



Bid Guideline Sheet

Drilling of test bores and construction of nested test water well

Mountain Resource Conservation Authority

Puerco Canyon

Malibu, California

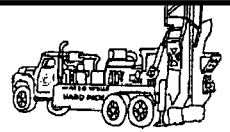
Water Wells

August 1, 2018 Project Narrative Combination Test Well and Production Well

Project involves the drilling of test hole and co

Nested vertical type well

Lic. 504769



Item No.	Description				
1	Permitting via Los Angeles County for new test well construction and LA County Commercial well permit	Two permits			\$ 2,050
2	Mobilization & demobilization, including limited site preparation and restoration	Lump Sum			3,200
3	Furnish and install conductor casing through surface soils, 0 to 50 feet estimated at each. 12-inch minimum inside-diameter casing set in 18-inch minimum diameter borehole, sealed with a sand-cement slurry annular seal under County inspection	Feet		55	3,800
4	Drill 6-inch-diameter (nominal, minimum) pilot borehole, from base of conductor casing (50 feet) 600 feet bgs or as directed by Geologist/Owner; collect, bag, and label cuttings.	Feet	\$ 45	600	27,000
5	Conduct down-hole geophysical survey of boring: standard electric log package, deviation, and sonic/YDL log by Geologist-approved logging subcontractor	Each			3,500
6	Ream borehole to 12 inches diameter (minimum) from base of conductor to total depth to accommodate casing and annular material; conduct cellper survey	Feet	102	600	61,200
7	Furnish and install 4-inch diameter PVC Blank Water Well Casing	Feet	24	510	12,240
7A	Furnish and install 2-inch diameter PVC Blank Water Well Casings (up to four casings)	Feet	12	940	11,280
8	Furnish and install 4-inch diameter 0.040-inch slotted PVC water Well casing	Feet	25	90	2,250
8A	Furnish and install 2-inch diameter 0.020-inch slotted PVC Water Well Casings (up to four casings)	Feet	10	180	1,800
9	Furnish and install 4-inch diameter PVC end cap	Each	10	1	10
9A	Furnish and install 2-inch diameter PVC end cap at each well	Each	10	4	40
10	Intermediate bentonite pellet seals	Feet	9	135	1,215
11	Furnish and install gravel pack pumped via tremie pipe	Feet	11	460	5,060
12	Furnish and install cement annular seal pumped via tremie pipe - contractor to ensure compatibility with casing to avoid collapse	Feet		55	5,000
13	Mechanical Development	Hour		50	0
14	Furnish and install temporary pump 20 gpm capacity; set at 500 feet below grade; include temporary power source Includes generator	Lump Sum		1	10,500
15	Conduct test pumping and development as directed, maintain discharge on property or to catch basins as directed by owner; disinfect well	Hour		50	6,500
16	Complete well heads to county standards, including 6 ft by 6 ft concrete slab at grade and ancillary tubing Increase size of concrete slab to 7'x 7' for production well	Lump Sum			2,500
17	Removal, transport, and disposal of drill cuttings and muds to approved offsite facility	Lump Sum			12,000
18	Standby Time	Hour	350		
19	Additional operations	Each	3,200		9,600
20	Destruction of Pilot borehole to County Standards	Feet			2,200
	TOTAL (Excluding Item Nos. 17, 18, 19, and 20)				159,145

Notes:

1. Only the actual units of Items actually directed by owners/Geologist and completed will be paid
2. Owner reserves the right to delete any or all items.
3. Should drilling or casing (etc.) be advanced to a shallower or deeper depth or at an alternative location on this mobilization, costs presented herein shall apply.
4. No standby time will be paid during the evaluation of cuttings to specify gravel pack and casing apertures. Owner anticipates having final casing design within 24 hours of completion of geophysical log in pilot bore.

DCA Drilling

Item 3: Minor tractor work - site prep and restoration of test well site additional \$1,200.

Item 13: We use air or down-hole hammer method – not drilling mud (bentonite).

Item 19: If caving occurs, we use a watered down cement slurry to stabilize the loose area, and then drill through it the next day. I have up to 3 cementings, if needed. This is instead of drilling with bentonite or casing the entire hole.