate to the desired depth because of either rock or densely compacted soils. On December 10, the investigation was completed with the aid of a compressor and power spade. The test holes are shown on the accompanying map, and field notes are summarized in the Appendix.

#### Results of Reconnaissance

At the northerly end of the proposed route, the combination of surface inspection and subsurface testing demonstrated that the upland boundary of archaeological site CA-SLO-2 as previously defined was accurate in predicting potential adverse impact. From the outer gate at the Field property to the inner gate near the corner of the settling pond, as confirmed by test 1, the north and west sides of the paved road appear to be clear of cultural resources.

From this inner gate, cultural remains which are part of CA-SLO-2 are visible on both sides of the paved road, either on the surface or covered with fill to variable depths. The sensitive area extends from test 2 to test 14. At test 2, the archaeological deposit begins at 15 inches below present surface; at test 3, 16 inches below surface; and from tests 4 through 14, the cultural remains are below the 18 inches required for the conduit. Various field tests were made to determine the best place to bring the proposed line across the paved road from north to south. The areas of 2, 2A-C, 19 and 20 contain surface or shallow archaeological deposits.



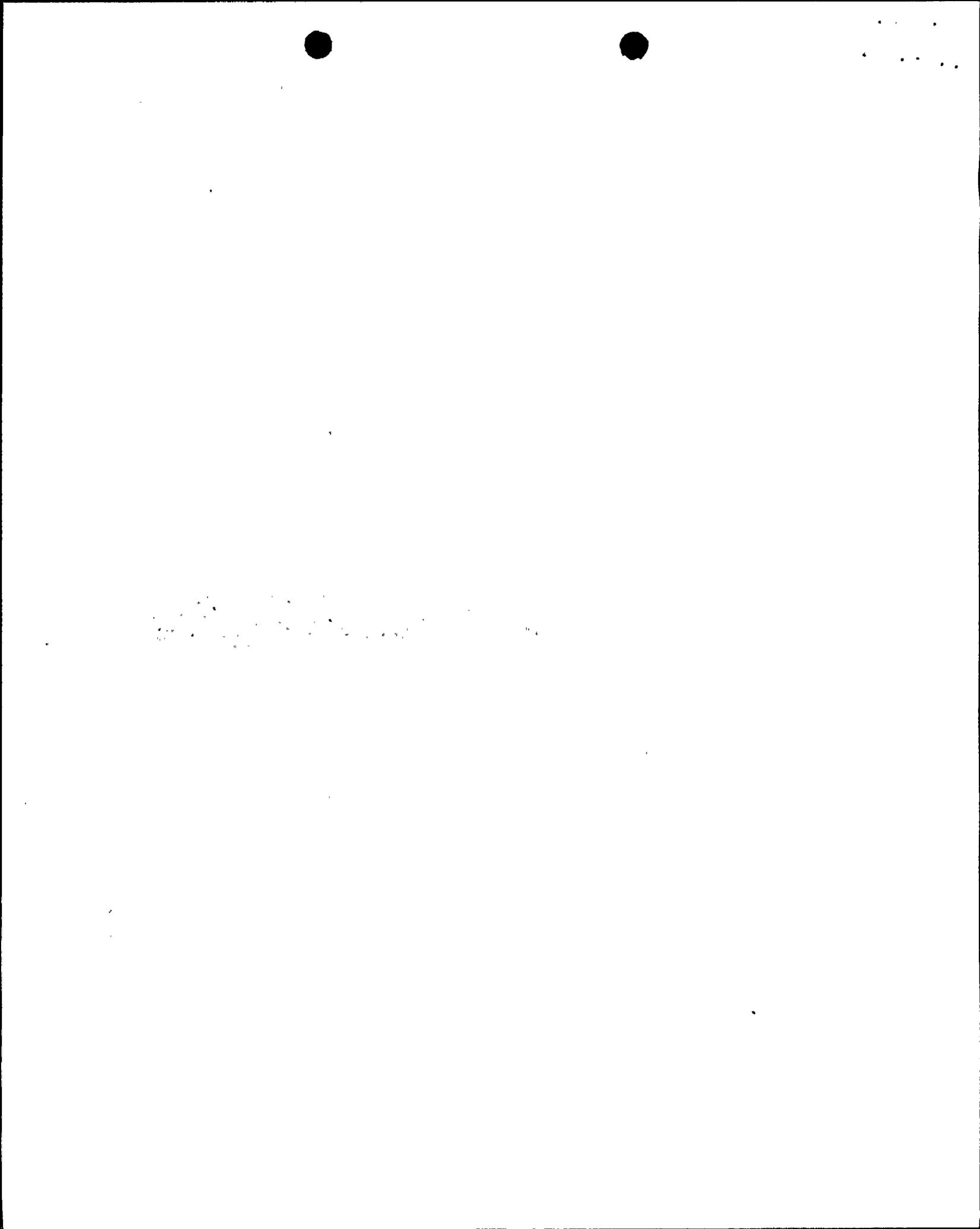
Blackened soil containing fragmented shell interpreted as prehistoric faunal remains of the Native American diet was accepted as presumptive evidence of the archaeological site. No lithic waste or artifacts were observed. The only artifact seen was a single spire lopped bead of Olivella biplicata noticed on the surface some 4.5 meters southwest of test 3, in an area which has been greatly altered and disturbed.

That portion of the proposed route from test 14 into the plant runs on the eastern side of the paved road through areas of deep fill, successive road modifications, stream channelization, erosion control and prevention measures which have altered the surface. Although within the defined boundaries of the archaeological site, the route of the cable installation will not cause any adverse impact upon cultural resources. From the south bank of Diablo Creek into the power plant, the line crosses archaeological site CA-SLO-61, but this portion of the site has already been destroyed by geologic trenching, grading, the access road, and construction of the reactor plant itself. The surviving remnant on this site, from the west side of the pavement to the ocean bluff, will not be affected by the proposed construction.

#### Recommendations

No recommendations are necessary for the northern and southern portions of the proposed route as mapped and discussed above. From the Field property boundary to test 1, and from test 4 to the plant, no cultural resources were found between the surface and 18 inches.

However, surface or shallow cultural resources are found on both sides of the paved road, and north and south of the unnamed drainage in the vicinity of the inner gate. Tests 2, 3, 19, 20, 2B and 2C all produced evidence of the archaeological deposit. There should be no intrusion or disturbance into the cultural remains. It is recommended that the line be brought south across the pavement in the general area of tests 1-15-16-17-18, and that sufficient



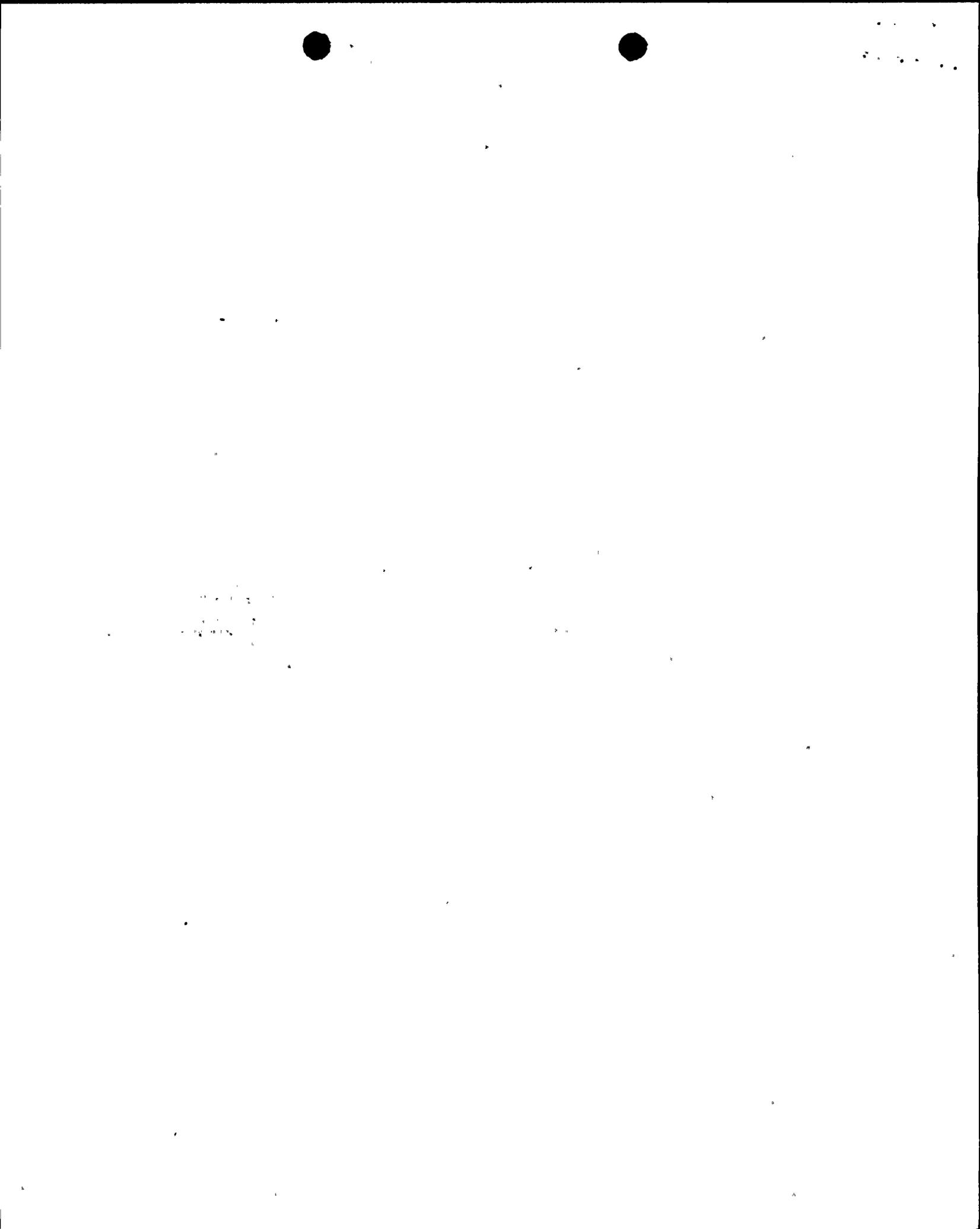
fill be imported and placed to contain the proposed conduit above the present surface of the sensitive locations. This lay-down can be feathered or tapered out gradually in a southerly direction as the line crosses the "boneyard" and work/storage areas.

Outside of this zone designated for fill, it is generally recommended that the installation take place as close to the present shoulder of the pavement as possible in order to minimize any possible intrusion into undisturbed deposits.

Finally, although these conclusions and recommendations are made with a high level of confidence, there always remains the potential for unanticipated and unpredictable cultural resources, particularly in the immediate vicinity to a major archaeological site such as CA-SLO-2. Therefore, both PG&E personnel and contractors should be instructed and informed to be alert during activities related to installing the proposed line; to halt work at once if suspected cultural remains should be encountered; and to obtain consultation promptly to evaluate any such resources and determine what measures might be required to avoid or mitigate adverse effects.

#### Impact of the Proposed Project

Adverse impact upon known or potential cultural resources by reason of the proposed telephone cable can be avoided by installing the line as closely to the shoulder of the pavement as possible in the areas found to be non-sensitive, and by the careful placement of sterile (non-archaeological) fill over that area where cultural materials are at or near the present surface. This fill may have a positive effect by helping to obliterate a dirt access road between the pavement and the cove, and thereby reducing traffic over the archaeological site.



## APPENDIX

### Observations of test bore holes:

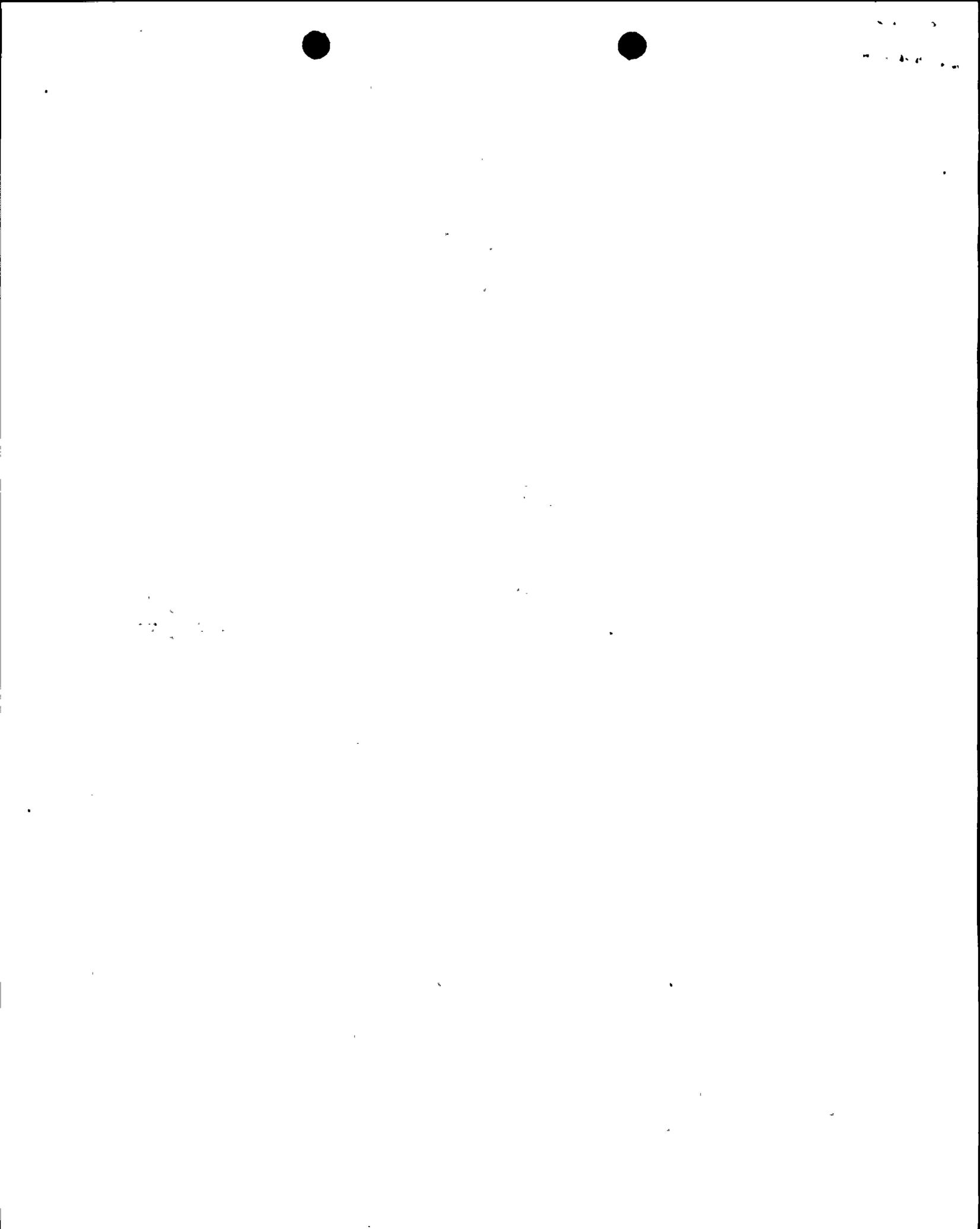
1. Power auger to 22 inches. Soil brown with bits of rock. All soil spread, negative for cultural remains.
2. Power auger. Test discontinued at 15 inches, when midden was encountered. Soil black with shell component including abalone (Haliotis sp.) and black turban (Tegula funebris). Interpreted as evidence of CA-SLO-2.
3. Four attempts were made with power auger, but rock encountered within 1.5 inches of surface. Additional efforts were made in a radius of 2.5 meters, which also were blocked by rock which may represent fill or road bedding. On the following day, the test in this area was resumed with the use of a compressor-driven chipping gun. The first 16 inches was revealed to be a mixture of light sand, rock and rubble; at this depth there was a very sharp break into the black midden as described above.
4. Power auger to 18 inches. Light tan sandy soil with cobbles; disturbance evidence by a handful of welding rods at 18 inches.
5. In 10 attempts, the power auger could only penetrate to 6 inches. On Dec. 10, the chipping gun was used to dig to 22 inches, encountering only tan sand and rocks.
6. Power auger could not penetrate rock layer.
7. Power auger used to 18 inches; tan sands with heavy rock component.
8. Power auger could not penetrate rocks. The chipping gun was used to cut to 24 inches; profile interpreted as disturbed. Although the soil was turning darker at 24 inches, there was much rock, possibly fill or bedding, and no evidence of shell or midden to this depth.
9. Auger could not penetrate rock.
10. Three unsuccessful attempts were made with the auger, and then the stake was moved 6 meters to the south. This bore struck a round steel plate 27 3/4 inches in diameter just below the surface. This was removed and the bore continued to 18 inches. A nail was observed at 11 inches, but no evidence of prehistoric cultural remains. The chipping gun continued to 22 inches, at which depth it was still in tan granular fill.
11. Test hole continued to 27 inches by auger; no cultural resources.



11 11 11

11 11 11

12. This location, on the remnant knoll, is soft clean sand which was easily tested to 22 inches with the auger. No cultural remains.
13. The original test location, lower on the knoll in line with the proposed route from test 12, encountered rock in four trials. The stake was then moved higher on the slope, which was negative to 20 inches. At and between stakes 12 and 13, any alignment between the stakes and the dirt access road will be acceptable within 18 inches from present surface.
14. It required three attempts with the auger to penetrate to 23 inches at the toe of the knoll where the paved and unpaved roads intersect. The profile here is a tight tan soil with pebbles, probably reflecting prior grading, fill, road work and traffic.
15. This and the other tests reported below were particularly designed and placed for the purpose of defining an alignment which would avoid intrusion into the deposit of CA-SLO-2 by avoiding a specific area entirely, or determining the depth of fill required to keep the proposed installation above the midden. This bore showed brown soil to 24 inches, with no evidence of archaeological sensitivity to this depth.
16. Test confirms brown soil, archaeologically sterile, to 22 inches. The fill should be feathered out to the south from this location.
17. Test conducted to 22 inches. The soil is brown, not characteristic of the midden. There are a few flecks of shell which are not interpreted as primary deposition, and this location is acceptable for construction within 22 inches of surface.
18. As above, the test showed brown soil to 22 inches with a few traces of shell which probably indicate mixing.
19. Test was halted at 16 inches. Shell regarded as midden was present from surface to this depth. There should be no intrusion below the present surface in this area.
20. Test conducted to 23 inches; light shell content in brown soil. There should be no intrusion below present grade.
- 2A. Tests 2A-D were conducted to define site boundaries and depth, for the purpose of designing a route and evaluating the need for fill. This location was tested to 24 inches. There was friable dark soil showing shell continuously to the base of the core. The heaviest concentration seemed to be between 7 and 12 inches. Deposit seemed heavier than at test 2.



- 2B. Test was pursued to 27 inches. Medium brown soil contained shell to base; abalone was present on the surface, and a chiton valve was observed on the bottom of the core. Areas 2A and 2B should be protected from disturbance; fill is necessary.
- 2C. Light soil, negative for cultural resources, from surface to 8 inches, with shell midden beginning at that depth. Upper 8 inches is sterile tan fill, and activity should be confined to this upper stratum. Test not pursued into midden.
- 2D. As originally staked and tested on Dec. 9, this location was on the west side of the paved road, south of the dirt access road which leads to the cove, and adjacent to the barrels presently on the shoulder. The auger encountered rock very close to the surface. Since there was no longer the interest or possibility of running the cable through this vicinity, the test was not pursued with the power spade, and the stake was removed.

The alignment of the proposed telephone cable route and the surveyed location of all boring points described above have been plotted on the PG&E map entitled "As Built Location of Overhead Power Line and Topo of Compost Pile," Drawings 445657-9, Scale 1"-20', updated on 12-19-80 to record this investigation.



11  
12  
13