BEFORE THE CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Right Application No. 30166 of James J. Hill, III	**TESTIMONY OF JAMES J. HILL, III**

1. Introduction

My name is James J. Hill, III and I am the owner of the El Sur Ranch, located generally north of the Big Sur River. The ranch consists of over 7,000 acres, of which approximately 300 acres are fenced for irrigated pasture. I have had a short video prepared to assist the Hearing Officers and the State Water Resources Control Board in understanding the Ranch's setting, its irrigation and its relationship to the Big Sur River. The video, which is **Exhibit--13,** was prepared under my direction and shows the overall setting of the Ranch, its pastures, the Big Sur River and its steelhead. The helicopter shots were taken on October 18, 2002, and the ground footage was shot on November 2, 2010. The footage of steelhead was taken from the bank of the Big Sur River at 36°16'58sec .02N, 121°51'32 sec. 45W; the USGS gauge at Julia Pfeiffer State Park recorded flows of 24 cfs when the river footage was taken.

In 1955, my father, Cortlandt T. Hill, bought the El Sur Ranch from Harry Hunt. I have been an active participant in ranch life and operations since I was a youth. My family's primary residence was and remains on the nearby Monterey Peninsula, and my first memory of the ranch is at approximately at the age of 2-1/2, visiting the beach. I have worked on the ranch since before I was ten years old. Generally, I participated in all phases of ranch operations as a youth, including cutting brush and building fence.

My mentor on the ranch was Tom Asmus, the ranch foreman during my youth and early adulthood. The Asmus family came to the ranch in 1935. Tom's father was the foreman on the ranch before him. Tom was raised on the ranch, graduated from UC Davis in Animal Science, served in WWII and returned to work on the ranch about 1960.

Prior to the time I was 10 or 12 years old, the pasture irrigation was the responsibility of Mr. Branson. He was the irrigator and irrigation was exclusively his domain. Consequently, while Mr. Branson was employed, I only sporadically assisted with the irrigation process. When I was somewhere between the age of 10 and 12, Mr. Branson left and irrigation duties shifted to ranch personnel collectively. From that time, I began to assist with the operation of the current irrigation system.

I continued to visit and work on the ranch during the summer when I was in high school. In college, the ranch became my responsibility and I rotated my time between school, the ranch and other family properties.

2. History of the Ranch

The El Sur Ranch was originally formed as one of several hundred ranchos created during the 1800's, in California's Spanish-Mexican period. The grant of the Rancho El Sur as it was known was made in 1834 by Governor Jose Figueroa to Juan Bautistia Alvarado. A copy of the map submitted to the Board of California Land Commissioners in the 1850s to confirm the grant hangs in my office and is shown in an excerpt of Exhibit **ESR--13**. By 1892, the ranch was divided into four lots; Lot I and Lot II were what is now the El Sur Ranch.

As far back as 1905, Lots I and II of the El Sur Rancho, which included the bench lands now in the permanent pasture north of the Big Sur River and west of Highway One, may have been irrigated with river water for the cultivation and harvest of crops. A Notice of Claim of Water Rights from the Big Sur River was recorded by Martha M. Vasquez on January 14, 1905 in Book A of Water Rights, Page 216. The rights claimed were for agricultural and irrigation purposes. A copy of this claim is Exhibit **ESR--15**. Two centrifugal pumps were installed at the Molera Ranch for this purpose, on the

north side of the river near the Cooper cheese house, on what is now Andrew Molera State Park. A centrifugal pump foundation can still be seen in the state park, and portions of the old pipe system can still be observed along the highway in what are now the Molera State Park and El Sur Ranch irrigated pasture.

Electricity reached El Sur Ranch in 1948. Mr. Hunt constructed the current irrigation system, based on an electric motor-driven centrifugal pump in a well connected to pipes and valves that were designed in 1950 by Monterey County Surveyors, Inc. The core irrigation system is still in use on the ranch today.

The current irrigation system was originally based solely upon the Old Well installed around 1950 or 1951. Pipes ran to Irrigation Fields Nos. 1 through 8, but not to the upper part of the North Pasture (aka Old Grass Field), the South Pasture (aka New Grass Field) near the highway, or the Pumphouse Field. As a practical matter, the usual operation was continuous irrigation to the fields, in rotation, from late spring to fall, which resulted in each field being irrigated about every 45 days. Salinity in the pumped water would become a problem every year at one time or another, usually in August, when salt water intruded into the groundwater supply. Prior to the installation of a conductivity meter, salinity was monitored by taste, and the Old Well pump was shut off when the water tasted salty to prevent damage to the crop roots.

My father expanded the irrigation system to the additional fields mentioned above during the period 1956 to 1958. He added one lateral irrigation pipeline, relocated laterals within the Pumphouse Field and graded the field in order to avoid the flooding of lands below the bench lands, or terrace lands, in what is now known as Andrew Molera State Park. A tailwater reclamation pond was also constructed at that time. Cattle are watered by troughs fed by water from a groundwater well and springs on the east side of Highway 1 through separate supply pipelines (not from the irrigation system). Cattle also water at the reclamation pond itself.

The expanded place of use taxed the existing Old Well's capacity, so my father hired International Agricultural Services to determine how to supply the expanded irrigation fields. Additional wells, including a second irrigation well, the "New Well," were drilled beginning in 1972.

Due to a dispute with the State of California concerning the reserved easement rights to connect the well to the ranch's irrigation system, however, the New Well was not placed into operation until 1984 after settlement of litigation resolving the dispute.

3. Assumption of Management Duties

My father died in 1978, during my third year of college. Consequently, on March 28, 1978, I assumed responsibility for management of the ranch. While I was still in college, the ranch was largely run by an experienced businessman and Tom Asmus, the ranch foreman. During this period, however, I started becoming more involved in Ranch operations, eventually becoming fully familiar with all operational and fiscal aspects of the ranch. I participated in and oversaw major capital expenditures and litigation perfecting ranch property rights. I graduated from California Polytechnic State University in 1981 with a degree in Agricultural Business Management and have had full management responsibility for the ranch ever since. I remain involved in daily operations, but I now also have a major emphasis on securing the water right to continue the cattle ranch operation.

4. Description of Irrigation System and Pasture Operations

The El Sur Ranch farms eleven irrigated fields as an essential part of its ranching operation, which will be discussed later. The fields have been planted with a mix of non-native legumes and forage grasses, as recommended by agricultural consultants retained by my father, and have been managed to ensure their long-term productivity and health.

Disking of the pastures is not practiced since it would be harmful to the perennial crop planted on the pastures and could result in erosion and invasion of disturbed soil by weed species. Instead the fields are managed to control undesired species and to promote self-seeding of the forage species by ensuring a dense and healthy stand of crop.

We have fertilized the irrigated pastures with urea for many years. Fertilization is conducted during mid- to late summers while the irrigation pumps are running. Fertilizer is applied no more than 48 hours ahead of the water as the irrigation moves across the fields. It is applied with a broadcast spreader at approximately 70 to 80 pounds per acre, in order to produce enough crop to sustain the

herd through the calving and breeding season without having to move or disturb them or their very young calves.

The Ranch also uses non-restricted herbicides, such as Weed B Gon® and Round Up® for weed control. This is done near the end of the rainy season during warm sunny days when weeds are sprouting and in their growing stage. Another round is done in late summer to treat late-blooming thistles. Both herbicides are mixed with water to a 1% concentration and manually applied by spot-spraying individual plants.

No insecticides, fungicides or rodenticides are used by the Ranch.

The layout of the pasture irrigation system can be seen on Exhibit **ESR--14**, showing the layout of the irrigated fields, the locations of the Old Well and the New Well, the pipelines from the wells to the fields, and the reclamation pond. From a physical facilities perspective, either well can be used to irrigate any field, but irrigating the upper fields with the New Well is more difficult and requires use of the reclamation pond, a booster pump and temporary water line. Figure 1 is a schematic showing the valve arrangement that allows either well's pipeline to be connected to the laterals.

The two wells are different in nature. The Old Well was drilled in about 1950 or 1951 for Harry Hunt, the former owner, by Alsop Pump. It utilizes a 60 horsepower centrifugal pump and originally produced up to approximately 2,000 gpm, depending on the field being irrigated. The New Well is driven by a 50 horsepower turbine pump capable of delivering approximately 1,500 gallons per minute.

The pump on the Old Well has a pressure regulator on the discharge in order to create an artificial head of between 60 and 62 pounds. This is necessary to prevent the well from breaking suction. This well performs better when delivering to the higher elevation fields, which provide a naturally greater head. The pump is next to the well and draws the water out by suction.

In contrast, the New Well is operated by a motor shaft going down the well to bowls and impellers. This well won't break suction no matter what elevation it is pumping to. However, it does not generate the same level of pressure as the Old Well and can't deliver to the highest elevation fields as efficiently.

Salinity of the well water is tested daily, using a conductivity meter, and the results are recorded. The Old Well sometimes records electrical conductivity readings in excess of 1.00 millimho/cm periodically. When this occurs, pumping from the Old Well stops in order to avoid excessive salinity in the pastures and to limit leaching requirements. The New Well is operated under an agreement with State Parks, which requires the ranch to conduct chloride analysis if pumping occurs at conductivity levels over 1.00 millimho. These levels have not ever occurred in the New Well, which is also tested daily.

There is a pipeline from each well. These pipelines each connect to the pasture's four laterals (also known as distribution or discharge mains), one at the top of each field. The connection of the pipelines to the laterals is shown in Figure 2.[1] The top lateral services the North and South Pastures, the middle lateral services Fields 1, 2, 3 and 4. The lower lateral serves Fields 5, 6, 7 and 8. The Pumphouse lateral serves only the Pumphouse Field. Of the two wells, only the Old Well can service the upper lateral directly. When the Old Well is not pumped due to salinity, water can be delivered by pumping from the reclamation pond, using a portable pump and temporary line to irrigate the North and South Pastures. However, this is very expensive.

The pipelines have stand pipes to provide pressure relief for the pipelines. These are located at the end of the laterals with a couple along the laterals every 750 to 1,000 feet. The stand pipes are installed as a precaution in order to prevent the laterals from breaking under excess pressure.

The pasture on El Sur Ranch is surface irrigated with borders. A border is a strip of land parallel to the slope of the land and bound by ridges of soil. The borders on the ranch irrigated pasture are 14 feet wide and vary in length from about 500 to 1000 feet. Figure 3 is a photograph showing some of the borders on the ranch. Irrigation water is introduced at the top of the border using alfalfa valves and flows to the bottom of the border. Water is introduced to the borders via the laterals by opening valves. The valve locations are illustrated in Exhibit **ESR--14**. Most of the laterals are 14-

[1] Figure 2 is also found in the testimony of Dr. L. Niel Allen -- Figure 18.

inch diameter concrete pipes with valves placed at 28-foot spacing across the pastures. The concrete pipes are being replaced by PVC pipe as necessary.

The irrigation system is operated by manually opening and adjusting valves at the head of the borders, with each valve serving two borders. The number of valves opened is dependent upon various factors, including the length of the border, dryness of the soil, length and condition of the grass, irrigation set time, and unique characteristics of each border which cannot necessarily be attributed to any observable factor. The irrigator determines the number of valves to be opened based on his experience. During the irrigation set, the irrigator checks the advance of the water in the borders and makes adjustments to the valves to maintain a uniform advance of water between the borders while avoiding flow past the bottom end of the pasture.

The borders are designed so that the flow of tailwater from a set of borders flows to the next down-gradient set of borders. The pastures are separated from the ocean, Swiss Canyon and Andrew Molera State Park by elevated roads that serve as berms and contain tail-water runoff. In particular, the entire road along Andrew Molera State Park has been elevated to prevent runoff of water into the park, including runoff from winter rains. Any tailwater from the bottom set of borders is discharged into a reclamation pond (in the case of the field southeast of Swiss Canyon) or to one of two water control structures (in the case of the fields northwest of Swiss Canyon) which discharge to the ocean. Unintentional discharge of irrigation water from the reclamation pond is rare, occurring perhaps 1 or 2 times a year at most. The three water control structures are designed and sized primarily to regulate the effects of winter rains and runoff.

The irrigation rotation varies, but during the summer the period is generally 3 to 4 weeks. The summer irrigation season typically requires constant irrigation, so that fields don't dry out before the next irrigation commences.

Ranch personnel are trained for irrigation before being allowed to operate the system, in order to develop an understanding of how the water moves through the borders. The rotation for the Old Well is normally started in the North Pasture adjacent to Highway 1. The rotation for the New Well normally starts in Field No. 3. When applying water to fields with high infiltration rates fewer valves

are opened creating a higher flow velocity and reducing the exposure time for infiltration. Conversely, fields with low infiltration rates require more valves to be opened with less flow per valve, allowing greater exposure time for infiltration. When water reaches about 80 percent of the way down the border, the valves are shut off, but the water will continue to flow to the end of the border.

5. Irrigation Management Principles

The commencement, continuation and termination of irrigation is governed by general operating considerations that have been implemented and adjusted over the past 60 years to suit the growing conditions and grazing management and herd requirements of the ranch. These operating principles are subject to the judgment of myself and the foreman. The irrigation schedule is adjusted for some or all of the following conditions:

- Scheduled and unscheduled power outages.
- Scheduled and unscheduled shutdown required for repairs.
- The soil moisture conditions of each field at the beginning of the irrigation set.
- Daytime or nighttime irrigation and labor constraints.
- The soil conditions and topography of the particular field being irrigated. For example, the Pumphouse field has more porous soils than other areas of the pasture, and so requires shorter, higher velocity flows than other fields.
- Precipitation that may have occurred, or is anticipated based on forecasts, or other climate conditions. Precipitation is anticipated by monitoring the long-term (30 days) storm forecasts. When significant precipitation is anticipated, the fields are allowed to dry in advance of it.
- Climatic conditions. Windy, high temperature days will dry out pasture faster than normal. The irrigator also takes into account the length of the grasses, including grazing stages of the grasses and legumes in the pasture. Grasses at different lengths have different water uses.

- Time of year. In September and October, for example, the forage crop does not grow as fast as during spring and summer, and thus needs less water.
- Down-gradient progress of irrigation flows. The irrigator also adjusts the flow of water through the irrigation system as required. During irrigation sets, the valves are adjusted as necessary to equalize the down-gradient progress of water flow within the borders. The flow rates of the valves may be adjusted to take into account the particular fields being irrigated, and the limits on the rates of diversion allowed.
- Salinity levels in the pumped water. If salinity in the Old Well exceeds 1.00 milli-mho/cm of conductivity, it is shut down and irrigation is either accomplished with the New Well or the portable reclamation pond pump.
- Erosion considerations. Irrigation operations are designed to control erosion by not allowing fields to be over-grazed, and by maintaining a dense growth of legumes and perennial grasses within pasture fields.
- Forage needs. If there are fewer cows, or if there is adequate non-irrigated pasture, then the level of irrigation of the permanent pasture is reduced.
- Season. Irrigation is usually shut down by October 15 to 25th, as grass growth has slowed significantly.
- Economic considerations. The costs of energy and limited labor availability promote an efficient use of water.

As a result of these variables, it is not possible to predict with absolute certainty what irrigation operations will meet the pasture's needs with perfect efficiency. Some flexibility in both operations and allowable diversions is required to take these variables into account and achieve the best irrigation of the pastures.

6. Irrigation Records

I am familiar with the records that the ranch maintains in the regular course of business. Among these are the records of irrigation which are Exhibit **ESR-17**. These records report irrigation

water use since 1975. These records show the date of irrigation, the well operated, the salinity reading of the well, electric meter reading and, since 2006, the field to which water was applied and the prevailing weather conditions. These records were supplied to NRCE and to PBS&J for use in their analyses of the Ranch's irrigation.

Four pump efficiency tests were conducted during this period, which allow for estimation of water use based on the electric meter readings reported. These pump tests are found in Exhibit **ESR--16**. They were also provided to NRCE and PBS&J. An additional and most recent pump test was conducted in February, 2004, as part of the comprehensive studies undertaken for the Water Right Application and are found at Exhibit **ESR--3**. Using electrical records, the February 2004 pump tests provided specific pump data, including flow rates and kilowatt demand for each field. These tests indicated that the production capacity of the Old Well had decreased to about 1,145 gallons per minute (2.55 cfs).

In addition, I had a weather station installed at the intersecting corners of Fields 5,6 and 3 in August of 2004 and maintained it through February, 2007 in order to obtain the best possible data on which to ascertain the irrigation requirements of the pasture crop. The weather station recorded site-specific maximum, minimum and average temperature and relative humidity, solar radiation, wind direction and speed, and precipitation every fifteen minutes, collected on an hourly basis. The daily record of data collected by the weather station was provided directly to NRCE for analysis. The daily weather station records are found in Appendix C of Dr. L. Niel Allen's testimony found at Exhibit **ESR--12**.

7. Description of Cattle Operations

During the early spring season, cattle graze on the natural grasslands at higher elevations in the mountains and hills east of the Highway, and are moved to the irrigated pasture as the hills dry up, generally in the March to May period. Irrigation of the pasture typically begins in spring as the forage in the hills becomes less nutritious.

During the early summer, there will normally be approximately 400 calves in the irrigated pasture for about 45 to 60 days, after which they are taken out of the irrigated pasture and the steers are sold. Then the pastures will be given a rest and irrigated and the remaining herd will be placed in the pastures starting late August for the next 5 months. The cows are placed into the irrigated pasture in August, approximately 1 month before they begin to calve, in order to obtain proper nutrition from the green grass.

Cattle are moved through the fields ahead of and behind the irrigation when the fields are sufficiently dry that damage will not occur. The time required for a field to reach this point varies, with some needing as many as 10 days to be ready, and some drying very quickly. Some of the fields, such as the Pump House field, have soil profiles which absorb water so quickly that they can be irrigated while cattle are in them; they do not become so soggy as to be damaged by the herd.

The cattle typically have free access to every field in the permanent pasture except those being irrigated or dried, which normally means that they can freely move through at least 8 fields. Gates and fences can be used to close off the fields as needed. The cattle generally remain in the permanent pasture for 4 to 5 months, calving and then breeding, depending on how long the crop holds up.

I operate the ranch as a commercial cow-calf operation. I buy registered horned Herford bulls, and breed Herford cows. I sell the weaned calves to various markets within 6 to 8 months of birth. We do not conduct a feeding or fattening operation, nor do we have a dairy operation. We birth all of our own calves (i.e., no purchased stockers) and the mother cows generally have been bred and raised on the ranch. Presently, the ranch supports about 450 head. Breeding occurs with approximately 30 to 35 bulls over a 60 to 75 day cycle. The cows go through two thirty-day heat cycles, breeding from December 1st to February 5th.

Breeding occurs in the permanent pasture when it is not being irrigated. The breeding season is limited to 75 days maximum in order to limit the calving season accordingly for more uniform calf weights. The dry ground and relatively flat terrain requires fewer bulls and results in fewer injuries. The irrigated pasture is less dusty than uncultivated fields, and cattle experience less respiratory

disease as a consequence. If the weather is too rainy, however, the cows are moved out of the pasture, to protect the fields from damage.

The calving generally begins approximately September 10. An electronic database is maintained that relates each calf to its mother. Colored numbered and electronic ear tags denote heifers from steers. The electronic ear tags and database contain all relevant data regarding each animal. Each animal is closely observed in a chute and or squeeze at least 3 to 5 times a year for general health, medical conditions, weight, age, production capability, mothering history, etc., and cattle are culled as indicated.

Most bull calves are castrated and sold. Between 30 and 80 unbred heifers are retained to replace mature cows that are culled. The calves may be held as late as the following August before culling, the timing being dictated by the condition of the non-irrigated pasture, which varies from year to year. In 2009, culling occurred in mid-June, and in 2010 it occurred in mid-July.

The three-year timeline for this year's herd can be described as follows. A herd of 450 cattle was reduced to approximately 427 after the first cull. Of these, there are approximately 190 steers and 170 heifers, for a total of 360 head. Another 80 plus heifers (already 2 years old) are not mothers. Calves will be born beginning in September 2010. There will be approximately 170 one-year old heifers in September 2011. Of these, approximately 120 will be kept and the rest will be sold. The remaining 120 heifers will be bred for the first time in September 2012. At this time, the herd will be culled again with 60 to 80 one-year old heifers remaining. These heifers will calf for the first time in September 2013.

About 1-1/2 acres of irrigated pasture are needed to support a cow and calf for a full year. A cow constitutes one animal unit and a cow-calf pair constitutes 1-1/2 animal units. A bull constitutes 2 animal units.

The average size of the herd at approximately 450 is primarily limited by the number of acres of irrigated pasture and labor constraints (two employees). Greater irrigation of the existing fields would not substantially increase herd capacity above 450 cattle. Any significant increase in herd size

would require an expanded permanent pasture and additional labor.

8. Importance of Irrigation to Ranch Operations

The permanent irrigated pasture is an integral aspect of the cow-calf operation and essential to the economic feasibility of the ranch and the well-being of the herd. The irrigated pasture provides valuable feed at the time when the non-irrigated pasture does not. It is managed in conjunction with the non-irrigated range land, such that when more feed is generated by the non-irrigated range land, less feed, and less irrigation, is required in the permanent pastures. When late rains occur, I fertilize portions of the non-irrigated pasture in order to improve the grass yield. The increased yield allows me to use less water in the irrigated pasture since I don't need as high a crop yield there.

The feed cultivated in the permanent pasture is high-quality, green feed which provides essential nutrition for lactating mother cows, breeding bulls and a clean environment for the baby calves. The permanent pasture provides a location near the ranch headquarters and facilities with adequate feed and water for cows so that they can be carefully observed and cared for during the calving season when ranch personnel spend a great deal of time in the field. Additionally, the forage produced in the irrigated pasture prevents over-grazing of range land, prevents the erosion of the non irrigated hillside pastures, minimizes the stress on the land that usually generates very high levels of noxious weed production in the spring time, limits the purchase of feed and semi-truck traffic on Highway One during the busy summer months, and minimizes the need to excessively cull the herd during dry years. The dense growth of the irrigated pasture also exposes cattle to less dust and reduces the level of respiratory disease among the herd. These contributions all serve to stabilize the ranching operation and provide the economic certainty to continue it.

9. Historically, Pumped Well Water Was Considered to be Percolating Groundwater

Until the State Water Board staff advised me in 1991 that the ranch wells were diverting the underflow of the Big Sur River, no one, including any state entity, had ever suggested this. The

possibility that the El Sur Ranch wells might be diverting underflow wasn't mentioned when the New Well was drilled, not even by the California Department of Parks and Recreation (DPR"), which exercised permitting authority and CEQA jurisdiction over the five (5) wells drilled by the El Sur Ranch under the DPR temporary use permits. Neither DPR nor any other state entity ever asserted that the New Well was diverting river water, even during the litigation over the state's refusal to confirm the Ranch's easement to access its wells.

Additionally, well water from the Navy Well, located only yards from the El Sur Ranch wells, was conveyed through the Navy's own pipeline system to the Point Sur Naval Facility, under the operation of the Navy. Thereafter, the State of California took title to these properties and the Department of Parks and Recreation continued the same practice. Although this water was taken from the same source as the ranch's irrigation wells, and similarly transported out of the watershed, neither the Navy nor the State ever sought a water right permit or suggested that its well or the New Well was diverting from the river prior to DPR filing its complaint in 1990.

10. The Water Right Application Process

In the summer of 1990, the last year of a multi-year drought, DPR conducted a project over 3000 feet upstream of the El Sur Ranch wells. In implementing that project, DPR temporarily diverted the course of the Big Sur River into a newly-excavated channel in order to allow bank restoration work to occur in the streambed. This action had the effect of immediately de-watering the redirected river for a considerable stretch of the Lower Big Sur River. The river never ceased to flow adjacent to the ranch wells or into the lagoon downstream of that location.

On August 31, 1990, DPR filed a complaint with the State Water Resources Control Board. The complaint alleged that the lagoon at the mouth of the River was very low and would soon be dry. DPR claimed that the River had been de-watered because of the operation of El Sur Ranch wells.

The State Water Resources Control Board staff thereafter advised me that the ranch wells were diverting the underflow of the Big Sur River, and that a Water Right Permit was required. I promptly filed a Water Right Application in July of 1992, requesting the maximum amount of water historically

used (1984 water year) plus a small additional amount as a cushion against potentially drier conditions in the future. My application was protested by the Department of Parks and Recreation, the Department of Fish and Game, and the California Sportfishing Protection Alliance.

In 1994, my representatives, in consultation with the State Water Resources Control Board, the Department of Parks and Recreation and the Department of Fish and Game, began to discuss protocols for studies necessary to assist in the possible resolution of the protests, and in the absence of protest dismissal, for a hearing on the Water Right Application. Pursuant to this protocol, Jones & Stokes Associates, Inc. undertook a hydrologic investigation for the State Water Resources Control Board, for which the Ranch paid, and produced a report dated April 1999. The report concluded that there is a hydraulic connection between the well pumps and the river. The report also determined that El Sur Ranch's pumping impact on the river's flow is negligible. The Jones & Stokes report is Exhibit **ESR--27**. Although the Jones & Stokes report concluded that the Ranch's impact on streamflow and lagoon were "negligible," (see Exhibit **ESR--27**, Jones & Stokes, 1999, at 3-1) the protestants were not persuaded, and their protests to the Water Right Application remained unresolved.

In order to respond to the continuing protests, I retained respected experts in the fields of hydrogeology (The Source Group, Inc.), fisheries (Hanson Environmental) and irrigation management (Natural Resources Consulting Engineers) to investigate and document the degree of relationship between the ranch pumping and the Big Sur River. As part of this process, these consultants conducted three years of studies on the hydrology and biology of the Big Sur River and its instream resources, and evaluated the irrigation requirements of the El Sur Ranch fields using weather stations I installed on the pasture and at the Old Well site to better understand the site-specific factors affecting the pasture's irrigation requirements.

Other witnesses will describe the results of these studies.

The studies have produced not only a very detailed and well-supported understanding of the geohydrology and fishery resources of the Big Sur River, they have also allowed a closer examination of the irrigation needs of the El Sur Ranch. Development of a site-specific long-term meteorological record, as well as consideration of soil and crop types that typify the irrigated fields have persuaded me

that the amount of water sought in the application can safely be reduced without undue harm to the pasture on which my operation depends.

Therefore, I am amending the application to provide an annual limit of 1320 acre-feet as an annual maximum diversion (instead of the Third Amended Application's cap of 1615 afy).

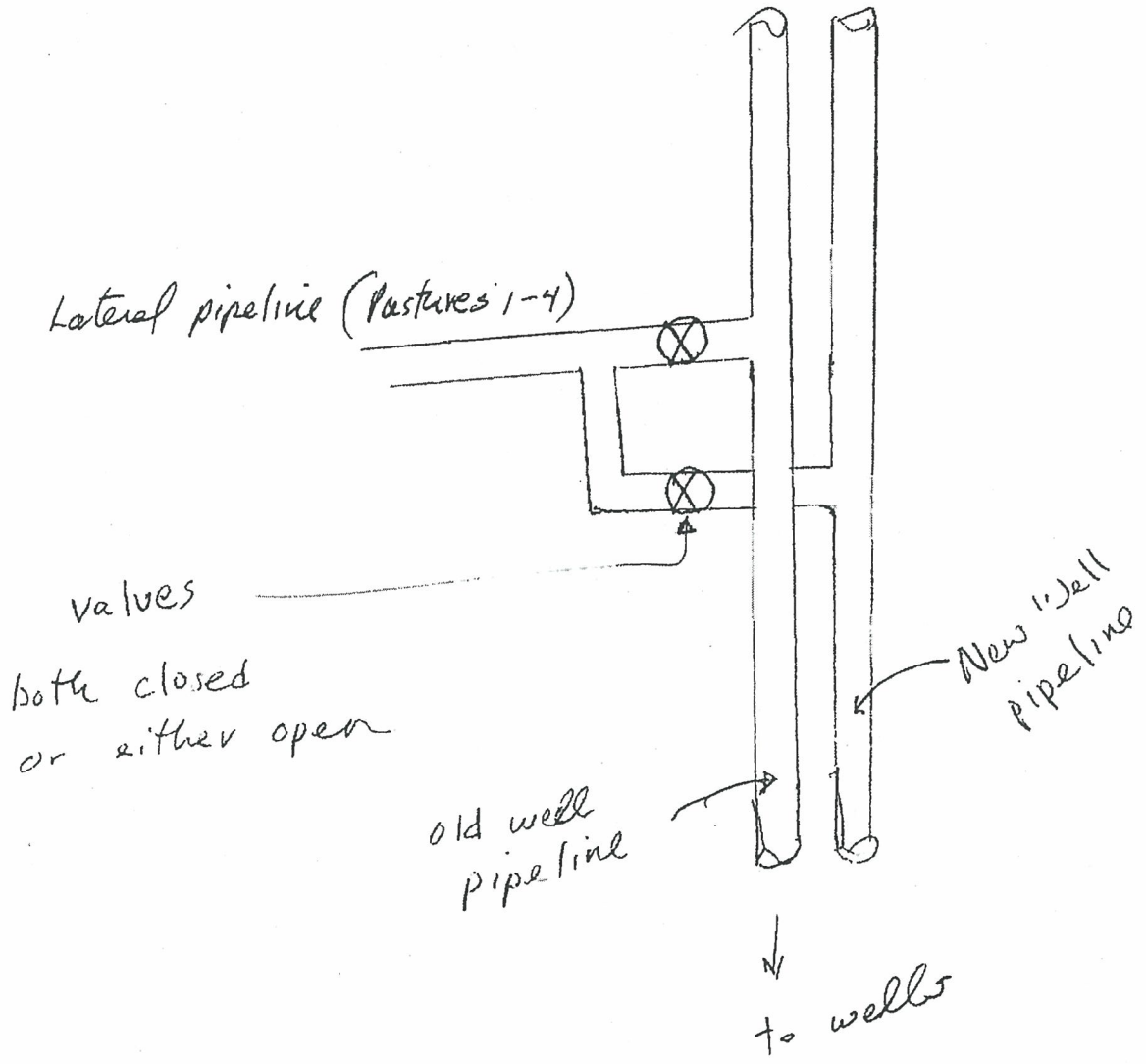
11. Future Use of El Sur Ranch

My goal in pursuing the Water Right Application is to ensure adequate irrigation for the existing permanent pasture, which is necessary to continue my cow-calf operation.

I have no plans for the ranch other than to continue to operate it as a cattle ranching facility and intend that it should remain in my family indefinitely. Consistent with these plans, I entered into a bargain sale agreement with the County of Monterey. Pursuant to this agreement in 1997, I granted a permanent Conservation and Scenic Easement that includes the vast majority of the public viewshed lands within the El Sur Ranch. A copy of the Easement is found at Exhibit **ESR—20**. Included in the permanent easement are all of the lands west of Highway One, including all of the permanent pasture constituting the place of use under the Application. The Conservation and Scenic Easement allows for no economic activity other than continued agricultural and ranching use of the land. These are recognized as priority uses under the Monterey County Local Coastal Program certified by the California Coastal Commission, and are found at Exhibits **ESR—18 and 19**. As a result of the Conservation and Scenic Easement a ranching operation is the only remaining economically viable use of the property.

#1

El Sur Ranch



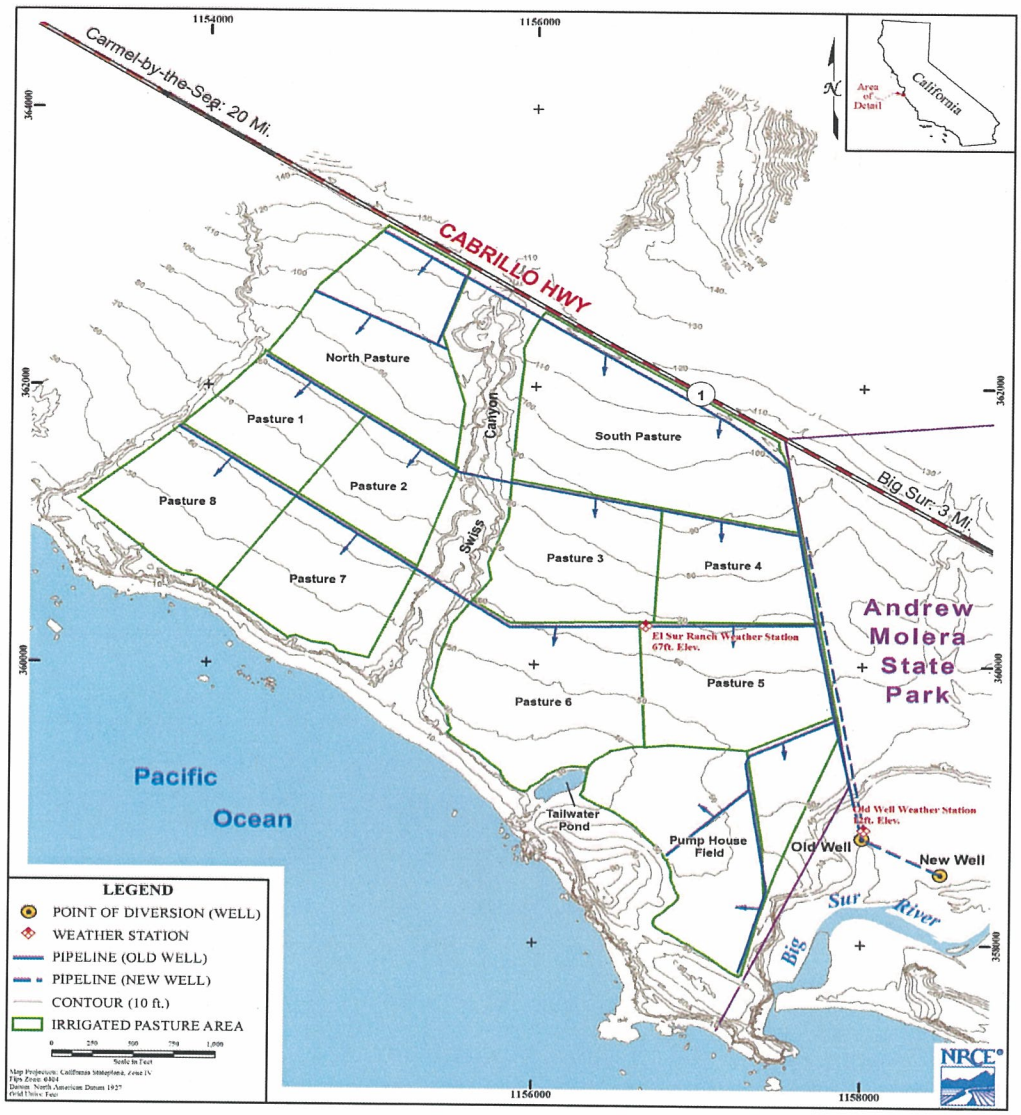


Figure 2. Topographic Map of the El Sur Ranch Irrigated Pasture and its Infrastructures.