

**July 2, 2014**

T. A. Bishara  
Century 21 Bright Horizons  
3110 E. Garvey Ave. S.  
West Covina, CA 91791

Re: Governor Mine: Review of geological data and field reconnaissance, TerraMins Project No. 201407

Dear Mr. Bishara,

This letter is the report of the investigation of the Governor Mine, near Acton, in Los Angeles County California. The scope of work for this project included acquisition and examination of available geological and analytical data. Most of the historical documents were provided to TerraMins staff by the Century 21 Bright Horizons representatives (the Client). A field reconnaissance review was conducted on March 26, 2014. The Client's representative, Aneese Bishara, accompanied the investigators on the field review.

**Location:** The mine site is located about 52 miles from Los Angeles via the I-5 and I-14 Freeways, and 3.75 miles north-west of Acton, CA. within the Cedar Mining District (see Figure 1: Location Map of the Governor Mine).

**Property:** The property consists of 80 acres of patented land situated in T5N, R13W, Section 23 SBBM (see Figure 2: Topographic Map of the Governor Mine). The mine property trends east-west across a north-south trending ridge.

**History:** The site was first mined in 1880 as the New York Mine reportedly yielding \$100,000 at a gold price of \$18.94 per ounce (see Figure 3, Gold Price Chart: 1833 to 2011). According to historical records, in 1897 the vein was "lost" and mining ceased. In 1932 the mine was reopened by Frances Gage of the Governor Mines Company. The

mine was then renamed the Governor Mine. The best producing years were 1932 to 1942. The ore was crushed at the mine and trucked to a mill in Acton. The mine was closed in 1942. The Governor Mine was reported to be the largest gold producer in Los Angeles County (Tucker and Sampson, 1940).

In 1984, several men were sampling the underground workings when a fatality occurred. The Governor Mine was then sealed and closed. The fatality was apparently never recovered because of potentially dangerous underground conditions.

In 1987, Great Western Agriculture, Inc. (GWA) conducted a one-year core drilling program, reportedly confirming the existence of one gold bearing quartz vein with numerous small offsets (Herron, 1986). GWA proposed a mine plan to reopen the mine by constructing a pad and excavating a cut in the ravine 300 feet SW of the main shaft. The excavation was planned to expose an underground vault and a 20% decline would be developed following the strike of the vein. At 70-foot depth the decline could intercept the mineralized zone.

**Geology:** The site is located in the California Transverse Range geological province. The central and eastern Transverse Ranges are composed of a basement complex of igneous and metamorphic terrains most of which consist of continental crust (see Figure 4, Geological Map of the Governor Mine site). The site is within the zone of influence of the Vincent Thrust, a major regional structure. The Vincent Thrust is known to host several small gold prospects. At the Governor Mine the gold is reported to occur within quartz veins trending N20W, and dipping 65 to 75 degrees to the NE. The quartz vein is hosted in the quartz diorite and hornblende diorite of the Pelona Schist series. The width of the vein ranges from 4 to 18 feet with an average width of 4 to 5 feet (Gay and Hoffman, 1954). The quartz vein exhibits several post-mineralization offsets of 2 to 5 feet. The early miners looked for rust coated quartz stained with oxidizing pyrites to indicate good ore.

**Historic Mining Activities:** Available historical records indicate mining began with the New York mine adjacent the existing Governor Mine. The Governor Mine was started in 1932, and by 1937 a 720 foot shaft was sunk off the main tunnel level (see Figure 5a: Cross Section Map). Crosscut drifts were excavated at every 100-foot depth below the tunnel level. Although the shaft was sunk to 1000', the lowest development level was at the 700' elevation (it was later observed that the mine was flooded below the 700' level). The crosscuts follow the gold-bearing vein. The mining method is the "shrink stope method". In this method, a cross cut drift is developed for hauling via ore cars. An undercut drift is driven directly above the crosscut drift. Loading chutes are installed in the roof of the crosscut drifts. The roof of the undercut drift is then blasted in the vein rock. The blasted gold bearing rock falls on top of the crosscut and is extracted through the chutes into ore cars. The miners return after the blast and work on top of the shot rock to drill another series of roof shots in the vein. The miners continue this process upward until they approach the upper crosscut drift. The only ore drawn from the loading chutes in the crosscut drift below is to make room for the miners to work on top of the shot rock above. All development is contained within the vein's 4-foot width, most stopes were wider (5 to 6 feet). Avoiding rock with no gold values is important to reduce ore dilution.

When the miners reach the top of the stope, mining ceases to prevent the upper crosscut drift from caving. When mining ceases the open ore cuts were often backfilled with rock waste.

The current condition of the mine is unknown except for the reports and mine maps discovered during the fatality investigation team in 1984. Figure 5b shows the mine section map drawn by Dr. Carl Austin, leader of the mine rescue team (see Figure 5b 1984 Cross Section Map). The existing mine is most likely in unusable and dangerous conditions for present access. Reports from the Fatality Investigation Team indicate the underground openings were unstable and not safe. Old workings dominate down to the 400 level and an unknown amount of mining was done between the 400 and 700 levels.

Water is reported at the 700-foot elevation which can be a challenge for development. Some of the exiting lower level stopes may contain gold-bearing blasted ore that was not removed.

**Reconnaissance Field Review:** The Governor Mine site was visited by TerraMins' geologic staff on March 26, 2014. Several samples were collected for possible future analysis. Few exposures of quartz veins on the surface, although fractured and iron stained exposures are visible in the site of the "main" shaft, on the eastern portion of the property and at and at a closed adit on the western part of the property. Very little indication of mineralization is visible on the site. Samples were collected from the few accessible quartz veins as well as some "grab samples" from dumps.

**Recommendations and conclusions:**

All recommendations and conclusions are based on available literature on the Governor Mine (See References) and a reconnaissance field visit conducted on March 26, 2014.. There is no mine access, as all entrances have been sealed.

Aneese Bishara, agent of the client, met with Allen Herron and discovered a mine report "The Governor Mine" prepared for Pac West Development which describes underground development and ore occurrences. Geologist Paul Morton prepared a report entitled "Engineering Factors for Residential Development of the Governor Mine Site". In the Morton report, there is a reference to 34 diamond drill holes and 17,600 feet of drill core. Interviews with Morton and a search of his files found no core drill reports. TerraMins opinion is that Morton may not have been the geologist on the drilling program.

To bring the mine in to operation would require some level of exploration and permitting

with the County and State. Exploration would involve drilling test holes to verify vein location and ore grades. Any surface disturbances would have a Conditional Use Permit and an approved Mine Reclamation Plan from the State.

A 700- foot test hole can range in cost from \$15,000 to \$50,000 depending on the type drilling. Core holes are the top cost variety. A drill program could easily cost \$300,000. Permitting and exploration could cost \$1 million.

**Potential Mining:** With the limited site acreage, and the orientation and depth of the ore vein target, open pit mining is not possible. The gold bearing vein is narrow and steeply dipping so underground methods would be the best option. Underground mining in California is the least difficult to permit because State Mining Regulations impact only surface disturbances. The Federal Mine Safety and Health Administration (MSHA) regulates underground mining operations.

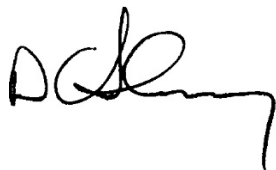
Technologically, the best option is to excavate a spiral decline for diesel powered rubber tired equipment to access vein below 400 feet in depth. The gold vein above 400 has been historically mined and disturbed. Again the conditions of the mining area between the 400 to 700 levels is unknown. Conditions associated with old mine workings are difficult to predict without accurate maps. In a review of the fatality reports, it appears that the fatality was likely a result of low oxygen content air rather than problem gas. Underground mining costs are approximately \$1,500 per foot to provide access to the ore body. The author calculates a minimum of 1,600 feet of tunneling would be required to access the ore body at the 400 foot level. 1,600 feet of tunneling at \$1,500 / foot would cost \$2.4 million with another \$1 million in support costs like ventilation. A minable ore body could be below the 400 foot level, increasing costs by \$1,500 per foot of decline. Ore crushing and handling could be contracted out for another \$2 million. A source to take the processed ore and produce gold could be a problem as there are no custom mills available in the area. See the accompanying narrow vein mining information.

Previous reports indicate water may not be a problem for underground mining although submerged historic underground excavations can be highly unstable.

**Economics Considerations:** Historic data indicates the upper workings (100 to 400 feet in depth) are reported to host ore of 0.3 to 0.5 ounces gold per ton. Reports show that gold below the 400 foot levels show higher grades of gold, up to 1.0 oz. / ton. Historical data indicates that gold values seem to increase with depth. Reports of higher grade “pockets” were discovered. Gold values of 1.0 oz. / ton are considered high grade at today’s gold price of approximately \$1,350 oz. A prudent mining company would want verification of this information through their exploration program for location and grades of potential ore zones

Any mining operations would have to be extremely selective to minimize dilution. Crushing would be done on-site but the processing program would be required to be designed by a metallurgical engineer.

The investigator estimates an initial investment of \$6 to \$10 million to get the property permitted and into production. A complete mine and processing plan should be done to confirm costs. The author suggests attempting to market the property to an gold mining company with underground experience. This document can be used as a marketing tool. The author can provide the owner with other potential buyers.



Douglas C. Shumway  
Mining Engineer

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**FIGURES 1-6** Pages 8- 14



**Figure 1: Location Map of the Governor Mine, Los Angeles County, California**



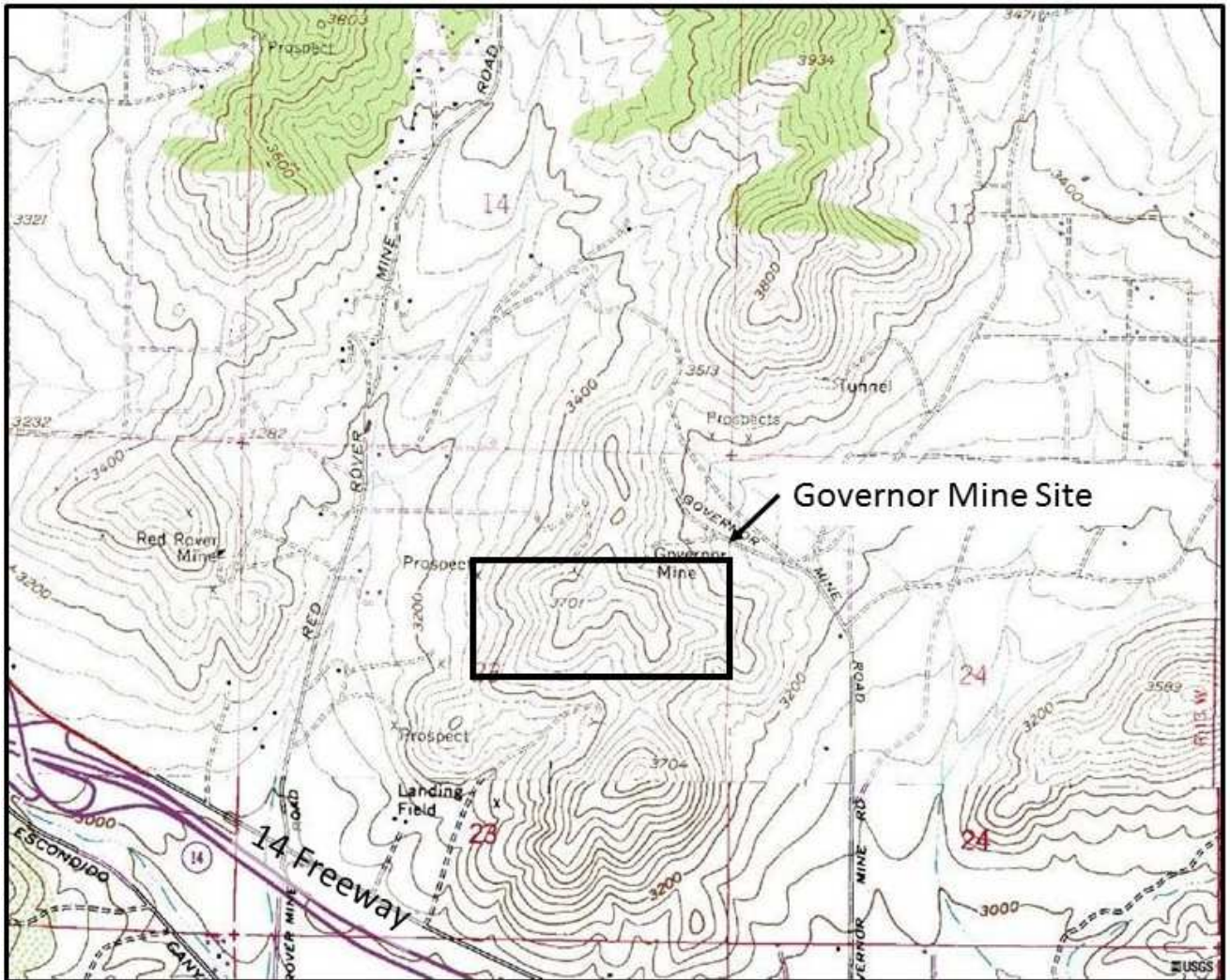


Figure 2: Topographic Map of the Governor Mine Site

### HISTORICAL GOLD PRICES- 1833 to Present

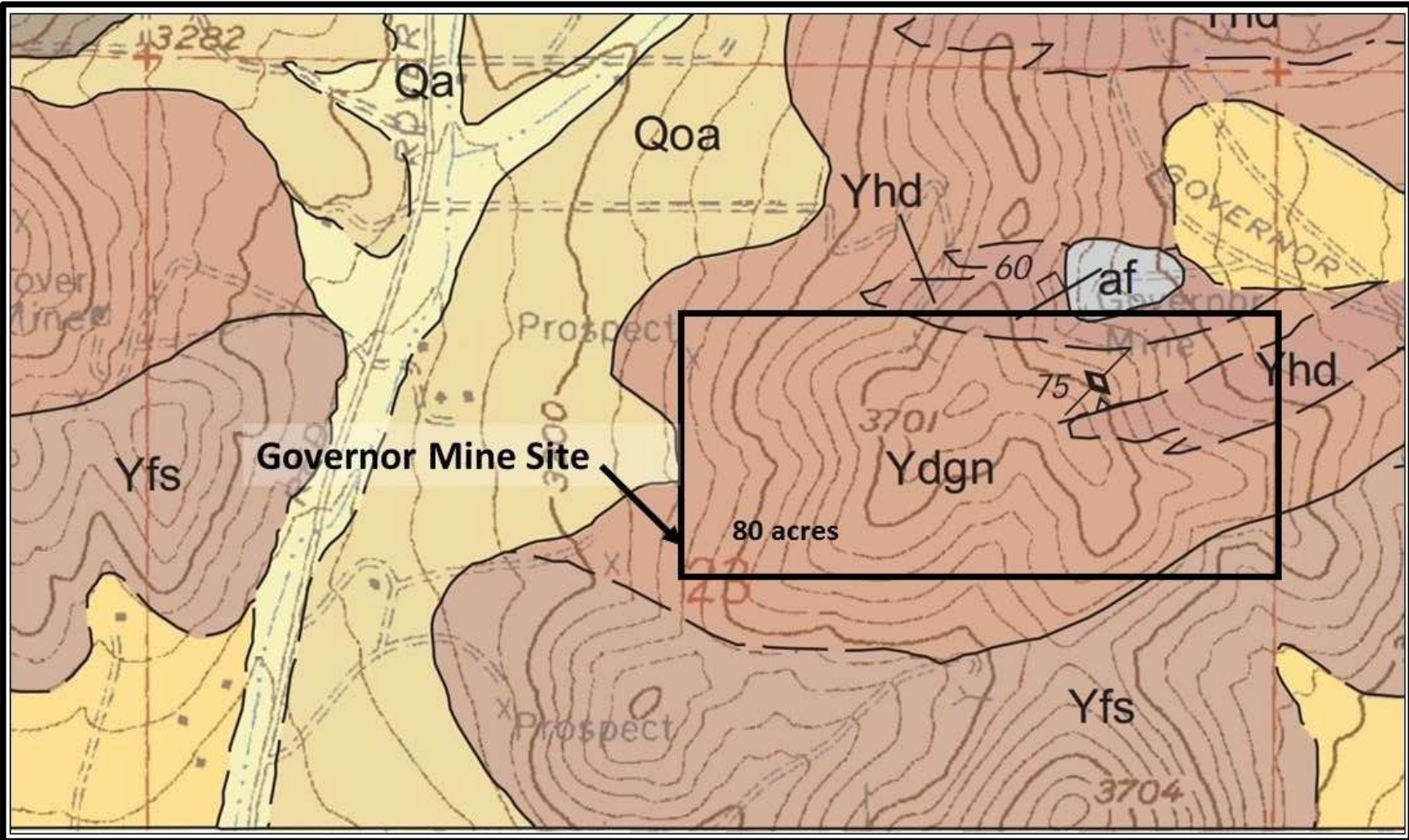
The price of gold remained remarkably stable for long periods of time. For example, Sir Isaac Newton, as master of the U.K. Mint, set the gold price at £3.17s. 10d. per troy ounce in 1717, and it remained effectively the same for two hundred years until 1914. The only exception was during the Napoleonic wars from 1797 to 1821. The official U.S. Government gold price has changed only four times from 1792 to the present. Starting at \$19.75 per troy ounce, raised to \$20.67 in 1834, and \$35 in 1934. In 1972, the price was raised to \$38 and then to \$42.22 in 1973. A two-tiered pricing system was created in 1968, and the market price for gold has been free to fluctuate since then as the table below shows.

Year	Average Price	Year	Average Price	Year	Average Price	Year	Average Price
1833-49*	18.93	1901	18.90	1903	24.84	2005	444.74
1850	18.93	1902	18.07	1904	28.04	2006	603.48
1851	18.93	1903	18.95	1905	35.03	2007	895.38
1852	18.93	1904	18.96	1906	34.99	2008	871.98
1853	18.93	1905	18.02	1907	34.95	2009	972.35
1854	18.93	1906	18.00	1908	35.10	2010	1,224.53
1855	18.93	1907	18.94	1909	35.10	2011	1,571.52
1856	18.93	1908	18.95	1910	35.27		
1857	18.93	1909	18.96	1911	35.28		
1858	18.93	1910	18.02	1912	35.23		
1859	18.93	1911	18.92	1913	35.00		
1860	18.93	1912	18.93	1914	35.10		
1861	18.93	1913	18.92	1915	35.12		
1862	18.93	1914	18.90	1916	35.13		
1863	18.93	1915	18.99	1917	34.98		
1864	18.93	1916	18.99	1918	38.31		
1865	18.93	1917	18.99	1919	41.28		
1866	18.93	1918	18.98	1920	36.02		
1867	18.93	1919	19.95	1921	40.62		
1868	18.93	1920	20.08	1922	58.42		
1869	18.93	1921	20.50	1923	67.36		
1870	18.93	1922	20.66	1924	164.00		
1871	18.93	1923	21.32	1925	160.80		
1872	18.94	1924	20.69	1926	124.74		
1873	18.94	1925	20.84	1927	147.84		
1874	18.94	1926	20.83	1928	193.45		
1875	18.94	1927	20.04	1929	206.00		
1876	18.94	1928	20.66	1930	615.00		
1877	18.94	1929	20.63	1931	460.00		
1878	18.94	1930	20.65	1932	376.00		
1879	18.94	1931	17.08	1933	424.00		
1880	18.94	1932	20.89	1934	381.00		
1881	18.94	1933	26.33	1935	317.00		
1882	18.94	1934	34.89	1936	268.00		
1883	18.94	1935	34.84	1937	447.00		
1884	18.94	1936	34.87	1938	437.00		
1885	18.94	1937	34.79	1939	381.00		
1886	18.94	1938	34.85	1940	383.51		
1887	18.94	1939	34.42	1941	362.11		
1888	18.94	1940	33.85	1942	343.82		
1889	18.93	1941	33.85	1943	359.77		
1890	18.94	1942	33.85	1944	384.00		
1891	18.96	1943	33.85	1945	383.79		
1892	18.96	1944	33.85	1946	387.81		
1893	18.90	1945	34.71	1947	331.02		
1894	18.94	1946	34.71	1948	294.24		
1895	18.93	1947	34.71	1949	279.98		
1896	18.98	1948	34.71	2000	279.11		
1897	18.98	1949	31.69	2001	271.64		
1898	18.98	1950	34.72	2002	309.73		
1899	18.94	1981	34.72	2003	383.38		
1900	18.85	1952	34.65	2004	409.72		

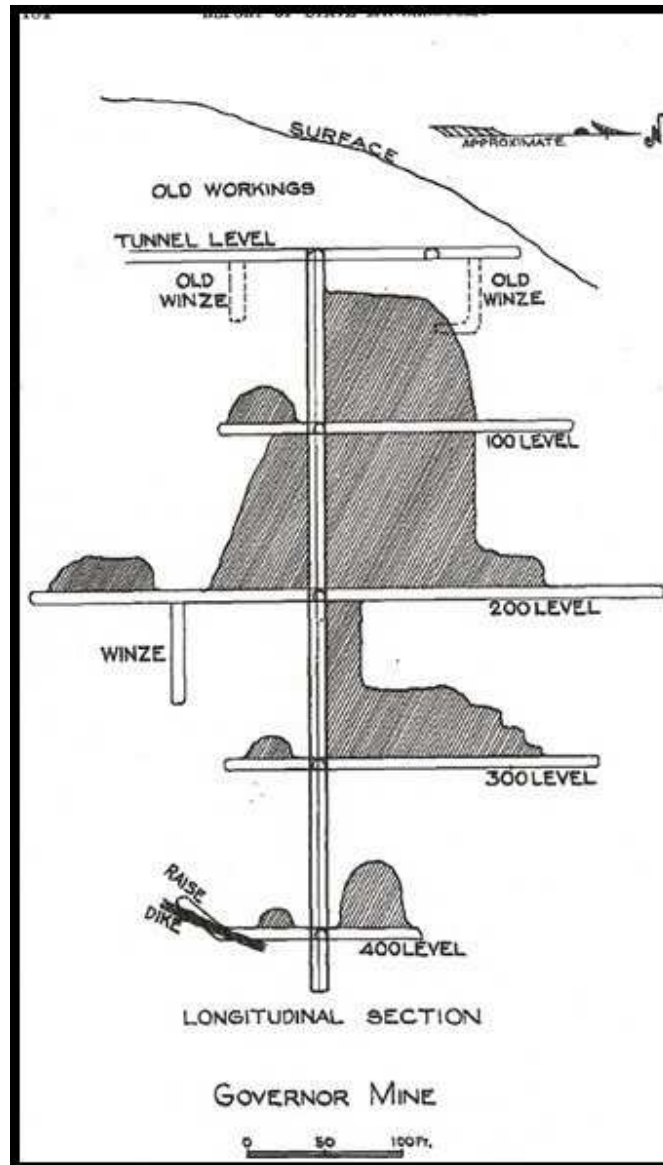
\*Prices from 1833-1904, World Gold Council. Taken from Timothy Green's Historical Gold Price Table. London prices converted to U.S. Dollars.

\*\*Prices from 1985-2008, Kitco.com, based on the London PM fix.

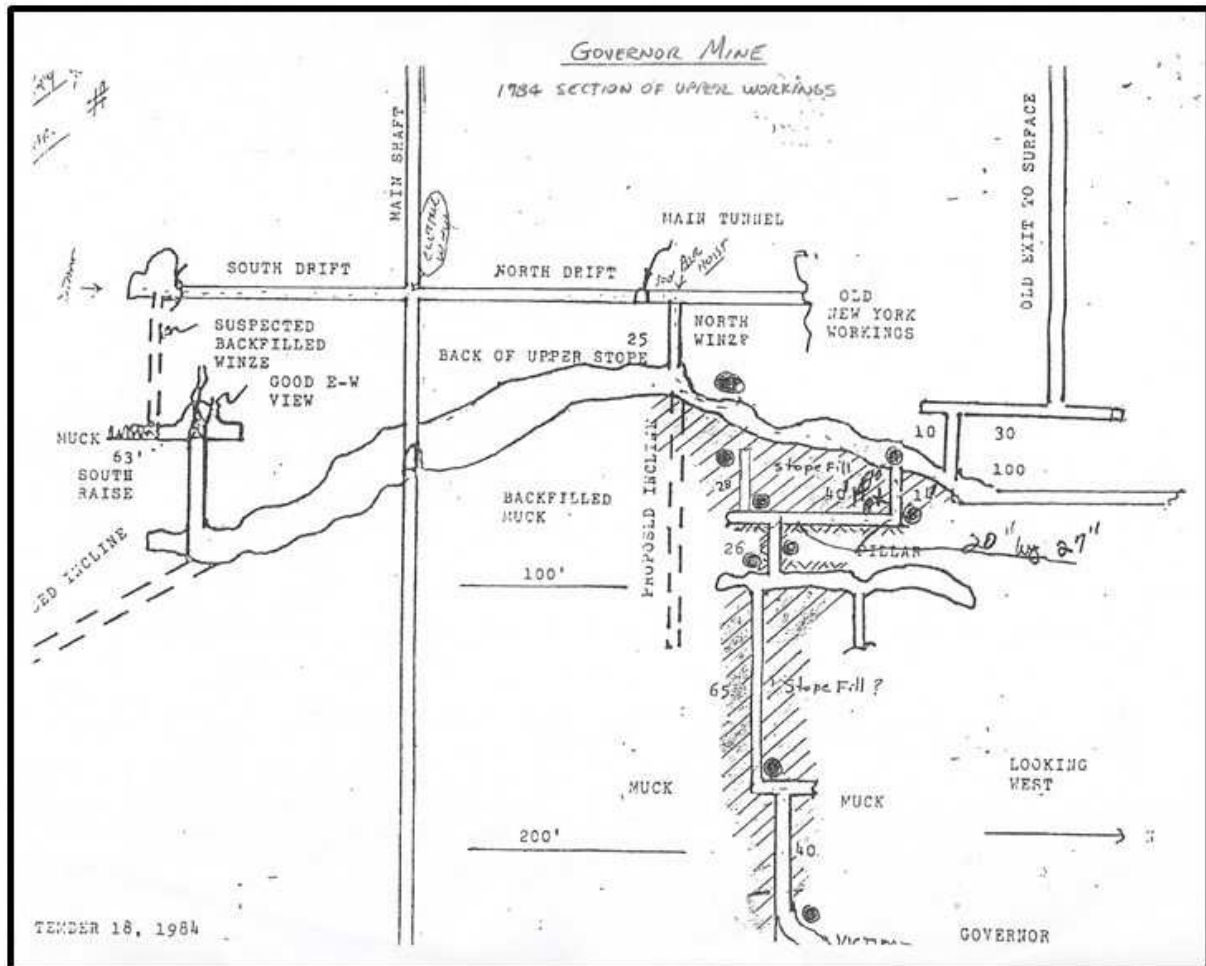
Figure 3: Table of Historical Gold Prices 1833 – 2011



**Figure 4: Geology of the Governor Mine Site: Qa: younger alluvium; Qoa: older alluvium; Yfs: syenite and quartz syenite; Yhd: hornblende diorite; Ydgn: quartz diorite (Scale approximately 1:700)**



**Figure 5a: Cross Section Map of underground workings at the Governor Mine  
(from Sampson 1937)**



**Figure 5b: Cross Section Map of underground workings at the Governor Mine (from Austin 1984)**

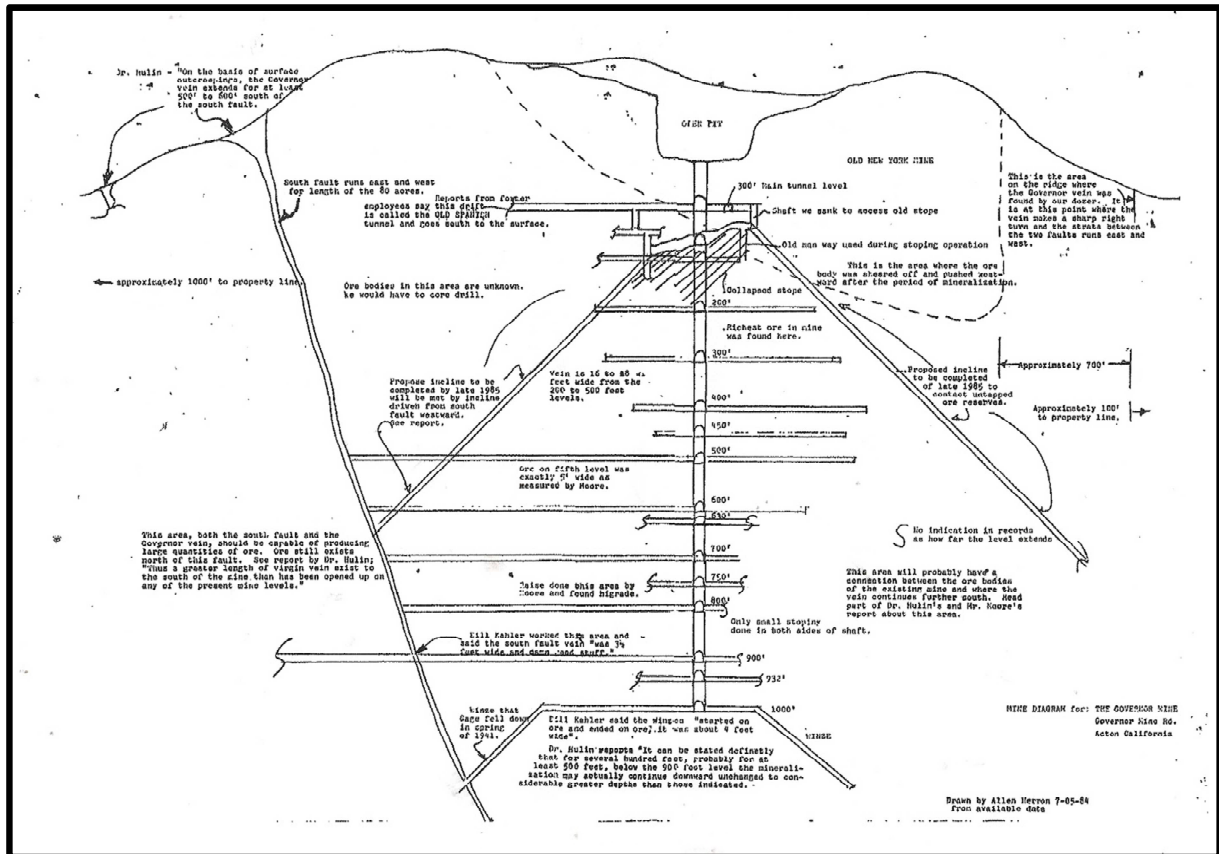


Figure 6: Cross Section Map of underground workings at the Governor Mine from the Pac West Development Report (Herron, 1984)