

KULA PIPE LINE
THRU ULUPAKAUA RANCH
LAND, HAWAII

Copy furnished Supt. Public Works
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File in Carton 13.

Territory of Hawaii,

Office of the Government Survey.

Honolulu, T. H., September 20. 1910.

Description of Kula Pipe Line.
through the Ulapalakua Ranch Land,
Honuaula, Maui.

Beginning at a + on a stone on the boundary of Kamaole and Paeahu at an elevation of 3187 feet, from which the Government Survey Trig. Station "Nupuwai o Kukui o Piikea" is by true azimuth $114^{\circ} 35'$ 242.1 feet, thence following general line of pipe, by true azimuths and distances:-

1. $35^{\circ} 48'$ 360.6 feet along slope;
2. $41^{\circ} 05'$ 130.4 feet along slope;
3. $26^{\circ} 21'$ 1328.8 feet across sway;
4. $22^{\circ} 04'$ 545.0 feet along slope;
5. $40^{\circ} 38'$ 591.6 feet along slope;
6. $31^{\circ} 51'$ 236.4 feet along slope;
7. $14^{\circ} 23'$ 245.0 feet along slope;
8. $31^{\circ} 21'$ 299.6 feet along slope;
9. $36^{\circ} 52'$ 75.7 feet along slope;
10. $24^{\circ} 24'$ 104.2 feet along slope;
11. $31^{\circ} 18'$ 366.9 feet along slope;
12. $27^{\circ} 25'$ 116.4 feet along slope;
13. $52^{\circ} 26'$ 230.1 feet crossing a small gulch and up slope to ridge.
14. $22^{\circ} 41'$ 358.9 feet across sway to ridge, from this point Government Survey Trig. Station "Puu Io" is by true azimuth $129^{\circ} 32'$;

15. 2° 20' 231.6 feet along slope;
16. 356° 26' 118.2 feet along slope;
17. 30° 50' 115.8 feet along slope;
18. 0° 54' 148.5 feet along slope;
19. 40° 58' 206.4 feet along slope;
20. 21° 28' 239.8 feet along slope;
21. 7° 45' 409.8 feet along slope;
22. 5° 10' 254.8 feet along slope;
23. 358° 46' 272.0 feet along slope;
24. 349° 13' 89.7 feet along slope;
25. 357° 58' 208.0 feet along slope;
26. 351° 28' 174.5 feet along slope;
27. 0° 53' 369.4 feet along slope, from this point Government
Survey Trig. Station "Puu Io" is by true
azimuth 158° 58';
28. 1° 21' 411.1 feet across sway;
29. 11° 13' 510.2 feet across sway;
30. 17° 38' 579.4 feet across sway;
31. 17° 48' 324.6 feet up slope;
32. 38° 08' 345.3 feet along slope;
33. 36° 25' 123.6 feet along slope;
34. 24° 25' 66.0 feet along slope;
35. 14° 20' 199.5 feet along slope;
36. 26° 05' 207.6 feet along slope;
37. 15° 56' 102.8 feet along slope;
38. 23° 16' 121.5 feet along slope;
39. 18° 21' 100.0 feet along slope;
40. 2° 42' 98.8 feet along slope;

41. 34° 14' 152.0 feet along slope;
42. 5° 44' 105.3 feet along slope;
43. 18° 36' 182.6 feet along slope, elevation of this point is
3000 feet, the following Government
Trig. Stations are by true azimuths and
distances "Puu Mahoe" 8° 55' 6976.5 feet;
"Puu Olai" 77° 06' 30" 23636.0 feet;
44. 352° 45' 399.0 feet across sway;
45. 343° 53' 93.1 feet along slope;
46. 328° 41' 73.8 feet along slope
47. 315° 34' 447.6 feet along slope;
48. 343° 44' 182.8 feet along slope;
49. 329° 09' 172.8 feet along slope;
50. 7° 14' 88.6 feet along slope;
51. 28° 12' 325.0 feet along slope;
52. 21° 14' 66.2 feet along slope;
53. 12° 58' 52.7 feet along slope;
54. 7° 02' 105.1 feet along slope;
55. 18° 30' 215.4 feet along slope;
56. 350° 01' 36.8 feet along slope;
57. 306° 59' 104.6 feet along slope;
58. 318° 51' 99.6 feet along slope;
59. 303° 36' 99.5 feet along slope;
60. 343° 02' 99.7 feet along slope;
61. 311° 39' 86.2 feet along slope;
62. 337° 17' 145.4 feet along slope;
63. 345° 34' 260.5 feet down slope to trail;
64. 13° 16' 293.1 feet up slope on a curve to the right;
65. 39° 48' 159.8 feet along slope;

- 66. 31° 40' 113.0 feet along slope;
- 67. 22° 22' 80.4 feet along slope;
- 68. 12° 36' 73.6 feet along slope;
- 69. 359° 53' 90.8 feet along slope;
- 70. 347° 49' 99.1 feet along slope;
- 71. 337° 41' 66.2 feet along slope;
- 72. 329° 47' 64.9 feet along slope;
- 73. 321° 16' 224.0 feet along slope;
- 74. 12° 18' 385.2 feet along slope;
- 75. 344° 48' 76.0 feet along slope;
- 76. 328° 00' 126.4 feet along slope;
- 77. 314° 26' 138.8 feet along slope;
- 78. 298° 05' 134.1 feet along slope;
- 79. 289° 33' 132.8 feet along slope;
- 80. 279° 45' 240.9 feet along slope;
- 81. 295° 06' 220.5 feet down slope;
- 82. 331° 40' 300.2 feet up slope, from this point the following
stations are by true azimuths and dis-
tances; "Puu Mahoe" 55° 33' 3264.3 feet;
"Pimoe" 348° 57' 30" 9819.5 feet;
- 83. 280° 59' 64.4 feet along slope;
- 84. 317° 04' 121.9 feet along slope;
- 85. 288° 50' 36.6 feet; along slope;
- 96. 262° 11' 62.0 feet along slope;

87. 246° 39' 146.0 feet along slope;
88. 276° 11' 101.0 feet along slope;
89. 297° 53' 47.3 feet down slope to a + on a stone on the
boundary of Kanaio and Kaloi, from
this point a corner on the boundary
of these two lands, marked by a + on
a stone and a pile of stones, is by
true azimuth 11° 10' 137.7 feet;

FRED E. HARVEY
Engineer in Charge,
Kula Pipe Line.