WATER LOCATING by latest Scientific Methods.
Accepted and used by the United States Government.

## V. L. CAMERON

GEOLOGIST

HYDROLOGIST

Box S-218 Grand Avenue Elsinore, Calif.

May 8, 1950

The Fletcher Company, San Diego, California.

Attention: Mr. Ed Fletcher, Senior

Dear Sirs:

As requested in your letter to Mr. Purer, he and I made a careful survey and recheck of the Henshaw Valley, including the entire area around both sides of the Lake for many miles, and I verified what I thought I had found a few days before that the main fault of the Valley coming from the long canyon to the southeast makes an offset of about thirty degrees which carries it into your property about under the old dug well, and there it makes another thirty degree angle which carries it right under the dam,

It is 250 feet wide in places. I found a location 125 feet east of the old dug well, where a separate spring feeds a nice little stream down about comparable the old well, starting at 15 feet and down to 90, then at 108 feet you will be going into the great fault water with the first layer down to 360 feet. Then there is a second stratum from 420 to 500 feet. There is every evidence that the water in the big fault has a great deal of pressure on it, and it is almost sure to flow a large volume of water. If it does not, it will be a big pumper anyway. You are better able to judge the usas you are able to put a large well to, there, than I am.

One big advantage is that in pumping a well right there it will go directly into the lake with no loss from absorption, while if wells are developed in the area where the /Water Company is looking for them, they have to pump the water for a mile or two through pipe lines or it will go back into the ground and be lost.

The well should be drilled too 375 or preferably 510 feet.

Very truly yours,

VLC/C Enc Wameron

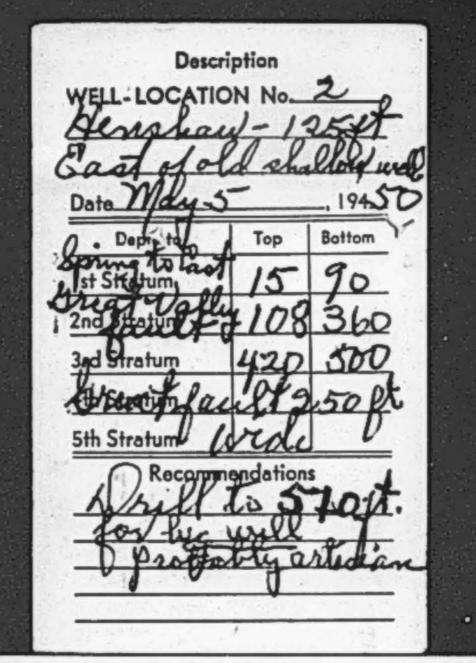
V. L. Gameron

GEOLOGIST - HYDROLOGIST

Locating by Latest Scientific Development

Box S-218 Grand Avenue

Elsinore, California



April 9, 1953

Dear Friends:

I just finished phoning you about the locating at kaxkakka Torrey Pines, so that is taken care of until next week, but I forgot to mention I had just got this article typed, as you requested, and I hope it is satisfactory. I have another copy you can have for your files if you need it, or I could mimeograph it and give you a number of copies if you care for it, as I'd sort of like to have a bunch of copies, anyway, for propaganda purposes.

If you want any changes made in additional copies, you can let me

know.

I have some good wells in that neighborhood, but mostly farther North and East; then, too, I ve forgotten a great deal of what I'learned years ugo about that area, so its important that I spend a half-day there before you came, and then we'll have more to work on.

So until I see you again, best wishes,

Sincerely,

VLC/C Enc

PS. I hope the enclosed information becomes a part of the textbooks of the future. We it any way you want to but he sure and use it. I don't care who reads it.

WED

Cel. Ed Fletcher; Dear Friend;

Referring to our talk of a couple of days ago; you mentioned that some engineers were contending that the water in your deep granite wells in the El Cajon area are being fed by rain and snow in the High Sierras. How much longer are they going to cling to that outworn, threadbare theory? It is utterly ridiculous and untenable, and surely they realize it. Yet ever since I first began locating wells, 28 years ago, I have heard it.

At first I too believed it but about twenty years ago I found that practically all the underground water is coming straight up as condensed steam, until it reaches lateral cracks or aquifers, which permit herizontal movement.

These vents are in three forms, namely, fissures or cracks which permit large flows of cold water, small evals or cold springs, and circles, large or small which were evidently were geysers in the past and which still vent het water when drilled thru the clays and other sediments which have been deposited in the cracks in the bedreck by the upcoming het water.

In past ages these vents flowed or squirted cold or hot water or steam out of the surface when the crust of the earth was hetter than new. The cracks were newer and there were "fumaroles" and geysers everywhere. New however, the skin of the earth has solidified to a depth of many miles and the crust has cooled to the extent that most of these vents have been sealed by erosion or plugged by calcium, clays, silica, iron etc.

But the pressure is still enermous at a depth of three miles.

The cooling and consequent shrinkage of the crust caused millions of cracks, checks and faults, seme of the latter hundreds or even thousands of miles long as for instance the San Andreas Fault, running from the Arotic, thru Washington and Oregon and thru the entire length of California and into or thru lewer California.

This one has many parvalels, branches and other ramifications, some of which run under the Pacific. There are just as many under the oceans, lakes and rivers as under the land, many more in face, since more than two-thirds of the Earth is covered by water, and they are just as open and pervious as the land faults.

Therefore why say the water at El Cajen, or anywhere else for that matter, is from the High Sierras? That is really "carrying ceals to Newcastle" when, in this instance, the ocean is so near, only about 7 or 8 miles, in fact.

New this eccan, or other water, falling down an active earth fault would create a static or hydrestatic pressure of around seven thousand pounds per square inch, at three miles depth, and in places there is more than six miles of depth of water on top of the faults.

Under the land, (it is known by drilling eil-wells), at eight to twelve thousand feet, the temperature of the earth exceeds the 212 degrees at which water forms steam at atmospheric pressure, and is mounting rapidly. In one of my water wells at the Red Star Service Station, near Cerena, years age, with a depth of only 220 feet the drill came up "se het you couldn't held your hand on it", in the driller's words. In another drilled years age at Red Mountain, Calif., the drill came up from only 200 feet "red het", I was teld. Seme eilwells, the nearly 17,000 feet deep, proceed in spite of the great heat by means of a constant flow of cooling mud pumped down thru the drill-stem to bring up the cuttings and cool the bitt.

It is my belief that at only three miles down the temperature is sufficient to vaporize the water even against a pressure of 7,000 lbs., leaving all salt and other impurities behind, and it would instantly jet away from under the overburden of water, and would become a part of the head of super-pressure, super-heated steam carried by the entire under-crust of the Earth. And I am equally sure this head of steam can be tapped for man's benefit anywhere in the world. This explains the cases in the deserte where we rain over falls.

The tremendous steam pressure at the places where the steam is generated bulges the crust in blisters which often fill with the salt left behind and this accounts for the "salt Domes" found in drilling old marine formations f for oil. It also explains why some of the water which comes from granite, lew in solubles, is more than 99 percent pure, since it is steam until it rices to the spring or well. At these places it may rise five to ten thousand feet as steam, then condensing in the cooler rock, it may finish its treck as cold water.

However, water is known as the "universal solvent", since it will dissolve more substances than anything else, and HOM water is much more effective than cold, therefore, boiling water has the ability to disintegrate the hardest rock in time and Time is what nature has plenty of, so that most waters pick up some of the solubles along the way up. For this reason water from old sea formations often contain sea elements such as salt, borax, lime, sodium sulphe potash, nitogen, iron etc, the amount depending not only upon the amount in the formation but also on the heat left in the water while traversing the formation, and this depends upon how fast it rises and whether it is confined to one open crack or fassure or it is dispersed thru many fine cracks. Unter rising thru loose faults may arrive as geysers or hot springs, since the rapid flow is able to heat the rock and maintain this heat.

It is the latter condition which also permits the hot water to retain volcanic gases like sulphurreted hydrogen which tend to be filtered but by slow percolation. That is why hot mineral waters often smell "like rotten eggs".

Most of the minerals in the medicinal hot waters are the product of the melten. "magma", the boiling rock upon which the Earth's crust floats. Yes, it actually "floats", having an average eleven inch tide 80 minuted after the sum or moon passes the zenith. This is why the faults remain open or movable. In proportion to the size of the Earth, the solid crust is no thicker than the peel

of an apple, and is constantly "rippling".

In drilling the five wells I located for you North of El Cajon, we found the first 100 feet or so to be partly a white clay leftthere by the Colorado River, and below this almost unbroken blue granite with absolutely no change as deep as we have ever gone, which so far was 840 feet. I located all thee wells in the centers of faults up to 400 feet wide, as in the case of the No. 4 well, except the windmill well which is intthe extreme edge of the same fault the No. 4 is in the center of. When this No. 4 was at a depth of 479 feet, 8 inch diameter, there was only about 2 gallons per minute of water and that of very poor quality. It indicated to be coming from 150 feet away in a tiny crack from one small spring. We then changed to the 3 inch diamond drill and took cores 2 inch diameter and up to 13 feet long of the hardest wirgin granite, tombstone quality. At a depth of 535 feet the instruments indicated 13 springs had suddenly come to life and were feeding the hole. When we reache 840 feet the well was tested and pumped 300 gallons per minute or the full capacity of the pump. At this time the same 13 springs still showed, but later when a larger pump was installed and pumped along with the wells numbered la 2 and 3, as well as two neighboring wells, all through meters under the supervision of Mr. J. M. Estridge of the State Division of Water Resources, the No. 4 after 72 hours of continuous pumping of all these wells would still hold nearly 500 gallons per minute when the pump was speeded up and now showed a flow from at least 20 springs within 200 feet of the well. Mr. Estridge seemed much interested when I told him the wells were delberately located in faults and were not pumping from a basin, and when the pumps were shut down over night this was proved to be so by the rapid return of the water to its former levels. The quality of this deep zone water & alm far better than that in the upper clays and other materials, since the latter is polluted by surface drainage and also by the soil materials, while the deep zone water was steam until reaching the upper granite and is sealed off from surface pollution by the very sediments it has placed in the upper gracks.

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The High Sierra theory cannot be substantiated in any way and becomes more ridiculous all the time. In a statement published in the Los Angeles Times on March 17, 1953, credited to Paul Baumann of the County Flood Control, Los Angeles County, he said, "In 1950, consumption of potable water in the United States reached an estimated level of 170,000,000,000 gallons a day or some 58 cubic miles a year. During the same period the usable volume of water produced by rainfall was only about 50 cubic miles. This means that the water consumed in 1950 was 116% of the water produced, and this means that our national water resources account was overdrawn. During the same period the overdraft in Los Angeles County was several hundred percent. " He urged the reclamation of sewage water to save us from disaster. How much longer will those boys cling to that moth-eaten theory that the deep water is rain and snow How much more proof do they need before they will rewrite those antiquated text books written a century ago? Their "bible" was written before the days of enlightenment.

I have not the figures on the number of wells of 1,000 gallons per minute or over in the San Joaquin Valley the I believe it would far exceed one thousand, and I know there are many that will exceed three thousand g.p.m., but one thousand wells at an average of 1,000 g.p.m. would pump a million gallons per minute for an average of eight months a year, and I doubt if the snow in the High Sierras accumulating in the remaining four months could possibly supply that amount to may nothing of the tremendous future development, for it has only begun as yet, unless, of course, the officials pull some stupid deal like the one just settled in Arizona, where they blocked drilling for a long period while the State tried to grab title to all underground water, Needless to say it was defeated. In the next ten years there should be twice as many irrigation wells in California as now, and if we are to keep pace with the need for increased agriculture, now is the time to adopt new ideas and methods such as where the water comes from and how to get it. The supply from the Colorado is in grave danger of being decreased rather than increased.

In the Borego Desert I have one well, belonging to Mr. Ira Leck of Vista, which will pump a sustained flow of more than 2700 g.p.m., and it is only 150 feet from a previously drilled dry one. Both are 700 ft. deep. This pretty well wrecks the "basin" theory, and proves the water is in well

defined channels.

If my estimate of the number of wells in the San Joaquin Valley is right or if they use 1,000,000 g.p.m., they are consuming three trillion, four hundredsixteen billion, four hundred million gallons in eight months , and that is only one of the areas to be accounted for.

Your No's 2 and 3 El Gajon wells, after pumping continuously for eight years had not diminished a particle in flow, and this thru the six dryest years in recorded history. Another indictment of theeHigh Sierra theory.

I wonder how they account for the fine fresh water wells Henry Gross and Kenneth Roberts developed on the Island of Bermuda where it was said it was impossible to get water, since the ground was impervious and there were no H

High Sierras.

The longer the Diehards cling to their High Sierras, the longer it will be before they will be able to help with the reclamation and development of our country, for you and I know it is not the "Old School" geologists and engineers who are locating the hundreds of new wells which are being drilled every year, but it is the despised "witchers" and dowsers and "doodle buggers who must be given the credit. On investigating I find that nearly every successful well was located by someone using a switch, wire or instrument not recognized by the engineering profession. The Dowsers are not always right but they are right three fourths of the time while the geologists seldom are except when they follow the lead of the dowsers and drill in proven territory.

What orthodox geologist has the guts to go out in the so-called "arid" desert and try to locate an irrigation well? The accredited engineers just failed miserably twice in succession on two wells they lessted for the City Of San Clemente, both of which I condemned, one of them being 600 feet deep. and in territory proven to have water by a domes before the town was built. And wet I was not given a change because they know I would show them up.

I was requested by the City Water Commissioner to locate a wellsite for San Clemente and was assured that if the engineers choice was drilled and found to be a failure they would probably drill my location second or third. So far they have drilled three dry ones and are drilling a fourth at present. About 8 years ago I was requested by the City Engineer of Las Veges Heve. to see what the possibilities were of finding a new supply of water to enable the city to become independent of the Railroad Company which supplies the

water for the city. I located abundant new supplies right in the city, great underground springs and one river running right under Fremont street thru the center of town. kept the Engineer as well as the public well informed of my progress by frequent reports and newspaper articles. After six months work the Engineer casually infirmed me he had just been made Mayor and that he did not believe the city was in any position to do anything about developing new supplies even if they wanted to. At that time there were several Nevada State Engineers who had been stationed at Las Vegas for four years, running surveys to try to prove that the water there was coming from Mt. Charleston, 35 miles away.

I told them they could never do it because the water was coming straight up as steam. It is loaded with minerals from the deep layers of volcanie ash under the city. There was another six months wasted for which I never r received a cent of pay. Is it any wonder If I seem a bit unhappy with the reactionaries and their stubbornness?

In closing I will reiterate "there is abundant water almost anywhere in the

world, if it is properly located and developed.

Yours Respectfully

1) L'Eameron

P.S. Under the city of San Diego there is a river of good water from the

back country, 578 feet wide, running right under the city equipment lot. A similar river bisects Oceanside and an underground river six-tenths of a mile wide runs thru Long Beach. In the latter two cases I proposed to the city water engineers that I would drill them and prove them to be huge new supplies at my own expense and let them pay me after they had seen the water and tested it to their satisfaction. I got no response whatever.

At San Diego I was given large publicity in the Tribune, with pictures but

again no response.

In May 1951 I was elected as engineer fot the entire Navajo Tribe at Window Rock Ariz., to develop their resources, especially underground water. This was by unanimous vote of the entire Council of 58 Councilmen or Chiefs.

I found they had abundant water underground but while the Government engincors "permitted" them to drill the or three wells a year, the Navajos paid for them with tribal funds, yet the engineers "located" the sites and let the drilling contracts. Since they had no idea where the water was, they tried to make up for this defect by drilling to excessive depths. This made the wells cost an average of \$24,000 each where if they had been properly located and honestly drilled they could have been 90 percent successful and at a cost of not over one tenth to one fifth the cost. As it was most of them had been failures, even at such enormous cost. They have 613,000 square miles.

And the worst of it was that the Navajos ' allowance of sheep had been reduced due to water and pasture shortage to such a low number the sheep were dying of thirst and the Navajos from hunger in some instances. They were forced to haul water in barrels ten miles to water the sheep they informed But the Bavajos were not permitted to drill one well on my locations. I located 17 well sites and even the some of the chiefs pearly mept I was The property of the care of the care

**HYDROLOGIST** 

OIL and WATER

## V. L. Cameron

THE ONLY SCIENTIFIC METHOD OF LOCATING WATER KNOWN. ACCEPTED BY THE UNITED STATES AND MEXICAN GOVERNMENTS.

Residence Box 1120 Grand Avenue

Elsinore, California

Telephone Grand 634

April 27, 1953

Col. Ed Fletcher;

Dear friend;

My daughter, (25), her husband, a young one armed engineer, and my son, (13), returned from Eagles' Nest yesterday evening, after a most wonderfulttwo days, actually about the most wonderful we have ever experienced, thanks to your kindness.

The first day, (Sat.) Larry, (my boy) caught four big trout and I got one. We enjoyed ourselves immensely, in and around the "club house", and later enjoyed the trout for supper. We had our own dishes, bedding etc., and after a long visit with Mr. Davison, went to bed. Yesterday morning we hiked up to the springs and I marked the sources of three springs for later development, Also I killed a small rattlesnake and we looked for likely rocks for minerals,

Later we had a good lunch and Larry caught three more trout, the last one against my orders, as I had told him to take no more than one for my ex-wife, (his mother), and one for Jeanne, my present wife who also was not along. He said the last one hooked itself while was doing something else. It was 143 with long. As to my survey of the Sorrento, Del Mar district:

On Friday I spent all day working over the entire district; at first I was a little doubtful that there would be anything good, except by going deep into a spring, and I have found in the past that these in this district are very liable to be salt water, but on going through Del Mar I discovered that the Coast Fault, which is a part of the San Andreas Fault system and which I already knew ran through or near all the Coast cities from there to Long Beach, instead of going on down to La Jolla as I had thought, suddenly turned at the Southern limits of Del Mar and passed through the hills and up to Sorrento. I could not find any deep wells in it at Sorrento, but found there were one or two shallow wells over it there, and it almost certainly accounts for the fact that the creek is flowing permanently.

Then I retraced the fault back to the slough or canyon under the Mt. Carmel Valley Road and around to the north and approached it both over the hills and through Del Mar and finally into your property, where it nearly follows parallel to your north line, angling slightly so that at the northeast corner of your property down in the canyon it is almost entirely under your property, being x22 two-thaths of a mile or approximately a thousand feet wide. At this point it shows a top of 210 feet, and the bottom of the first water at 465 feet. Of course, there is no actual bottom, and a small hole on down from this depth of 465 would bring up wastly more water.

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Incidentally, San Clemente, I believe just brought in a big well of something like 100 inches on their fourth try by just accidentally close beside one of those deep springs to a depth of something over 1000 feet. They would not follow my advice or drill where I located, but I had the pleasure of condemning each of the first three in turn as they started drilling; the fourth one I didn't know they had set up on until they were already finished.

I do not believe the danger of salt intrusion or penetration is quite as great there, however, as it is at Del Mar and Encinitas; however in going deep in a Sault, I have little fear of any such trouble even there. Shallow wells just north of your place, 30 feet deep and spring-fed, are somewhat salty due to accumulation of minerals in the surface. My suggestion would be that you drill a large rotary hole to 475 feet in the canyon at your northeast corner at a spot I will stake accurately after you get a road in and brush off the bottom. If you will have a wide streak brushed off, say 50 feet wide up and down the canyon to near the north line and get an access road in, I'll stake a place somewhere around 200 feet south of the line or north of a strip of white cloth I placed on the north side of a pine tree in the bottom. The brush is very thick and its mean travelling. Just after I passed a stake on your north line, I suddenly thought of rattlesnakes, which is very unusual for me as I can't hear them any more so just have to leave them to look out for themselves; I hadn't gone 30 feet further down the htll, watching carefully, when I saw a big, fat, red one under a bush. It was about 4 feet long; his body is lying around your north stake. He put up quite a fight. Also, I killed a second small one at the Eagle's Nest right on the steps of one of the cabins. That makes four in four days, and I usually don't see one in two years, so be careful now when your're in the brush.

I believe we can get a hundred inch well, or larger, there in the canyon, and if it doesn't furnish abundant good water by 475, we can drop in with a smaller bitt and go on down to a thousand or where ever you want to stop. Of course, that will have to be regulated, as well as the size of the hole, but whether you would want to furnish water for the City of Del Har or not, as I am pretty sure you can do it from this source. I have approached many of the Coast cities in past years about developing water from this fault for them, but have had no takers so far, so if you would care to do it, starting with Del Har, it would delight me no end. This will be a most important well in my business, and because of that I wanted to spend a great deal of time running around the country there, getting as much assurance as possible as to the quality and quantity of water before starting the well. I am satisfied. If you want to go over it with me at any time,

I'll be glad to do so,

I don't feel much like billing you for the day after your wonderful kindness in giving us the use of the Eagle's Nest and since the
well is not yet staked, but of course that is a very minor job whenever we can get around over the ground; however, if you care to send
me anything, you can do so, and I'll credit you on future work, as
for instance another trip to Del Mar. I want to observe that well
closely, too, while itsdrilling, as I believe it will write history
for California. I feel about it as you probably did about Hodge's
Dam.

All for now; again, please accept our sincere gratitude.

VLC/C 8 P

Sincerely,

ameron.

70 Sor Cliffs ne Corner Pine ke Road Here Bruch out If Pine tree New Road on top Stake MAP Of Subdiv. At Forrey Pines

## **Ed Fletcher Papers**

1870-1955

**MSS.81** 

Box: 4 Folder: 18

## **General Correspondence - Cameron, V.L.**



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