

**Rio Grande Well**  
**Engineers Estimate**  
**17 February 2005**

	2005 Estimated Cost	Totals	System Cost
<b>Pump &amp; Installation</b>			
350 Hp 14 inch Submersible Pump Motor			
1800 RPM	\$ 60,000.00	2	\$ 120,000
1000 GPM 1054" TDH Pump	\$ 32,000.00	2	\$ 64,000
Freight	\$ 5,500.00	1	\$ 5,500
Pump Placement	\$ 25,000.00	1	\$ 25,000
Well Head Cap and Slab	\$ 2,500.00	1	\$ 2,500
8 & 5/8" Tapered Thread Ductile Iron Riser Pipe	\$ 35.00	1,200	\$ 42,000
Submersible Wire	\$ 30.00	1,200	\$ 36,000
Pitless Adapter	\$ 15,000.00	1	\$ 15,000
Check Valve	\$ 1,600.00	6	\$ 9,600
Air & Sounder Lines	\$ 8.00	1,200	\$ 9,600
Stainless Steel Banding	\$ 3,200.00	1	\$ 3,200
Electrical Junction Box @ Well Head	\$ 500.00	1	\$ 500
Well Pumping Monitoring Equipment	\$ 7,500.00	1	\$ 7,500
<b>SUB TOTAL</b>			<b>\$ 340,400</b>
<b>Well</b>			
2005 Estimated Cost	Totals	System Cost	
8" Diameter Pilot/Test Hole	\$ 55.00	1,600	\$ 88,000
32" I.D. Surface Casing & Installation	\$ 400.00	250	\$ 100,000
20" I.D. Steel Casing	\$ 125.00	1,000	\$ 125,000
20" Stainless Steel Well Screen	\$ 400.00	600	\$ 240,000
Gravel Packing & Installation	\$ 500.00	160	\$ 80,000
32" Drilling for 20" Casing and Screen	\$ 80.00	1,600	\$ 128,000
Surging and Development	\$ 310.00	40	\$ 12,400
Geohydrology	\$ 50,000.00	1	\$ 50,000
Test Pumping	\$ 240.00	96	\$ 23,040
Recovery Testing	\$ 90.00	40	\$ 3,600
<b>SUB TOTAL</b>			<b>\$ 850,040</b>
<b>Booster Pump Building</b>			
2005 Estimated Cost	Totals	System Cost	
Land Costs - Two Acres	\$ 50,000.00	2	\$ 100,000
Pump Control Building	\$ 50,000.00	1	\$ 50,000
Chlorination Building	\$ 50,000.00	1	\$ 50,000
Pump Controller & Electrical Cabinet	\$ 25,000.00	1	\$ 25,000
100 Hp Booster Pumps 1000 GPM @ 250' TDH	\$ 38,000.00	3	\$ 114,000
Wire & Conduit	\$ 25.00	650	\$ 16,250
Chlorination Equipment	\$ 7,500.00	1	\$ 7,500
Chlorination Equipment Installation and Training	\$ 1,500.00	1	\$ 1,500
Chlorine Concentration Meter and Strip Recorder	\$ 4,000.00	1	\$ 4,000
Flow Meter and Strip Recorder	\$ 5,000.00	1	\$ 5,000
Security Fencing (Two Acres)	\$ 15,000.00	1	\$ 15,000
12" CL 350 Pipe	\$ 75.00	650	\$ 48,750
Bends & TEES & Misc. Fittings	\$ 15,000.00	1	\$ 15,000
12" Butterfly Valve	\$ 2,800.00	2	\$ 5,600
12" Check Valve	\$ 2,800.00	1	\$ 2,800
Trench & Backfill @ 8' Deep (or less) Per foot	\$ 6.50	640	\$ 4,160
Select Fill Material Cubic Yard	\$ 6.00	107	\$ 642
<b>SUB TOTAL</b>			<b>\$ 484,602</b>
<b>12" Water Main</b>			
2005 Estimated Cost	Totals	System Cost	
12" AWWA C900 Class 200 Pipe Installed	\$ 45.00	11,000	\$ 495,000
18" AWWA C900 Class 200 Pipe Installed	\$ 85.00	18,000	\$ 1,530,000
6" Fire Hydrant Assembly	\$ 1,800.00	26	\$ 46,800
Pressure Reducing Valve	\$ 3,000.00	20	\$ 60,000
12" Butterfly Valve with Box	\$ 950.00	26	\$ 24,700
12" Megalug	\$ 95.00	144	\$ 13,680
<b>SUB TOTAL</b>			<b>\$ 2,170,180</b>
<b>Electrical Transmission Line Extension</b>			
2005 Estimated Cost	Totals	System Cost	
Power Line Three Phase Underground Installed	\$ 15.00	11,000	\$ 165,000
<b>SUB TOTAL</b>			<b>\$ 165,000</b>
<b>250,000 Gallon Water Storage Tank</b>			
2005 Estimated Cost	Totals	System Cost	
250,000 Gallon Steel Ground Storage Tank Complete Including Painting and Appurtenances	\$ 130,000.00	1	\$ 130,000
Concrete Ring Wall	\$ 10,000.00	1	\$ 10,000
Excavation and Backfill	\$ 9,000.00	1	\$ 9,000
Cathodic Protection	\$ 12,000.00	1	\$ 12,000
<b>SUB TOTAL</b>			<b>\$ 161,000</b>
<b>Arsenic Treatment</b>			
2005 Estimated Cost	Totals	System Cost	
Arsenic Treatment System	\$ 360,000.00	1	\$ 360,000
<b>SUB TOTAL</b>			<b>\$ 360,000</b>
Design Engineering, ROW & NEPA @ 10%	\$ 451,122		
Construction Engineering and Inspection @ 5%	\$ 225,561		
Contingency @ 15%	\$ 676,683		
Mobilization @ 5%	\$ 225,561		
<b>TOTAL</b>			<b>\$ 6,090,149</b>
<b>NM GRT @ 6.3125%</b>			<b>\$ 384,441</b>
<b>GRAND TOTAL WELL #4</b>			<b>\$ 6,474,590</b>

Midway Well  
Engineers Estimate  
17 February 2005

	2005 Estimated Cost	Totals	System Cost
<b>Pump &amp; Installation</b>			
350 Hp 14 inch Submersible Pump Motor	\$ 60,000.00	1	\$ 60,000
1800 RPM	\$ 32,000.00	1	\$ 32,000
1000 GPM 1054' TDH Pump	\$ 5,500.00	1	\$ 5,500
Freight	\$ 25,000.00	1	\$ 25,000
Pump Placement	\$ 2,500.00	1	\$ 2,500
Well Head Cap and Slab	\$ 35.00	1,200	\$ 42,000
8 & 5/8" Tapered Thread Ductile Iron Riser Pipe	\$ 30.00	1,200	\$ 36,000
Submersible Wire	\$ 15,000.00	1	\$ 15,000
Pitless Adapter	\$ 1,600.00	6	\$ 9,600
Check Valve	\$ 8.00	1,200	\$ 9,600
Air & Sounder Lines	\$ 3,200.00	1	\$ 3,200
Stainless Steel Banding	\$ 500.00	1	\$ 500
Electrical Junction Box @ Well Head	\$ 7,500.00	1	\$ 7,500
Well Pumping Monitoring Equipment			\$ 248,400
<b>SUB TOTAL</b>			
	<b>2005 Estimated Cost</b>	<b>Totals</b>	<b>System Cost</b>
<b>Well</b>			
8" Diameter Pilot/Test Hole	\$ 55.00	1,600	\$ 88,000
32" I.D. Surface Casing & Installation	\$ 400.00	250	\$ 100,000
20" I.D. Steel Casing	\$ 125.00	1,000	\$ 125,000
20" Stainless Steel Well Screen	\$ 400.00	600	\$ 240,000
Gravel Packing & Installation	\$ 500.00	160	\$ 80,000
32" Drilling for 20" Casing and Screen	\$ 80.00	1,600	\$ 128,000
Surging and Development	\$ 310.00	40	\$ 12,400
Geohydrology	\$ 50,000.00	1	\$ 50,000
Test Pumping	\$ 240.00	96	\$ 23,040
Recovery Testing	\$ 90.00	40	\$ 3,600
<b>SUB TOTAL</b>			\$ 850,040
	<b>2005 Estimated Cost</b>	<b>Totals</b>	<b>System Cost</b>
<b>Booster Pump Building</b>			
Land Costs - Two Acres	\$ 50,000.00	2	\$ 100,000
Pump Control Building	\$ 50,000.00	1	\$ 50,000
Chlorination Building	\$ 50,000.00	1	\$ 50,000
Pump Controller & Electrical Cabinet	\$ 25,000.00	1	\$ 25,000
100 Hp Booster Pumps 1000 GPM @ 235' TDH	\$ 38,000.00	3	\$ 114,000
Wire & Conduit	\$ 25.00	650	\$ 16,250
Chlorination Equipment	\$ 7,500.00	1	\$ 7,500
Chlorination Equipment Installation and Training	\$ 1,500.00	1	\$ 1,500
Chlorine Concentration Meter and Strip Recorder	\$ 4,000.00	1	\$ 4,000
Flow Meter and Strip Recorder	\$ 5,000.00	1	\$ 5,000
Security Fencing (Two Acres)	\$ 15,000.00	1	\$ 15,000
12" CL 350 Pipe	\$ 75.00	650	\$ 48,750
Bends & TEES & Misc. Fittings	\$ 15,000.00	1	\$ 15,000
12" Butterfly Valve	\$ 2,500.00	2	\$ 5,000
12" Check Valve	\$ 2,800.00	1	\$ 2,800
Trench & Backfill @ 8' Deep (or less) Per foot	\$ 6.50	640	\$ 4,160
Select Fill Material Cubic Yard	\$ 6.00	107	\$ 642
<b>SUB TOTAL</b>			\$ 464,602
	<b>2005 Estimated Cost</b>	<b>Totals</b>	<b>System Cost</b>
<b>12" Water Main</b>			
12" AWWA C900 Class 200 Pipe Installed	\$ 45.00	2,000	\$ 90,000
6" Fire Hydrant Assembly	\$ 1,800.00	2	\$ 3,600
Pressure Reducing Valve	\$ 3,000.00	2	\$ 6,000
12" Butterfly Valve with Box	\$ 950.00	4	\$ 3,800
12" Megalug	\$ 95.00	16	\$ 1,520
<b>SUB TOTAL</b>			\$ 104,920
	<b>2005 Estimated Cost</b>	<b>Totals</b>	<b>System Cost</b>
<b>Electrical Transmission Line Extension</b>			
Power Line Three Phase Underground Installed	\$ 15.00	2,000	\$ 30,000
<b>SUB TOTAL</b>			\$ 30,000
	<b>2005 Estimated Cost</b>	<b>Totals</b>	<b>System Cost</b>
<b>250,000 Gallon Water Storage Tank</b>			
250,000 Gallon Steel Ground Storage Tank Complete Including Painting and Appurtenances	\$ 130,000.00	1	\$ 130,000
Concrete Ring Wall	\$ 10,000.00	1	\$ 10,000
Excavation and Backfill	\$ 9,000.00	1	\$ 9,000
Cathodic Protection	\$ 12,000.00	1	\$ 12,000
<b>SUB TOTAL</b>			\$ 161,000
	<b>2005 Estimated Cost</b>	<b>Totals</b>	<b>System Cost</b>
<b>Arsenic Treatment</b>			
Arsenic Treatment System	\$ 360,000.00	1	\$ 360,000
<b>SUB TOTAL</b>			\$ 360,000
Design Engineering, ROW & NEPA @ 10%			\$ 221,896
Construction Engineering and Inspection @ 5%			\$ 110,948
Contingency @ 15%			\$ 332,844
Mobilization @ 5%			\$ 110,948
<b>TOTAL</b>			\$ 2,995,598
<b>NM GRT @ 6.3125%</b>			\$ 189,097
<b>GRAND TOTAL WELL #5</b>			\$ 3,184,695