Loan Feasibility Study

For

Saguache Augmentation Project

Feasibility Study Approval
Pursuant to Colorado Revised Statutes 37-60-121 & 122, and in accordance with policies adopted by the Board, the CWCB staff has determined this Feasibility Study meets all applicable requirements for approval.

Zachary Salin — 05/08/2025

Signed — Date

Sponsored By

The Rio Grande Water Conservation District, acting for and on behalf of Special Improvement District No. 5 of the Rio Grande Water Conservation District, acting by and through its Water Activity Enterprise

Executive Summary

The Rio Grande Water Conservation District, acting for and on behalf of special Improvement District No. 5 (Subdistrict No. 5) has executed a purchase contract for a perpetual easement to drill and access two augmentation wells in Saguache County. The Subdistrict will need to purchase four additional center pivot irrigated fields and their associated groundwater rights. These groundwater rights will then be used as a source of augmentation through at least two new augmentation wells. The reason for the purchases is to obtain a secure source of water to be used as a remedy for injurious stream depletions caused by groundwater withdrawals from Subdistrict No. 5 Wells. The purchase includes four groundwater rights.

Subdistrict No. 5 is requesting a loan in the amount of Six Million, Ninety-Three Thousand, Two Hundred Fifty-Seven dollars ($6,093,257.00) to: 1) purchase additional groundwater rights; and, 2) construct up to three augmentation wells which would carry augmentation water to Saguache Creek at the time, location and amount which the injurious depletions are occurring. A portion of land which was previously irrigated by the wells will be dried up and the historical consumptive use amount of ±855 ac-ft will then be changed in water court to augmentation use. This water can then be pumped to the creek at time and place as determined by the Rio Grande Decision Support System (RGDSS) Saguache Response Functions.

Subdistrict No. 5 will assess its members an annual Groundwater Withdrawal Fee (per ac-ft) in an amount sufficient to cover both the loan and interest payments and the operation and maintenance costs for the project. Subdistrict No. 5 currently has a loan from the Colorado Water Conservation Board for the amount of $6,080,200.00. Subdistrict No. 5 is required to prepare and approve an annual budget through an open public process. The Board of Managers of the Subdistrict will set the annual Groundwater Withdrawal Fee rate during the budget process at a rate sufficient to cover both of the loan payments, any operation and maintenance costs for the project, and to cover all additional operating costs necessary to operate the Subdistrict No. 5 Annual Replacement Plan. Those fees will be incorporated into the Rio Grande Water Conservation District's annual budget.

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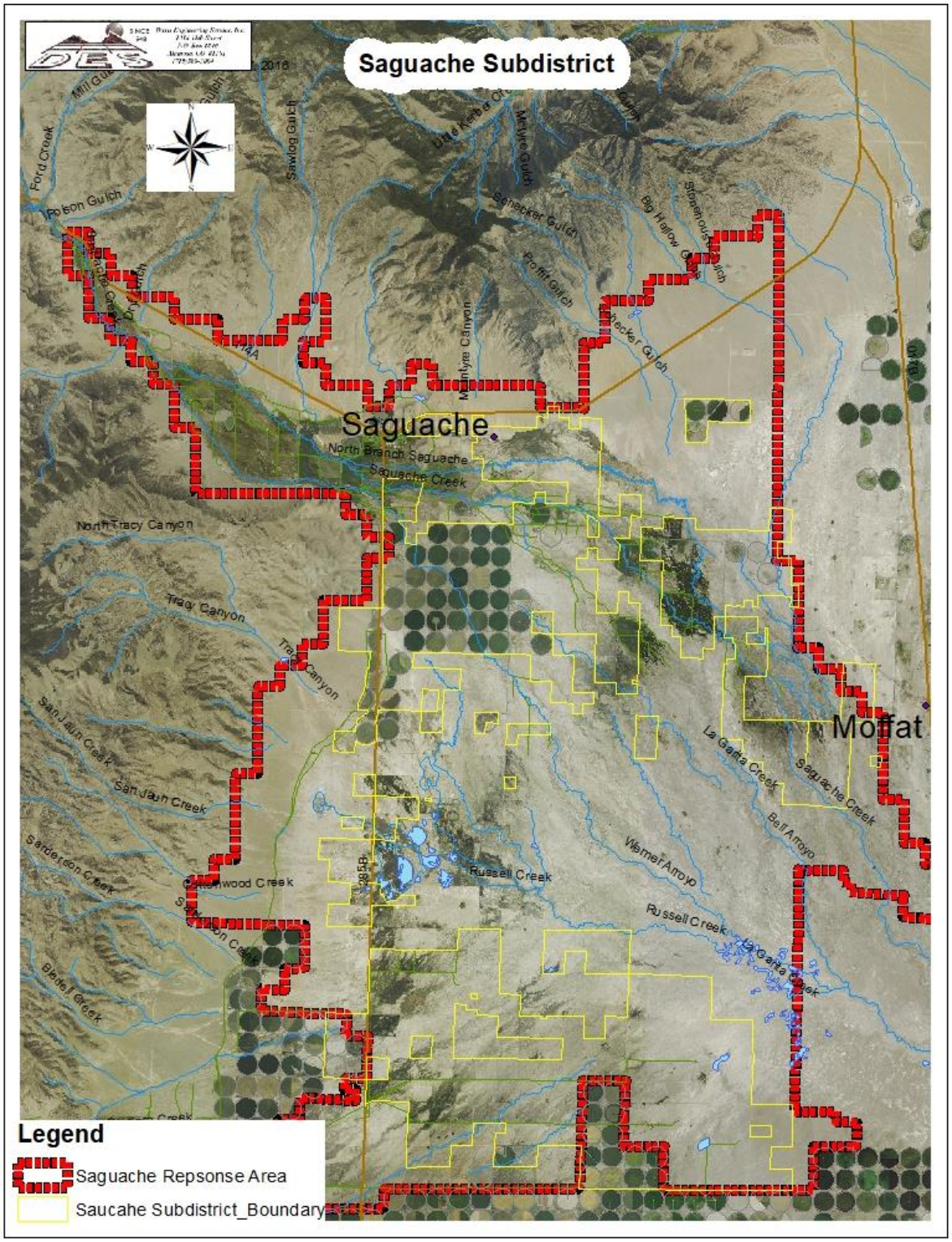
Contents

1.0 Introduction

1.1 Purpose of the Saguache Augmentation Project

Members of Subdistrict No. 5 are landowners within the Rio Grande Water Conservation District who rely on groundwater for all or part of their commercial, industrial and/or irrigated agricultural practices within the area defined by the Rio Grande Decision Support System (RGDSS) Groundwater Model and the Rules Governing the Withdrawal of Groundwater in Water Division 3, District Court, Water Division No. 3, Case No. 15CW3024 (Groundwater Rules) as the Saguache Response Area. Subdistrict No. 5 is a "checkerboard" encompassing specific lands within the Response Area, see Figure 1 below showing a map of the Subdistrict and Response Area. The RGDSS Groundwater Model has calculated stream depletions occurring to surface water streams caused by wells withdrawing water from the groundwater system within the Saguache Response Area that may cause injury to senior surface water rights and/or unreasonably interfere with the state's ability to fulfill its obligations under the Rio Grande Compact, codified in section 37-66-101, C.R.S. In order to remedy the injury or interference, the State Engineer has promulgated Groundwater Rules that have a direct impact on the current and future use of groundwater within the Saguache Response Area. Under the Groundwater Rules, non-exempt wells can only continue groundwater withdrawals if they have either: an individual Plan for Augmentation, a Substitute Water Supply Plan, or their well is included in a subdistrict's Groundwater Management Plan and Annual Replacement Plan. A subdistrict's Annual Replacement Plan must demonstrate that the subdistrict has a sufficient source of replacement water available to replace injurious stream depletions resulting from Subdistrict Well's groundwater withdrawals. Subdistrict No. 5 Seeks a Six Million, Ninety-Three Thousand, Two Hundred Fifty-Seven dollars ($6, 093, 257.00) loan from the CWCB Water Project Loan Program in order to fund the purchase of water rights and the construction of the Saguache Augmentation Project. Subdistrict No. 5 intends to use the Saguache Augmentation Project to replace all of its injurious stream depletions occurring to Saguache Creek. Subdistrict No. 5 has plans in place to remedy any injurious stream depletions which may occur to San Luis Creek and the Rio Grande as a result of the groundwater withdrawals from these Subdistrict Wells. Funding for acquisition of the water rights and the construction of the Saguache Augmentation Project will allow the Subdistrict No. 5 Members to continue operating their Subdistrict Wells and protect the local economy.

Figure 1 – Saguache Response Area Map



1.2 Project Sponsor – The Rio Grande Water Conservation District, acting for and on behalf of Special Improvement District No. 5 of the Rio Grande Water Conservation District, acting by and through its Water Activity Enterprise

The Rio Grande Water Conservation District (District) was created by the Colorado General Assembly and formed in 1967 by a vote of the people residing within its boundaries. The District was created to protect, enhance, and develop water resources in the Rio Grande River basin. The District encompasses a five county region, which includes Alamosa, Rio Grande, Conejos and those portions of Saguache and Mineral Counties within the Rio Grande River basin, including the Closed Basin. The District is a corporate body and a political subdivision. In order to accomplish its mission, the District is authorized to levy an ad valorem tax on all real property located within the District, collect fees assessments and surcharges. In addition, the District is also authorized to contract with Federal, State and local agencies, and individuals. Under section 37-48-108 C.R.S., the District is authorized to form Special Improvement Districts (subdistricts), which address specific needs and purposes for groups of water users in the District.

Beginning in the early 2000's, the District began the process of forming subdistricts to address the needs of water users in various regions of the District and aid them in complying with the proposed Groundwater Rules.

Subdistrict No. 5 of the Rio Grande Water Conservation District was established by the Saguache County District Court on December 18, 2017, in Case 2017CV30015. The overall purpose of this Subdistrict is to provide a community-oriented water management alternative to individual augmentation plans or state-imposed regulations limiting the use of wells in Water Division No. 3; that is, to provide a mechanism through which a group of well users in the Saguache Response Area can work collaboratively to develop and implement a system of self-regulation using economic-based incentives and other management tools that promote responsible groundwater management and that remedies the injury to senior surface water rights that result from groundwater use from Subdistrict wells. Subdistrict No. 5 currently consists of 230 wells that withdraw an average of 37,000 acre-feet of groundwater.

In order to fund their operations, the Subdistrict assesses Annual Service and User Fees by special assessments placed on their members and contract holders' taxes. The fees assessed by the Subdistrict are a per well Administrative Fee and a per acre-foot Groundwater Withdrawal Fee. The per acre-foot Groundwater Withdrawal Fee will be used to fund repayment of the Saguache Augmentation Project. In 2023 and 2024 the Groundwater Withdrawal Fee was assessed at $27.86 per acre-foot applied through sprinkler irrigation and $20.14 per acre-foot applied through flood irrigation.

1.3 Project Area

The Project Area is located in the northwesterly portion of the San Luis Valley in Saguache County, within the Closed Basin. The economy in this area is predominately controlled by the agricultural sector. Crops grown in the San Luis Valley include alfalfa, native grass hay,

wheat, barley, sorghum, canola, spinach, lettuce, carrots, and potatoes. Some of the other economic sectors include forestry, tourism, and mining.

The San Luis Valley is a large intermountain basin covering approximately 3,200 square miles of land in southern Colorado and northern New Mexico. The valley is bordered by the Sangre de Cristo Mountains to the east and northeast, the San Juan and La Garita Mountains to the west and northwest, and the Taos Plateau to the south. Snowmelt from the mountains surrounding the valley is responsible for most of the area's stream flow in the associated watershed, including Saguache Creek, the Rio Grande and Conejos River. Approximately 56 percent of the valley is in private ownership. The remaining acres are protected and managed by the U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Land Management, National Park Service, and State of Colorado. Most of the private land and wetland habitat occurs on the valley floor, creating one of the largest intermountain valleys in the world.

1.4 Land Uses

Land use in Subdistrict No. 5 is predominately irrigated agriculture, with a small amount of fish culture and commercial use. The main crops grown are grass hay, grass pasture, and alfalfa. Subdistrict wells withdraw an average of 37,000 ac-ft annually, 55 percent of withdrawals are used for flood irrigation, 43 percent are used for sprinkler irrigation, and 2 percent are for other uses.

2.0 Water Demands and Water Rights Included in the Saguache Augmentation Project

2.1 Water Supply Demands

The water supply demands are determined by the Rio Grande Decision Support System (RGDSS) Groundwater Model and the Saguache Response Area Response Functions. These tools are used to calculate the Subdistrict's depletions to Saguache Creek on a monthly basis. The magnitude of depletions varies with the April to September flows in Saguache Creek. The current Response Function evaluates three unique stream flow conditions; flows less than 26,000 acre-feet (Dry Years), flows between 26,000 and 37,999 acre-feet (Average Years), and flows of 38,000 acre-feet and more (Wet Years). The RGDSS Groundwater Model and the Saguache Response Area Response Functions are updated periodically and they are currently being updated to Phase 7. Preliminary estimates from the Phase 7 updates indicate that the Saguache Augmentation Project will need to supply an average of 1,987 ac-ft in Wet Years, 594 ac-ft in Average Years, and 130 ac-ft in Dry Years. These estimates represent a significant change from the Phase 6 numbers currently in use, see Table 1 below.

Table 1 – Saguache Creek Water Supply Demands Under the Current RGDSS Phase 6 Response Functions

	Monthly Injurious Stream Depletions												
Wet Years	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Ac-Ft/Month	355	325	141	188	87	51						40	1187
Ac-Ft/Day	11	11	5	6	3	2						1	
c.f.s./Day	5.77	5.47	2.3	3.06	1.45	0.82						0.67	
Average Years	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Ac-Ft/Month	160	224	83	21	1	0						93	581
Ac-Ft/Day	5	7	3	1	0	0						3	
c.f.s./Day	2.6	3.76	1.35	0.35	0.01	0.00						1.56	
Dry Years	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Ac-Ft/Month	42	21	17	7	9	28						79	203
Ac-Ft/Day	1	1	1	0	0	1						3	
c.f.s./Day	0.68	0.35	0.28	0.12	0.15	0.46						1.33	

Table 1. The table shows the average stream depletions from Response Function results under different April to September Saguache Creek stream flows. Wet Year stream flows are greater than 38,000 ac-ft, Average Years are between 26,000 and 37,999 ac-ft, and Dry Years are less than 26,000 ac-ft.

2.2 Water Rights Included in the Saguache Augmentation Project

Up to four irrigated quarters will be purchased by Subdistrict No. 5. Each of these irrigated quarters are irrigated using groundwater wells which are run through a sprinkler. Each of these wells are legally decreed through the Division of Water Resources. The decrees for the four wells are included in Attachment 1. The four wells are listed below:

- Permit # 6052-R, WDID 2605044
- Permit # 19063-F, WDID 2605046
- Permit # 19064-F, WDID 2605050
- Permit # 19058-F-R, WDID 2605052

The well permits for each well are included in Attachment 1.

3.0 Project Description

3.1 Purpose and Background of the Saguache Augmentation Project

The groundwater well owners within Subdistrict No. 5 have been trying to secure sources of water to replace their injurious depletions to Saguache Creek for several years. Since March 15th, 2021 the wells have been shut-off twice for extended periods due to a lack of remedy for these injurious depletions. Subdistrict Wells cause injurious depletions to Saguache

Creek, San Luis Creek, and the Rio Grande. Subdistrict No. 5 has been and will continue to work with the San Luis Creek Subdistrict (Subdistrict No. 4) to remedy depletions on San Luis Creek. Subdistrict No. 5 will replace depletions on the Rio Grande through the Closed Basin Project and agreements with the other subdistricts in that area. Subdistrict No. 5 has worked with the community for more than five years to find a suitable source(s) to remedy depletions on Saguache Creek that everyone would agree upon. The following alternatives described below have been considered to remedy depletions on Saguache Creek.

3.2 Analysis of Alternatives

3.2.1 Alternative 1 – Purchase Surface Water Rights and Well Injury Payment Agreements

Surface water rights could be purchased, and the irrigated land could be dried up. The historical consumptive use would be changed to augmentation through water court. The Saguache Creek drainage does not have any existing reservoir storage; therefore, the water would have been either left in the creek to meet depletions or with DWR approval the water could be recharged and pumped back to the creek later during the irrigation season when it was needed.

The majority of surface water rights along Saguache Creek are under conservation easements which do not allow the use of the water rights to be changed. Therefore, there are limited options available for purchasing surface water rights. Subdistrict No. 5 has evaluated four separate properties which included surface water rights. Even if the Subdistrict purchases all four properties, the historical consumptive use would not amount to enough replacement water in a wet year, so Subdistrict No. 5 would still have to come up with other replacement remedies for Saguache Creek.

Another replacement remedy that was considered with this option is a Well Injury Payment Agreement. A Well Injury Payment Agreement is between a subdistrict and the surface right owner who is being injured at a certain time and place. The agreement lays out an alternative to remedy injurious depletions between the surface water right owner and the subdistrict when the surface water right owner is the injured party. The surface water right owner would forego the injury owed to their water right for some type of compensation agreeable to them. This practice is common on San Luis Creek, the Rio Grande, the Conejos River, and the Alamosa River and has allowed other subdistricts to meet their required injurious depletions on those stream systems. The agreement allows the owner and the subdistrict to be creative with the compensation methods, but the most common type of compensation has been monetary.

To this point, the majority of surface water users along Saguache Creek have not been agreeable to Well Injury Payments as a remedy source and, in some cases, they have been hostile to the idea.

3.2.2 Alternative 2 – Saguache Pipeline

The second alternative considered was the use of augmentation wells which would pump water directly to Saguache Creek through a pipeline. The augmentation wells would pump the historical consumptive use from irrigated land that has been dried up. The pipeline would consist of approximately 17,000 feet of pipe buried approximately 5 feet deep. The existing irrigation wells would be piped together and pumped to a pumping station which would then pump water to Saguache Creek. In 2020, Subdistrict No. 5 secured a Water Project Loan from the Colorado Water Conservation Board in the amount of $4,892,440.00 for the construction of this pipeline. During the planning stages of the project, it was discovered that a section of county road did not have an easement across private lands and the Saguache County Commissioners declared they would assert authority under the County's 1041 regulations, which would at a minimum significantly delay the project. These issues prevented Subdistrict No. 5 from accessing the funds from that loan.

3.2.3 Alternative 3 - Saguache Augmentation Project

The third alternative involves pieces of Alternatives 1 and 2. Using their original Water Project Loan, Subdistrict No. 5 has purchased surface water rights from the Hazard Ranch in 2022 and three wells from North Star Farm in 2024 for sources of remedy. This Water Project Loan application to purchase four additional groundwater rights and drill up to three additional augmentation wells, will increase the Subdistrict's supply of replacement water and the capacity to deliver that water in the time and place it is needed, as dictated by the projected updates to the RGDSS Groundwater Model. The place of use for these groundwater rights will be changed to locations closer to Saguache Creek, which eliminates the need for a long pipeline. Up to three new augmentation wells will be constructed at these new locations to pump the augmentation water directly into Saguache Creek.

<u>Groundwater Rights</u>

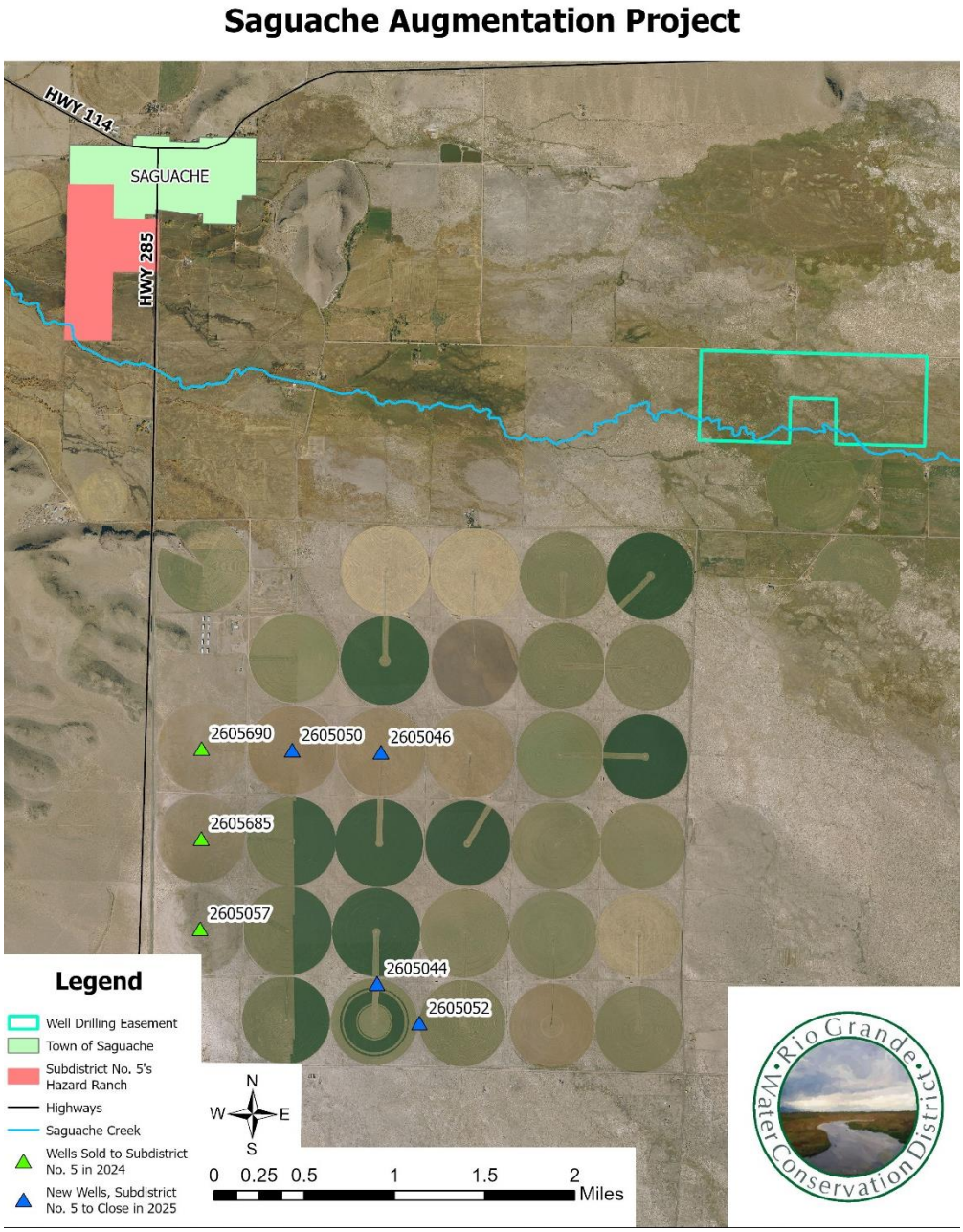
The groundwater rights considered in this alternative are all from Case No. W1902. The total volume expected from these three groundwater rights is approximately 855 acre-feet, see Attachment 2 for a preliminary historic consumptive use analysis. The groundwater rights allow Subdistrict No. 5 to use the aquifer as a reservoir and gives the Subdistrict a reliable source of on demand augmentation water. This on demand source of water will be relied upon only when the surface water rights are insufficient to remedy the Subdistrict's injurious stream depletions. In times when the additional sources of water and augmentation wells are not needed, the Historic Consumptive Use

"credits" may be left in the aquifer, which will aid the efforts to sustainably manage the groundwater resources in the Subdistrict.

Augmentation Wells

Due to the issues and timing of working through the Saguache County 1041 regulations and finding a route for a pipeline, Subdistrict No. 5 has opted to transfer the use of the groundwater rights to new locations. The Subdistrict will need to drill up to three new augmentation wells. The final number of augmentation wells will be determined once the final updates for Phase 7 of the RGDSS Groundwater Model and Saguache Response Functions are available. These locations will be near Saguache Creek and will not cross property lines or rights-of-way. The first two wells will be on the Sheppard property, for which the Subdistrict is in the process of purchasing an easement to drill these two wells. If a third augmentation well is needed, Subdistrict No. 5 is looking for and evaluating additional locations along Saguache Creek. If Subdistrict No. 5 cannot find a suitable location with a landowner willing to work with them downstream, they will evaluate adding an additional well on the Hazard Ranch.

Figure 2 – Proposed Saguache Subdistrict Augmentation Project



3.2.4 Alternative 4 – No Action

No action would result in approximately 230 groundwater irrigation wells being shut off throughout the Saguache Response Area. The economic and environmental impacts would be devastating to the area, so this is not a preferred alternative.

3.3 Preferred Alternative – Alternative 3

The community has not shown very much interest in Well Injury Payments which would be necessary to make Alternative 1 work and the prospects for completing the Saguache Pipeline in a timely manner are very unlikely. Therefore, the preferred alternative is the third alternative, presented above. Surface water used for direct replacement and augmentation wells pumping water to Saguache Creek will provide a guaranteed water source to Saguache Creek. The purchase of four additional groundwater rights and drilling additional augmentation wells proposed in this loan application will provide Subdistrict No. 5 with enough water and capacity to deliver that water to ensure injurious depletions can be remedied by Subdistrict No. 5 in time, place, and amount, as required by the Groundwater Rules. The augmentation water will be placed at a point high enough upstream to guarantee water can remedy depletions either downstream or upstream from that point.

4.0 Engineering Analysis for the Preferred Alternative

4.1 Source of Water for the Augmentation Wells

The source for water for the Saguache Augmentation Project will come from four separate irrigation wells which have historically irrigated acres under center pivot sprinklers. The irrigation wells pull groundwater from the confined aquifer. The irrigation under the center pivots will cease, acres will be dried up, and the historical consumptive use from those center pivots will then be used to remedy injurious depletions from Subdistrict Wells.

The crops under the irrigated ground which will be dried up have been in an Alfalfa/Small Grain rotation for the last 25 years. It is anticipated that each irrigated area under the center pivots will yield an annual average historical consumptive use of ±215 ac-ft per pivot. The total annual amount of 854.9 ac-ft is expected to be available to remedy injurious depletions to Saguache Creek.

4.2 Hydrologic Evaluation

All four wells are drilled to a depth that would classify them as completed in layers 1, 2, and layer 3 in the RGDSS model. The RGDSS model identifies layers 2 and 3 as confined aquifer layers. The depths of these three wells range from 200’ to 215’. Each of the irrigation wells currently pump ±900 gpm. The augmentation wells will be drilled and completed so that the historic consumptive use can be transferred from the irrigation wells in compliance with the Rules Governing New Withdrawals of Groundwater in Water Division 3 Affecting the Rate or Direction of Movement of Water in the Confined Aquifer System (Confined Aquifer New Use Rules).

5.0 Project Cost

The estimated cost for the Saguache Augmentation Project is $6,093,257.00. The detailed construction cost estimate for the project is shown in the Table 2 below.

Table 2 – Saguache Augmentation Project Cost Estimate

Item	Units	Quantity	Unit Cost	Total Cost
North Star Groundwater Rights w/ land*	ea.	4	$1,000,000.00	$4,000,000.00
Augmentation Well (Layer 2)	ea.	2	$577,199.00	$1,154,398.00
Augmentation Well (Layer 3)	ea.	1	$577,199.00	$577,199.00
Augmentation Well Access	ea.	3	$100,444	$301,330
			Total Construction Cost (TCC)	$6,032,927
			Total Project Costs with 1% Origination Fee	$6,093,257

*Cost shown in this estimate is the amount estimated to purchase each Sprinkler Quarter

6.0 Permitting, Change of Water Rights

As stated above all four wells are permitted through the Division of Water Resources and decreed through water court, the permits and decrees are included as Attachment 1.

Subdistrict No. 5 plans to temporarily change the water rights use from irrigation to augmentation through the SWSP process until they are able to permanently change the water rights through a water court case.

7.0 Implementation Schedule

This project will be constructed as soon as possible. Subdistrict No. 5 is moving forward with a purchase and sale agreement with the owner of North Star Farms for the groundwater rights. The bids and contracts to drill the layer 2 augmentation well have been awarded, notice to proceed should be completed by mid-December. The Contractors were selected not only on cost but also on availability and schedule to complete the project. Subdistrict No. 5 anticipates construction starting sometime in February-March 2025 after materials have been obtained for the project. The construction documents are included as Attachment 3.

8.0 Institutional Considerations

Subdistrict No. 5 will be required to obtain well permits prior to construction of any augmentation wells. The subdistrict does not anticipate it will be required to obtain any additional permits or permissions from any state or county agency to complete the infrastructure portions of this project. Subdistrict No. 5 will obtain any necessary permits if the need arises.

A purchase agreement between Subdistrict No. 5 and the Owner of the groundwater rights has not been finalized. Multiple conversations with the Owner indicate they are more than willing to work with Subdistrict No. 5 because they own other irrigation wells that could potentially be curtailed if Subdistrict No. 5 does not find a way to remedy injurious depletions. Subdistrict No. 5 has entered into an agreement to purchase an easement to drill two augmentation wells and is in the process of closing on the purchase.

9.0 Social and Environmental Impacts of the Project

The environmental impacts of installing the augmentation wells themselves are very minimal. There will be some relatively small environmental impacts to drying up the irrigated lands. However, if Subdistrict No. 5 does not find a way to remedy injurious depletions and the project does not move forward, then environmental impacts might be very significant if all Subdistrict 5 wells are turned off. Significant portions of historically irrigated land will be dried up, which includes thousands of acres of wet meadow habitat.

The social impact for the majority of the area including the Subdistrict Members will be positive. It will allow irrigation wells to continue to withdraw groundwater while also replacing any injurious depletions owed to senior surface water rights from these continued groundwater withdrawals. There is a portion of the community who has not been willing to work with Subdistrict No. 5 who might view this project as a negative impact to the area.

10.0 Financial feasibility

10.1 Financial Repayment

Subdistrict No. 5 is applying for a loan in the amount of a Six Million, Ninety-Three Thousand, Two Hundred Fifty-Seven dollars ($6,093,257.00) from the Colorado Water Conservation Board, Water Project Loan Program with a 30-year repayment period and an interest rate of not more than 2.15%. Subdistrict No. 5 currently consists of 230 wells that withdraw an average of 37,000 acre-feet of water per year. Subdistrict No. 5 assess a Groundwater Withdrawal Fee on each acre-foot withdrawn from Subdistrict Wells. Subdistrict No. 5 will fund the Saguache Augmentation Project through its Groundwater Withdrawal Fees. In 2023 and 2024, the assessed Groundwater Withdrawal Fees were $27.86 per acre-foot applied through sprinkler irrigation and $20.14 per acre-foot applied through flood irrigation. The total Groundwater Withdrawal Fees assessed in 2023 and 2024 were $533,706 and $664,576.78, respectively. Subdistrict No. 5 is currently sustainable under the Groundwater Rules, and it is anticipated that groundwater withdrawals will continue to fluctuate year to year, near historic values. The estimated annual payment of

$520,246.16 would enable Subdistrict No. 5 to maintain their fees at the current level for the life of the loan and in the future reduce the fees to reduce the costs to Subdistrict Members. The Schedule of Revenue and Expenditures is included as Attachment 4.

10.2 Credit Worthiness

Subdistrict No. 5 is entitled to raise funds by assessment of reasonable Annual Service and User Fees to carry out the goals and overall objective set forth in the Subdistrict's approved Plan of Water Management. Subdistrict No. 5 intends to finance its costs by raising sufficient revenue, in a fair and equitable manner, through the imposition of Annual Service and User Fees. Annual Service and User Fees will consist of two components, an annual Administrative Fee and an annual Groundwater Withdrawal Fee. Each component will be evaluated annually, and if appropriate, will be adjusted by the Board of Managers through an open public process, as required by the Plan of Water Management and in response to the demands of the Annual Replacement Plan. The total annual Groundwater Withdrawal Fee must be limited to the amount shown by specific items in the ensuing annual budget as required to provide sufficient revenue for the Subdistrict's operations, including: protection of senior surface water rights; funds to support a portfolio of water and/or a fund to assure the remedy of Post-Plan Injurious Stream Depletions; permanent retirement and/or annual fallowing of lands; establishment of a reasonable reserve fund; achievement and maintenance of a Sustainable Water Supply; and, any necessary infrastructure improvements.

As a special improvement district of the Rio Grande Water Conservation District, the Subdistrict's finances are included in those of the District. Attachment 5, shows the last three years of District Audit Reports.

11.0 Conclusions and Recommendations

1. The Saguache Augmentation Project is vital in assisting the Saguache Subdistrict to remedy injurious depletions owed to senior surface water users on Saguache Creek from groundwater withdrawals in the Subdistrict. The change of water right for the augmentation wells will result in a total of ±870 ac-ft based on the historical consumptive use of the irrigated areas.
2. The Saguache Augmentation Project is feasible from both a financial and engineering viewpoint.
3. The Saguache Subdistrict has the legal ability to budget the annual payment for the loan into their annual Groundwater Withdrawal Fee.

Attachment 1 – Water Rights Permits and Decrees

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION 3
STATE OF COLORADO

FILED IN DISTRICT COURT
WATER DIVISION 3
STATE OF COLORADO

JUN 17 1976

CARLA R. SHANNON
WATER CLERK

CASE NO. W- 1902

IN THE MATTER OF THE APPLICATION)
FOR WATER RIGHTS OF)
)
ARIZONA-COLORADO LAND AND)
CATTLE COMPANY, A COLORADO)
CORPORATION, LEGAL OWNER; AND)
OLIVER GOULD AND FAYE GOULD,)
CONTRACT PURCHASERS)

JUDGMENT AND DECREE
ADJUDICATING
WATER RIGHT

IN SAGUACHE COUNTY

South Farm
WELL NO. 2 W-1902.

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on June 27, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 25th day of May, A.D. 1976, and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:
   Arizona-Colorado Land and Cattle Company, A Colorado Corporation, Legal Owner, 5001 East Washington Street, Phoenix, AZ 85034.
   Oliver Gould and Faye Gould, Contract Purchasers
   P. O. Box 512, Saguache, CO 81149.
2. Name or designation of well:
   Well No. South Farm 2. Registration No. 19513-2.
3. Location of well and point of diversion:
   NE¼ NE¼, Section 30, Township 44 North, Range 8 East, NMPM, at a point 1310 feet from East Section line and 50 feet from North Section line, in Saguache County, Colorado.
4. Alternate points of diversion, if any:
   None.
5. Type of beneficial use:
   Irrigation.
6. Amount and source and means of diversion:
   2178 gallons per minute, being 4.85 cubic feet of water per second of time, being 9.70 acre feet of water in a period of twenty-four hours, from a (confined) ~~(unconfined)~~ aquifer.
7. Priority date of appropriation:
   August 27, 1951.

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION 3
STATE OF COLORADO

FILED IN DISTRICT COURT
WATER DIVISION 3
STATE OF COLORADO

JUN 17 1976

CARLA R. SHANCROFT
WATER CLERK

CASE NO. W- 1902

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF

ARIZONA-COLORADO LAND AND CATTLE COMPANY, A COLORADO CORPORATION, LEGAL OWNER; AND OLIVER GOULD AND FAYE GOULD, CONTRACT PURCHASERS

IN SAGUACHE COUNTY

JUDGMENT AND DECREE ADJUDICATING WATER RIGHT

South Farm
WELL NO. 2A W-1902.

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on June 27, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 25th day of May, A.D. 19 76, and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:
   Arizona-Colorado Land and Cattle Company, A Colorado Corporation, Legal Owner, 5001 East Washington Street, Phoenix, AZ 85034.
   Oliver Gould and Faye Gould, Contract Purchasers
   P. O. Box 512, Saguache, CO 81149.
2. Name or designation of well:
   Well No. South Farm 2A. Registration No. 019063-F.
3. Location of well and point of diversion:
   Center of NW¼, Section 29, Township 44 North, Range 8 East, NMPM, at a point 1320 feet from North Section line and 1320 feet from West Section line, in Saguache County, Colorado.
4. Alternate points of diversion, if any:
   None.
5. Type of beneficial use:
   Irrigation.
6. Amount and source and means of diversion:
   950 gallons per minute, being 2.12 cubic feet of water per second of time, being 4.24 acre feet of water in a period of twenty-four hours, from a (confined) ~~(unconfined)~~ aquifer.
7. Priority date of appropriation:
   August 27, 1951.

7A. That said well is not an independent source of water but is

WBJ-25-75

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

RECEIVED
AUG 31 '81
WATER RESOURCES

STATE OF COLORADO } SS.
COUNTY OF Rio Grande.

AFFIDAVIT

____ STATEMENT OF BENEFICIAL USE OF GROUND WATER
__X__ AMENDMENT OF EXISTING RECORD
____ LATE REGISTRATION

PERMIT NUMBER 19063-F

LOCATION OF WELL

THE AFFIANT(S) Ted Cook whose mailing address is 54970 County Road F City Center, Colorado 81125 (STATE) (ZIP)

County Saguache
Center ¼ of the NW¼ ¼, Section 29
Twp. 44 N. (N OR S), Rng. 8 East (E OR W), N.M.P.M.

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 1320 feet from the North (NORTH OR SOUTH) section line and 1320 feet from the West (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 27th day of August, 19 51; the maximum sustained pumping rate of the well is 950 gallons per minute, the pumping rate claimed hereby is 950 gallons per minute; the total depth of the well is 200 feet; the average annual amount of water to be diverted is 300 acre-feet; for which claim is hereby made for irrigation purpose(s); the legal description of the land on which the water from this well is used is NW¼ of Section 29, Township 44 North, Range 8 East N.M.P.M. of which 160 acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) Ted Cook

18973

Subscribed and sworn to before me on this 26th day of August, 19 81

My Commission expires: April 15, 1985 (SEAL)

Elizabeth A. Mann
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

ACCEPTED FOR CHANGE OF OWNERSHIP ONLY

FOR OFFICE USE ONLY

Court Case No. _____

Prior _____ Mo. ____ Day ____ Yr. ____

Div. _____ Cty. _____

Sec. ____ ____ ¼, ____ ¼, ____ ¼,

Well Use _____ _____ _____ _____

Dist. _____ Basin _____ Man. Dis _____

John A. Straub
Asst.

2/25/82
DATE

STATE ENGINEER

BY Robert A. Longenbaugh
Asst. State Eng.

Well drilled by Unknown Lic. No. _____

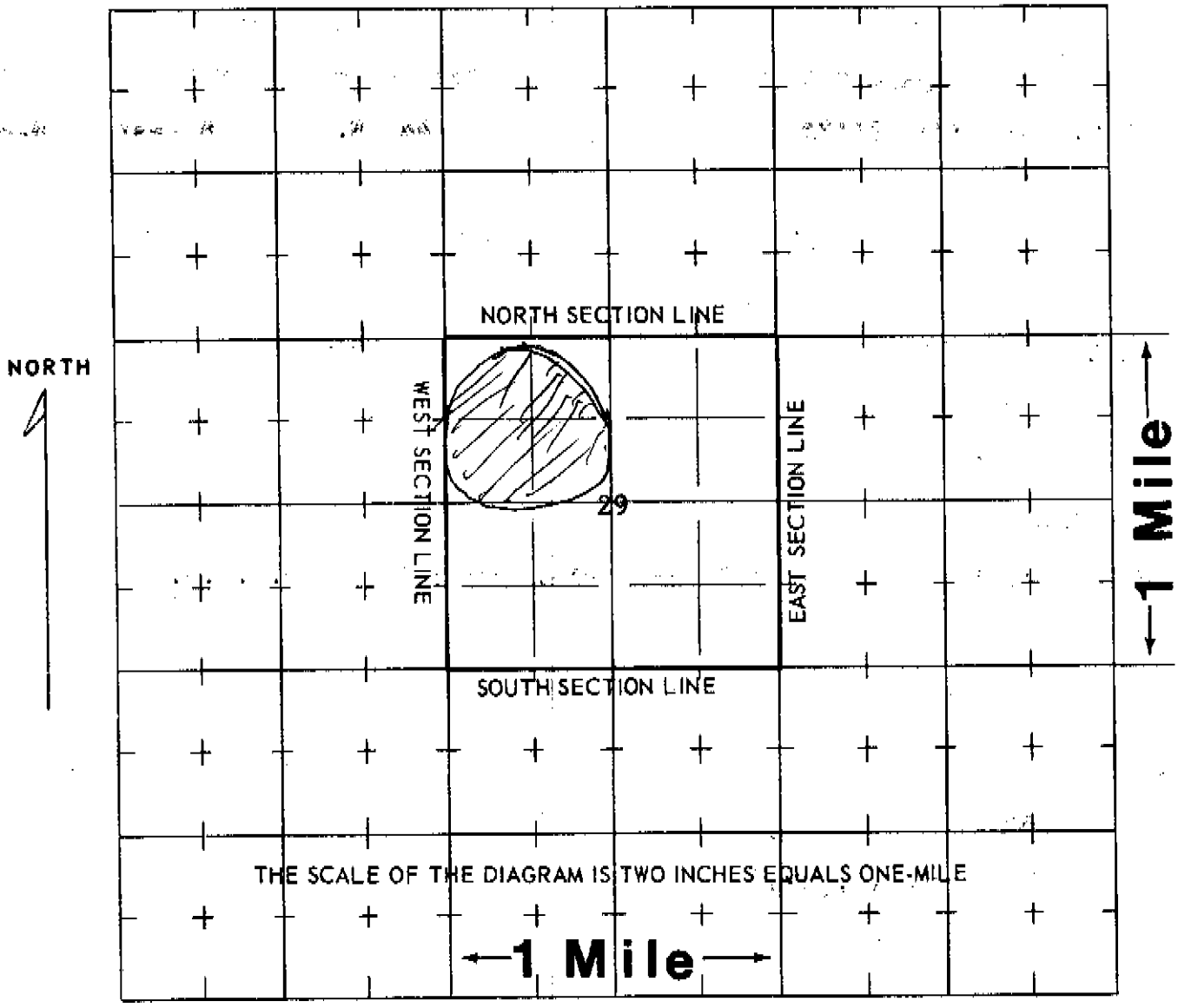
Permanent Pump installed by Unknown Lic. No. _____

Meter Serial No. None ☐ Flow Meter Date Installed _____

Owner of land on which water is being used Ted Cook

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the **CENTER SQUARE** (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep.
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
100 gpm pumped continuously for one year produces 160 acre-feet.

(WHITE AND PINK COPY TO BE FILED WITH THE STATE ENGINEER
PINK COPY WILL BE RETURNED TO OWNER)

WR-5-Rev. 76

RECEIVED

AUG 31

WATER RESOURCES STATE ENGINEER

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: (X) A PERMIT TO USE GROUND WATER
(X) A PERMIT TO CONSTRUCT A WELL
(X) A PERMIT TO INSTALL A PUMP

(X) REPLACEMENT FOR NO. 19063-F - being Well No. 2-A, Case No. W-1902, alternate point of diversion for Reg. No. 19513-2
( ) OTHER _____
WATER COURT CASE NO. _____

(1) APPLICANT - mailing address

NAME Ted Cook

STREET 54970 County Road F

CITY Center, Colorado 81125
(State) (Zip)

TELEPHONE NO. 754-2500

(2) LOCATION OF PROPOSED WELL

County Saguache

NE ¼ of the NW ¼, Section 29

Twp. 44 N. (N,S), Rng. 8 East (E,W), N.M. P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 950

Average annual amount of ground water to be appropriated (acre-feet): 300

Number of acres to be irrigated: 135

Proposed total depth (feet): 200

Aquifer ground water is to be obtained from:

Confined

Owner's well designation 2-A

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
( ) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
(X) IRRIGATION (6)
( ) MUNICIPAL (8)
( ) OTHER (9) _____

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name Licensed Driller to be Selected

Street _____

City _____ (State) (Zip)

Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 18973B / _____ + 76

Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED AS A REPLACEMENT OF WELL NO.19063-F, DECREED BY THE DIVISION 3 WATER COURT AS WELL NO.2A IN CASE NO. W-1902. THE EXISTING WELL MUS BE ABANDONED AND PLUGGED ACCORDING TO RULES AND REGULATIONS FOR WATER WELL AND PUMP INSTALLATIO CONTRACTORS. THE ENCLOSED ABANDONMENT AFFIDAVI MUST BE SUBMITTED WITHIN 60 DAYS OF COMPLETION OF THE NEW WELL.
2) A TOTALIZING FLOW METER MUST BE INSTALLED ON THE DISCHARGE OF THIS WELL WHEN THE WATER IS PU TO USE. DIVERSION RECORDS SHALL BE SUBMITTED T THE DIVISION OF WATER RESOURCES UPON REQUEST.
3) DEPTH OF THIS WELL SHALL NOT EXCEED 200 FEET PLAIN CASING SHALL BE INSTALLED TO A MINIMUM DEPTH OF 50 FEET.
4) APPROVAL OF THIS REPLACEMENT PERMIT SHALL NO RESULT IN AN EXPANDED USE OF GROUND WATER. THI WELL IS RESTRICTED TO IRRIGATION OF 135 ACRES I THE NW¼ OF SEC.29, T.44 N., R.8 E., N.M.P.M.
5) APPROVED AS AN ALTERNATE POINT OF DIVERSION T WELL NO. 19513-S (WELL NO. 2, W-1902). THE SIMULTANEOUS PUMPING RATE OF THIS WELL AND WELL NO. 19513-S SHALL NOT EXCEED 2178 GPM.

APPLICATION APPROVED

PERMIT NUMBER 19063-RF

DATE ISSUED MAR 08 1982

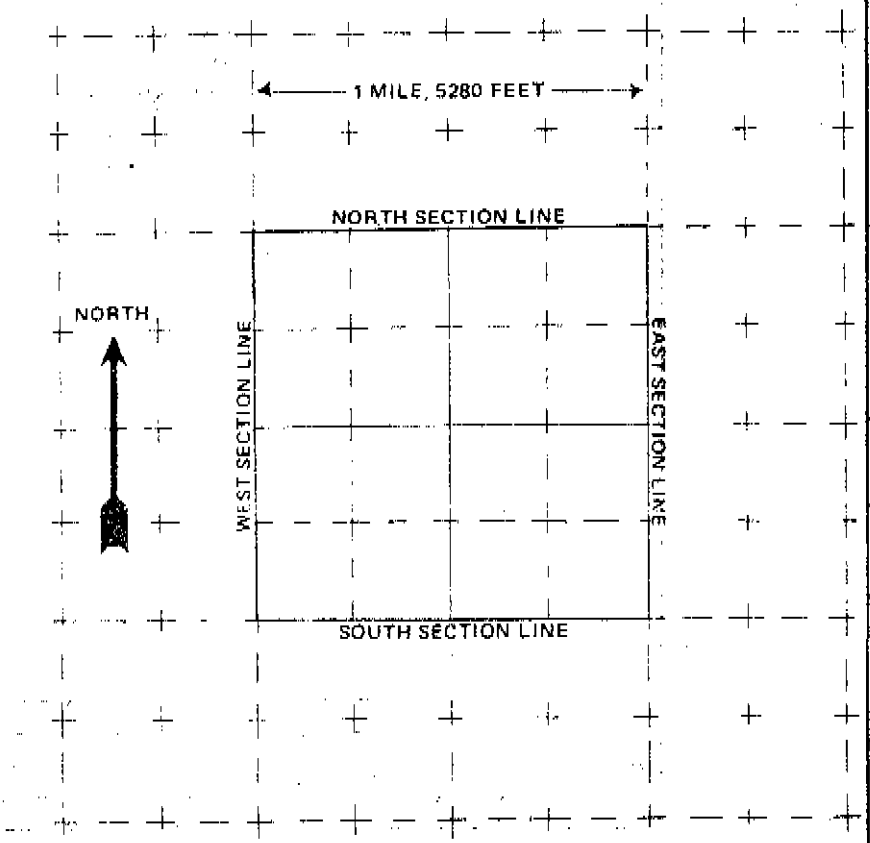
EXPIRATION DATE MAR 08 1983

Jim A. Danielson
(STATE ENGINEER)

BY Robert L. Longenbaugh, Asst. State Eng.

I.D. 3-36 COUNTY 55

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

1310 ft. from North (north or south) sec. line

1310 ft. from East (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: Ted Cook

No. of acres 160. Will this be the only well on this tract? No

(8) PROPOSED CASING PROGRAM

Plain Casing

16 in. from 0 ft. to 50 ft.

_____ in. from _____ ft. to _____ ft.

Perforated casing

16 ~~50~~ in. from 50 ft. to 260 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

Replacement well will be 10 feet North and 10 feet East of existing well. Replaced well will be plugged in accordance with regulations of the State Engineer.

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): Ted Cook No. of acres: 160

Legal description: NW¼ section 29, Twp. 44 N. Rg. 8 East NMPM

(11) DETAILED DESCRIPTION of the use of ground water. Household use and domestic wells must indicate type of disposal system to be used.

To provide water for sprinkler irrigation system now and for past several years in use.

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
None, except Well, Reg. No. 19513-8, base well for Well No. 19062-F		

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

8/26/81

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

WR

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

ACCEPTED FOR FILING BY THE OFFICE OF THE STATE ENGINEER ACCORDING TO THE DECREE GRANTED UNDER CASE NO. W-1902, WATER DIVISION 3, PURSUANT TO SECTION 37-92-304 (8), CRS 1973. DATE AUG 14 1981

STATE OF COLORADO } SS.
COUNTY OF _____

X STATEMENT OF BENEFICIAL USE OF GROUND WATER
_____ AMENDMENT OF EXISTING RECORD
_____ LATE REGISTRATION

950
200 | 400

PERMIT NUMBER 19063-F

LOCATION OF WELL

THE AFFIANT(S) Oliver & Faye Gould whose mailing address is P.O. Box 512 City Saguache Colorado (STATE) 81149 (ZIP)

County Saguache

C ¼ of the NW ¼, Section 29 Twp. 44 N (N or S), Rng. 8 E (E or W), NM P M

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 1320 feet from the North (NORTH OR SOUTH) section line and 1320 feet from the West (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 26 day of APRIL, 1976; the maximum sustained pumping rate of the well is 950 gallons per minute, the pumping rate claimed hereby is 950 gallons per minute; the total depth of the well is 200 feet; the average annual amount of water to be diverted is 400 acre-feet; for which claim is hereby made for Irrigation purpose(s); the legal description of the land on which the water from this well is used is _____ of which _____ acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) _____

Subscribed and sworn to before me on this _____ day of _____, 19___

My Commission expires: _____
(SEAL)

_____
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:
AS AN ALTERNATE POINT OF DIVERSION TO WELL NO. 19513-S (2)

FOR OFFICE USE ONLY

Court Case No 2A W-1902

Prior _____ Mo. ___ Day ___ Yr ___

Div. 3 Cty. 55

Sec. ___ ¼, ___ ¼, ___ ¼, ___ ¼

Well Use 6

Dist. 26 Basin _____ Mon. Dis. _____

THAT THOSE CONDITIONS OF APPROVAL AS STATED ON THE PERMIT ARE COMPLIED WITH.

DATE AUG 14 1981 STATE ENGINEER Jim A. Davidson BY _____

Well drilled by _____ Lic. No. _____

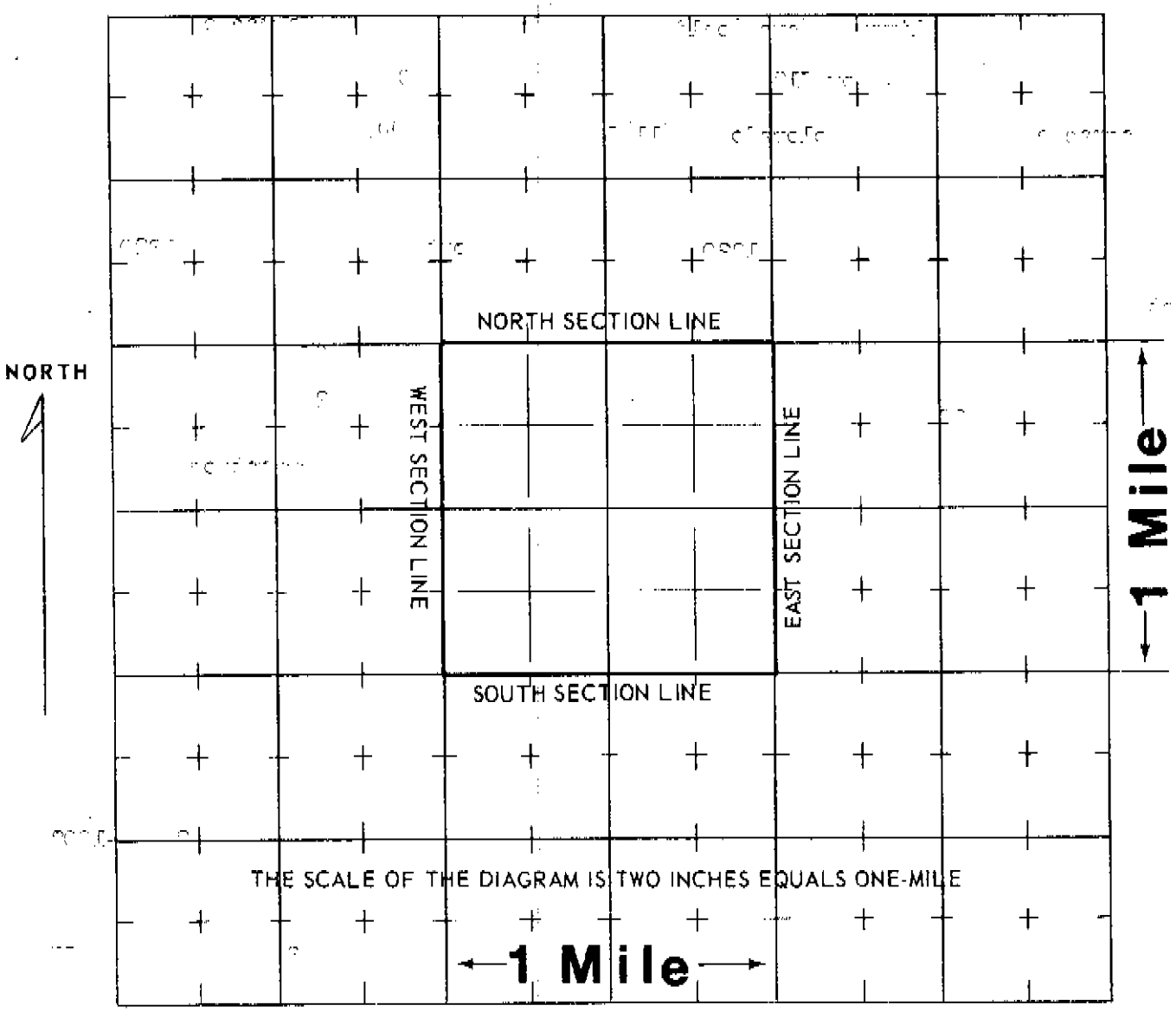
Permanent
Pump installed by _____ Lic. No. _____

Meter Serial No. _____ ☐ Flow Meter Date Installed _____

Owner of land on which
water is being used _____

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the **CENTER SQUARE** (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

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1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
100 gpm pumped continuously for one year produces 160 acre-feet.

**(WHITE AND PINK COPY TO BE FILED WITH THE STATE ENGINEER
PINK COPY WILL BE RETURNED TO OWNER)**

WRJ-26-72

THIS FORM MUST BE SUBMITTED WITHIN 60 DAYS OF COMPLETION OF THE WORK DESCRIBED HEREON. TYPE OR PRINT IN BLACK INK.

COLORADO DIVISION OF WATER RESOURCES

101 Columbine Bldg., 1845 Sherman St.
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER ~~19513-A~~ 019063-F

RECEIVED
NOV 13 '75
WATER RESOURCES
STATE ENGINEER
COLO.

WELL OWNER OLIVER AND FAYE GOULD

ADDRESS P.O. BOX 512 SAGUACHE, COLO.

DATE COMPLETED _____, 1975

center ¼ of the N.W. ¼ of Sec. 29,

T. 44 N, R. 8 E, N M P.M.

HOLE DIAMETER

26" in. from 0 to 200 ft.

_____ in. from _____ to _____ ft.

_____ in. from _____ to _____ ft.

CASING RECORD:

Plain Casing

Size 16" & kind ¼ from 0 to 50 ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

Perforated Casing

Size 16" & kind ¼ from 50 to 200 ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

GROUTING RECORD

Material _____

Intervals _____

Placement Method _____

GRAVEL PACK: Size pea to 1½"

Interval 0 to 200

TEST DATA

Date Tested 10-8-75, 19__

Static Water Level Prior to Test 17 ft.

Type of Test Pump 8" turbine

Length of Test 55 hrs.

Sustained Yield (Metered) 1050gpm

Final Pumping Water Level 71'

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	2	top soil	
2	9	sand and gravel	
9	10	clay	
10	30	sand and gravel	
30	34	clay	
34	40	sand and gravel	
40	45	clay	
45	67	sand and gravel	
67	70	clay	
70	82	sand and gravel	
82	134	clay with sand streaks	
134	138	fine sand	
138	147	clay	
147	156	fine sand	
156	167	clay	
167	184	sand and gravel with small clay streaks	
184	190	clay	
190	200	sand and gravel	

TOTAL DEPTH 200ft.

Use additional pages necessary to complete log.

PUMP INSTALLATION REPORT

Pump Make _____

Type _____

Powered by _____ HP _____

Pump Serial No. _____

Motor Serial No. _____

Date Installed _____

Pump Intake Depth _____

Remarks _____

_____

WELL TEST DATA WITH PERMANENT PUMP

Date Tested _____

Static Water Level Prior to Test _____

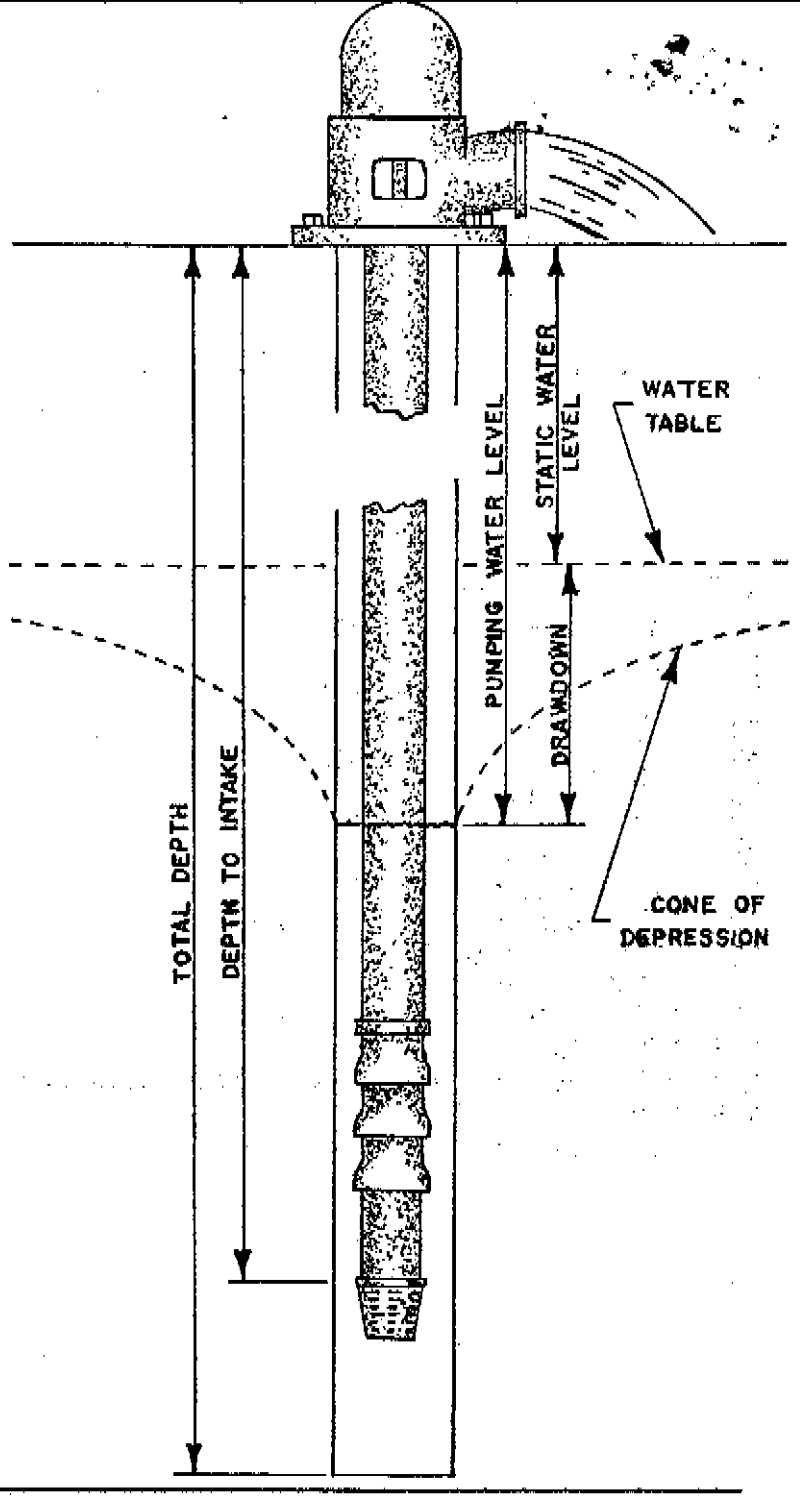
Length of Test _____ Hours

Sustained yield (Metered) _____ GPM

Pumping Water Level _____

Remarks _____

_____



CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature _____ License No. _____

State of Colorado, County of _____ SS

Subscribed and sworn to before me this _____ day of _____, 19 _____

My Commission expires: _____, 19 _____

Notary Public _____

FORM TO BE MADE OUT IN QUADRUPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer, PINK COPY is for the Owner and YELLOW COPY is for the Driller.

WRJ-26-72

THIS FORM MUST BE SUBMITTED WITHIN 60 DAYS OF COMPLETION OF THE WORK DESCRIBED HEREON. TYPE OR PRINT IN BLACK INK.

RECEIVED

MAY 24 '76

WATER RESOURCES STATE ENGINEER COLO.

COLORADO DIVISION OF WATER RESOURCES

101 Columbine Bldg., 1845 Sherman St.
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER ~~19513-x~~ 019063-F

WELL OWNER Oliver and Faye Gould

ADDRESS _____

DATE COMPLETED _____ , 19 ___

Center ¼ of the NW ¼ of Sec. 29 ,

T. 44 N , R. 8 E , N.M.P.M. P.M.

WELL LOG

From	To	Type and Color of Material	Water Loc.
		PUMP REPORT ONLY	

TOTAL DEPTH _____

Use additional pages necessary to complete log.

HOLE DIAMETER

_____ in. from _____ to _____ ft.

_____ in. from _____ to _____ ft.

_____ in. from _____ to _____ ft.

CASING RECORD: **Plain Casing**

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

Perforated Casing

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

GROUTING RECORD

Material _____

Intervals _____

Placement Method _____

GRAVEL PACK: Size _____

Interval _____

TEST DATA

Date Tested _____ , 19 ___

Static Water Level Prior to Test _____ ft.

Type of Test Pump _____

Length of Test _____

Sustained Yield (Metered) _____

Final Pumping Water Level _____

PUMP INSTALLATION REPORT

Pump Make Pengless

Type R U

Powered by U S Vertical HP 75

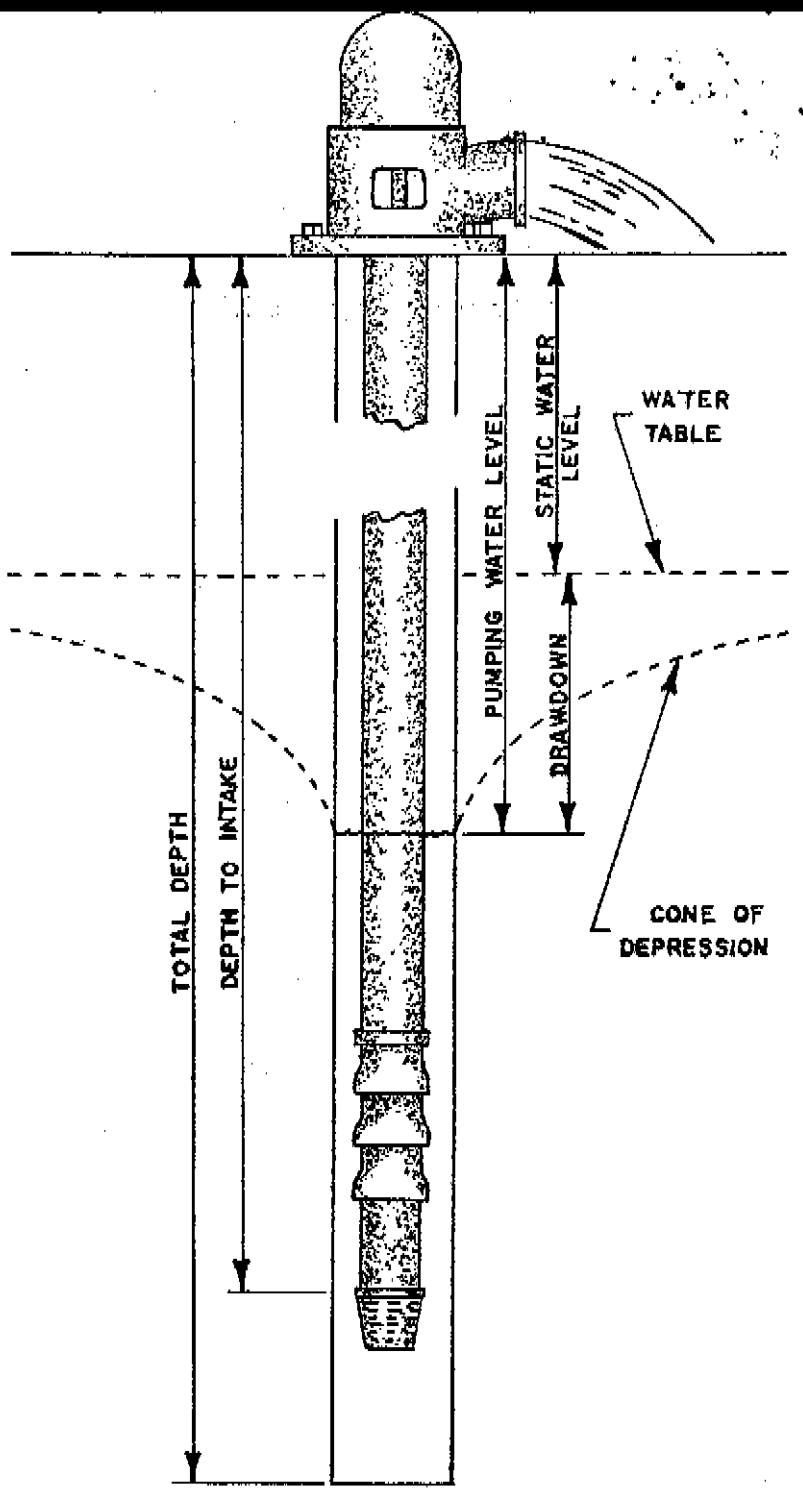
Pump Serial No.

Motor Serial No 9503253-D-569R2086873

Date Installed 3-9-76

Pump Intake Depth 110 ft.

Remarks



WELL TEST DATA WITH PERMANENT PUMP

Date Tested 4-26-76

Static Water Level Prior to Test 47 ft.

Length of Test 18 Hours

Sustained yield (Metered) 950 GPM

Pumping Water Level 68 ft.

Remarks

CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature [signature] License No. 880

State of Colorado, County of Rio Grande SS

Subscribed and sworn to before me this 20th day of May, 19 76.

My Commission expires: September 18, 19 78.

Notary Public [signature]

FORM TO BE MADE OUT IN QUADRUPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer. PINK COPY is for the Owner and YELLOW COPY is for the Driller.

WRJ-5-73

COLORADO DIVISION OF WATER RESOURCES

300 Columbine Bldg., 1845 Sherman St., Denver, Colorado 80203

RECEIVED
NOV 08 '74
WATER RESOURCES STATE ENGINEER COLO.

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed. Proper fee must be submitted with the application.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(X) OTHER Alternate point of diversion Permit # 19513-2

(1) APPLICANT - mailing address

NAME OLIVER GOULD AND FAYE GOULD
c/o William R. Bartlet
STREET P. O. Box 312
CITY Monte Vista, Colorado 81144
(State) (Zip)
TELEPHONE NO. 852-5135

(2) LOCATION OF PROPOSED WELL

County Saguache
Center ~~of~~ of the NW ¼, Section 29
Twp. 44 N, Rng. 8 E, N.M. P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 950
Average annual amount of ground water to be appropriated (acre-feet): 400
Number of acres to be irrigated: 160
Proposed total depth (feet): 250
Aquifer ground water is to be obtained from:
50 feet to 100 feet
Owner's well designation South Farm Well No. 2 A

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
( ) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
(X) IRRIGATION (6)
( ) MUNICIPAL (8)
( ) OTHER (9) _____

(4) DRILLER

Name M. A. Garner
Street _____
City Saguache, Colorado 81149
(State) (Zip)
Telephone No. 655-2293 Lic. No. 44

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

25.00
Receipt No. 56971 C
Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED AS ALTERNATE POINT OF DIVERSION FOR WELL NO. R-19513-2. INSTALLATION OF TOTALIZING FLOW METERS ON THIS WELL AND ON WELL NO. R-19513-2 IS REQUIRED.
2) WATER DRAWN FROM THIS WELL SHALL BE LIMITED TO IRRIGATION OF THE NW ¼ OF SEC. 29, T. 44 N., R. 8 E., N.M.PM.
3) PRIOR TO THE USE OF THIS WELL, APPLICANT MUST AMEND HIS APPLICATION FOR WATER RIGHT DETERMINATION NOW PENDING IN THE DISTRICT WATER COURT (CASE NO. W-1902) TO INCLUDE THIS ALTERNATE POINT OF DIVERSION WELL. JRM 11/25/74

PERMIT EXPIRATION DATE EXTENDED SIX MONTHS UNTIL MAY 26, 1976. JRM

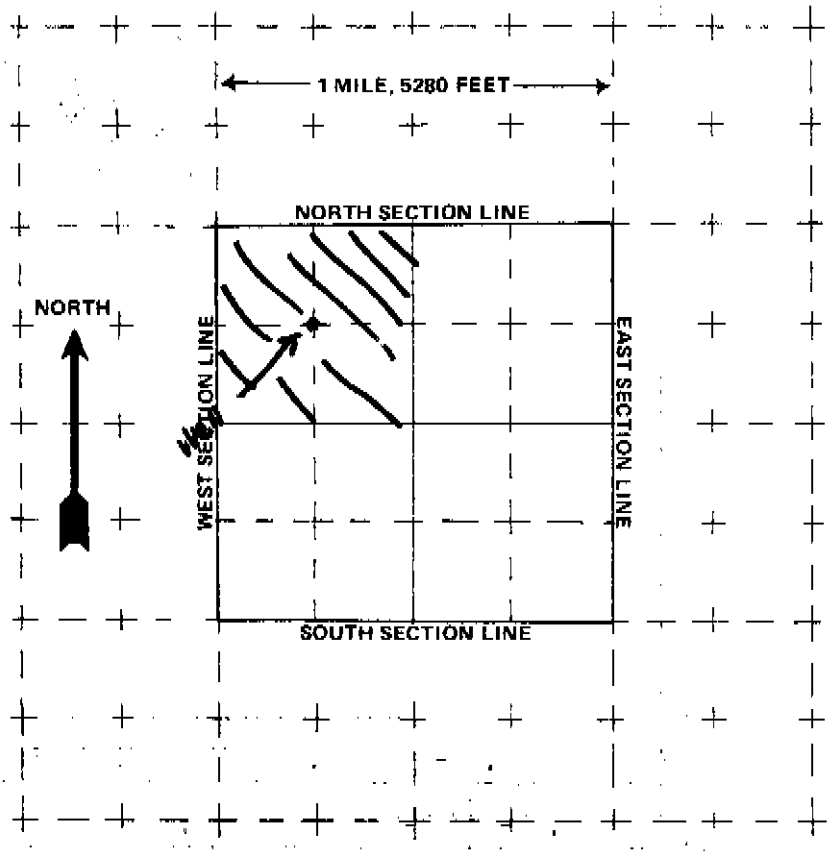
APPLICATION APPROVED

I.D. 3 W.D. 26 COUNTY 55

PERMIT NUMBER 019063-F
DATE ISSUED NOV 26 1974
EXPIRATION DATE NOV 26 1975

E. J. Sniper
(STATE ENGINEER)
BY _____

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

1320 ft. from North (north or south) sec. line

1320 ft. from West (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED

No. of acres 160. Will this be the only well on this tract? Yes

(8) PROPOSED CASING PROGRAM

Plain Casing

16 in. from 0 ft. to 50 ft.

_____ in. from _____ ft. to _____ ft.

Perforated casing

16 in. from 50 ft. to 250 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): Oliver Gould and Faye Gould No. of acres: 160

Legal description: NW¼ 29-44-8, Saguache County, Colorado

(11) DETAILED DESCRIPTION of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Irrigation of Crops on above quarter of land by sprinkler

(12) OTHER WATER RIGHTS used on this land, including wells.

Type of right	Used for (purpose)	Legal Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

OLIVER GOULD AND FAYE GOULD BY William R Bartlett Attorney

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

xxxxxxxxxxxxxx

116 Washington Street
P. O. Box 312

January 23, 1974

Division of Water Resources
1845 Sherman Street
Denver, Colorado 80203

Attention: Mr. Murthy:

Re: Permit Nos. R-20208RF, R-20209RF
and 017519-F, Oliver & Faye Gould

Dear Mr. Murthy:

In reference to the above entitled permits, the applicant respectfully requests that condition number 4, which states, "applicant shall install totalizing flow meter on well? be changed to read that "applicant shall furnish yearly kilowatt usage on the pump installed in the well and the rating on the pump and motor so that annual extraction of ground water may be calculated."

I have gone over this matter with the Public Service Company of Colorado, and they state that there are two wells on each meter and that they can calculate the total amount of water extracted by the two wells by rating the pumps and motors and keeping records on the total kilowatt hours that are used by the two sprinklers.

Mr. Gould now has seven sprinklers on his South Farm Ranch, and eventually plans on having 11 or 12 sprinklers and will be happy to furnish you with the kilowatt usage on all of his sprinklers and the kind of crops grown under each one so that the Department would know the annual extraction of ground water from all of the sprinklers and after a period of years would know the approximate amount of water it takes under a sprinkler to grow a particular crop.

It is felt that by using kilowatt usage it would save the expense of totalizing meters and would accomplish the same end.

I will endeavor to discuss this matter with you in person the next time I am in Denver.

Yours very truly,

William R. Bartlett

sd

WILLIAM R. BARTLETT
ATTORNEY AT LAW
116 WASHINGTON STREET
POST OFFICE BOX 312
MONTE VISTA, COLORADO 81144
AREA CODE 303
TELEPHONE 852-5135

April 29, 1976

Mr. Fred Loo
Division of Water Resources
1845 Sherman Street
Denver, Colorado 80203

Re: Oliver Gould and Faye Gould
Permits No. 019057-F through
010963-F inclusive

Dear Mr. Loo:

In reference to the above permits, I am enclosing herewith the Pump Installation report and Well Test Data.

On November 12, 1975, I mailed to you the Statements of Beneficial Use for each of these permits, together with the Well Completion Reports for said wells. I am enclosing herewith a copy of this letter for your information.

Yours very truly,

William R. Bartlett

sd

Enclosures 8

November 12, 1975

Mr. Krishna Murthy
Division of Water Resources
1845 Sherman Street
Denver, Colorado 80203

Re: Oliver Gould and Faye Gould
Permit Nos. 019064-F, 019063-F
019057-F, 019062-F, 019058-F,
019061-F, and 019059-F, 019060-F

Dear Mr. Murthy:

In reference to the above, enclosed herewith are Statements of Beneficial Use for each of the above entitled wells, together with two copies of Well Completion Report for each of said wells.

Mr. Gould has not yet been able to install permanent pumps in all of the wells covered by the above permit numbers except he has installed a permanent pump in the well covered by permit number 019064-F.

Due to the shortage of pumps and shortagbeof sprinkler systems, it has been impossible for Mr. Gould to install permanent pumps and meters in these wells, and it is respectfully requested that the expiration date on all of the above entitled permits, except for Permit No. 019064-F be extended for one year so that he can install pumps and meters.

In reference to permit number 019064-F, it is requested that he be granted an extension of oneyyear in which to install the totalizing meters required as condition one of the conditions of approval.

I am enclosing herewith a copy of the amendment to the application for undgeggound water right, Case No. W-1902, which covers these eight permits.

If you need further information, please advise.

Yours very truly,

William R. Bartlett

sd

Enclosures

P. S. The test data is shown on the Well Completion Reports, and when the pumps were run to secure the test date, the water therefrom was applied to a beneficial use to irrigate the land. When the permanent pumps are installed, then these wells will be used continuously during the irrigation season.

RICHARD D. LAMM
Governor

C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

Department of Natural Resources
300 Columbine Building
1845 Sherman Street
Denver, Colorado 80203
Administration (303) 892-3581
Ground Water (303) 892-3587

May 13, 1976

Mr. William R. Bartlett
Attorney-at-Law
116 Washington Street
P.O. Box 312
Monte Vista, CO 81144

Re: Oliver Gould and Faye Gould
Permits No. 019057-F through 010963 inclusive

Dear Mr. Bartlett:

Please find enclosed the copies of the pump installation reports and well test data for the above-referenced well permits that you sent in your letter of April 29, 1976. Please be advised that these copies of the reports are not acceptable. These reports must be submitted by the person who installed the permanent pumps on form WRJ-26-72. Both the white and green copies must be submitted to this office and the white copy must be notarized.

Please have the pump installer submit these reports as soon as possible, since the well permit files cannot be completed without them.

Very truly yours,

Fred M. Loo
Water Resource Engineer
Ground Water Section

FML/SPL:tjw

Enclosures

WELL NO. 74

THIS FORM MUST BE SUBMITTED PRIOR TO THE EXPIRATION OF THE PERMIT. TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

300 Columbine Bldg., 1845 Sherman St.
Denver, Colorado 80203

RECEIVED
NOV 13 '75
WATER RESOURCES
STATE ENGINEER
COLO.

STATE OF COLORADO }
COUNTY OF Rio Grande } SS.

AFFIDAVIT

SU 060176
water

x STATEMENT OF BENEFICIAL USE OF GROUND WATER
____ AMENDMENT OF EXISTING RECORD

PERMIT NUMBER 019063-F

LOCATION OF WELL

County Saguache
Center ¼ of the NW ¼, Section 29
Twp. 44 N (N OR S), Rng. 8 E (E OR W), N.M.P.M

THE AFFIANT(S) Oliver Gould and Faye Gould
whose mailing address is c/o William R. Bartlett
P. O. Box 312
City Monte Vista (STATE) Colorado (ZIP) 81144

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 1320 feet from the North (NORTH OR SOUTH) section line and 1320 feet from the West (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the ~~8th~~ day of October, 19 75; the maximum sustained pumping rate of the well is 1050 gallons per minute, the pumping rate claimed hereby is 950 gallons per minute; the total depth of the well is 200 feet; the average annual amount of water to be diverted is 400 acre-feet; for which claim is hereby made for Irrigation purpose(s); the legal description of the land on which the water from this well is used is NW¼ 29-44-8, Saguache County, Colorado which totals 160 acres and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

OLIVER GOULD AND FAYE GOULD
Signature(s) By William R Bartlett Attorney

Subscribed and sworn to before me on this 11th day of November, 19 75

My Commission expires: 1/14/79
(SEAL)

Shirley M. Dann
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

FOR OFFICE USE ONLY

Court Case No. W-1902
Prior ____ Mo. ____ Day ____ Yr. ____
Div. ____ Cty. ____
Sec. ____ ____ ¼, ____ ¼, ____ ¼, ____ ¼,
Well Use ____ ____ ____ ____
Dist. ____ Basin ____ Man. Dis. ____

DATE STATE ENGINEER BY

WILLIAM R. BARTLETT
ATTORNEY AT LAW
116 WASHINGTON STREET
POST OFFICE BOX 312
MONTE VISTA, COLORADO 81144
AREA CODE 303
TELEPHONE 852-5138

December 27, 1976

Mr. Fred M. Loo
Division of Water Resources
1313 Sherman Street
Denver, Colorado 80203

Re: Oliver and Faye Gould
Permit No. 17519-F;
19057-F through 19064-F

Dear Mr. Loo:

In reference to your letter of December 22, 1976, and to your letter of October 26, 1976, referring to the above permits, please be advised that Mr. Gould is presently installing flow meters on these wells and should have the same completed within the near future, at which time the statements of beneficial use and pertinent affidavits will be filed.

Application has been to the Water Court to adjudicate these wells under Case No. W-1902.

Yours very truly,

W. R. Bartlett

William R. Bartlett

sd

ELIZABETH A. CONOUR
ATTORNEY AT LAW
DEL NORTE, COLORADO 81132
TELEPHONE 657-3922
AREA CODE 303

RICHARD E. CONOUR
OF COUNSEL

P.O. BOX 629

August 27, 1981

Colorado Division of Water Resources
818 Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

Gentlemen:

We hand you herewith three applications for permit to construct three replacement wells to replaces wells registration Nos. 20159, 19063-F and 24067-F, also 3 Amendments of Existing Record covering these three wells.

Our check for $78.00 is enclosed in payment of the fees.

While your application forms make no provision for reasons for replacement, in this case such reasons appear relevant. No. 20159 has a collapsed casing. Severe sanding problems have arisen in wells Nos. 19063-F and 24067-F. These problems have been discussed with Division Engineer McFadden, who had these wells inspected. We are informed that Mr. McFadden agrees that the wells should be replaced. All proposed replacement wells are about 10-15 feet from the existing wells.

Please address any communications concerning this matter to this office.

Very truly yours,

Richard E. Conour

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION 3
STATE OF COLORADO

FILED IN DISTRICT COURT
WATER DIVISION 3
STATE OF COLORADO

JUN 17 1976

CARLA R. SHAWCROFT
WATER CLERK

CASE NO. W- 1902

IN THE MATTER OF THE APPLICATION)
FOR WATER RIGHTS OF)
)
ARIZONA-COLORADO LAND AND)
CATTLE COMPANY, A COLORADO)
CORPORATION, LEGAL OWNER; AND)
OLIVER GOULD AND FAYE GOULD,)
CONTRACT PURCHASERS)

JUDGMENT AND DECREE
ADJUDICATING
WATER RIGHT

IN SAGUACHE COUNTY

South Farm
WELL NO. 10 W-1902.

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on June 27, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 25th day of May, A.D. 1976, and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:
   Arizona-Colorado Land and Cattle Company, A Colorado Corporation, Legal Owner, 5001 East Washington Street, Phoenix, AZ 85034.
   Oliver Gould and Faye Gould, Contract Purchasers
   P. O. Box 512, Saguache, CO 81149.
2. Name or designation of well:
   Well No. South Farm 10. Registration No. 19513-10.
3. Location of well and point of diversion:

   SE¼ SW¼, Section 19, Township 44 North, Range 8 East, NMPM, at a point 2600 feet from West Section line and 275 feet from South Section line, in Saguache County, Colorado.

4. Alternate points of diversion, if any:

   None.

5. Type of beneficial use:
   Irrigation.
6. Amount and source and means of diversion:
   1360 gallons per minute, being 3.03 cubic feet of water per second of time, being 6.06 acre feet of water in a period of twenty-four hours, from a (confined) (unconfined) aquifer.
7. Priority date of appropriation:

   July 17, 1952.

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION 3
STATE OF COLORADO

FILED IN DISTRICT COURT
WATER DIVISION 3
STATE OF COLORADO

JUN 17 1976

CARLA R. SHAWCROFT
WATER CLERK

CASE NO. W-1902

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF

ARIZONA-COLORADO LAND AND CATTLE COMPANY, A COLORADO CORPORATION, LEGAL OWNER; AND OLIVER GOULD AND FAYE GOULD, CONTRACT PURCHASERS

IN SAGUACHE COUNTY

JUDGMENT AND DECREE
ADJUDICATING
WATER RIGHT

South Farm
WELL NO. 10A W-1902.

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on June 27, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 25th day of May, A.D. 19 76, and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:
   Arizona-Colorado Land and Cattle Company, A Colorado Corporation, Legal Owner, 5001 East Washington Street, Phoenix, AZ 85034.
   Oliver Gould and Faye Gould, Contract Purchasers
   P. O. Box 512, Saguache, CO 81149.
2. Name or designation of well:
   Well No. South Farm 10A. Registration No. 019064-F.
3. Location of well and point of diversion:

   Center of NE¼, Section 30, Township 44 North, Range 8 East, NMPM, at a point 1320 feet from North Section line and 1320 feet from East Section line, in Saguache County, Colorado.

4. Alternate points of diversion, if any:

   None.

5. Type of beneficial use:
   Irrigation.
6. Amount and source and means of diversion:
   950 gallons per minute, being 2.12 cubic feet of water per second of time, being 4.24 acre feet of water in a period of twenty-four hours, from a (confined) ~~unconfined~~ aquifer.
7. Priority date of appropriation:
   July 17, 1952.

7A. That said Well is not an independent source of water but is

WRJ-25-75

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

ACCEPTED FOR FILING BY THE OFFICE OF THE STATE ENGINEER ACCORDING TO THE DECREE GRANTED UNDER CASE NO. W-1902 WATER DIVISION 3 PURSUANT TO SECTION 37-92-304 (8), CRS 1973.
DATE AUG 14 1981

STATE OF COLORADO
COUNTY OF _____ } SS. _____ AFFIDAVIT

X STATEMENT OF BENEFICIAL USE OF GROUND WATER
_____ AMENDMENT OF EXISTING RECORD
_____ LATE REGISTRATION

950 / 200 / 400

PERMIT NUMBER 19064-F

LOCATION OF WELL

THE AFFIANT(S) Oliver and Faye Gould whose mailing address is Box 512 City Saguache, CO 81149 (STATE) (ZIP)

County Saguache

C ¼ of the NE ¼, Section 30

Twp. 44 N (N OR S), Rng. 8 E (E OR W), NM P M

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 1320 feet from the North (NORTH OR SOUTH) section line and 1320 feet from the East (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 2 day of JUNE, 19 75; the maximum sustained pumping rate of the well is 950 gallons per minute, the pumping rate claimed hereby is 950 gallons per minute; the total depth of the well is 200 feet; the average annual amount of water to be diverted is 400 acre-feet; for which claim is hereby made for Irrigation purpose(s); the legal description of the land on which the water from this well is used is _____ of which _____ acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) _____

Subscribed and sworn to before me on this _____ day of _____, 19 ___

My Commission expires: _____
(SEAL)

_____
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

AS AN ALTERNATE POINT OF DIVERSION TO WELL NO. 19513-Z(10)

THAT THOSE CONDITIONS OF APPROVAL AS STATED ON THE PERMIT ARE COMPLIED WITH.

AUG 14 1981
DATE

Jim A. Danielson
STATE ENGINEER

BY _____

FOR OFFICE USE ONLY

Court Case No. 10A W-1902
Prior. _____ Mo. _____ Day _____ Yr. _____
Div. 3 Cty. 55
Sec. _____ _____ ¼. _____ ¼. _____ ¼.
Well Use 6 _____ _____ _____
Dist. 26 Basin _____ Man. Dis. _____

Well drilled by _____ Lic. No. _____

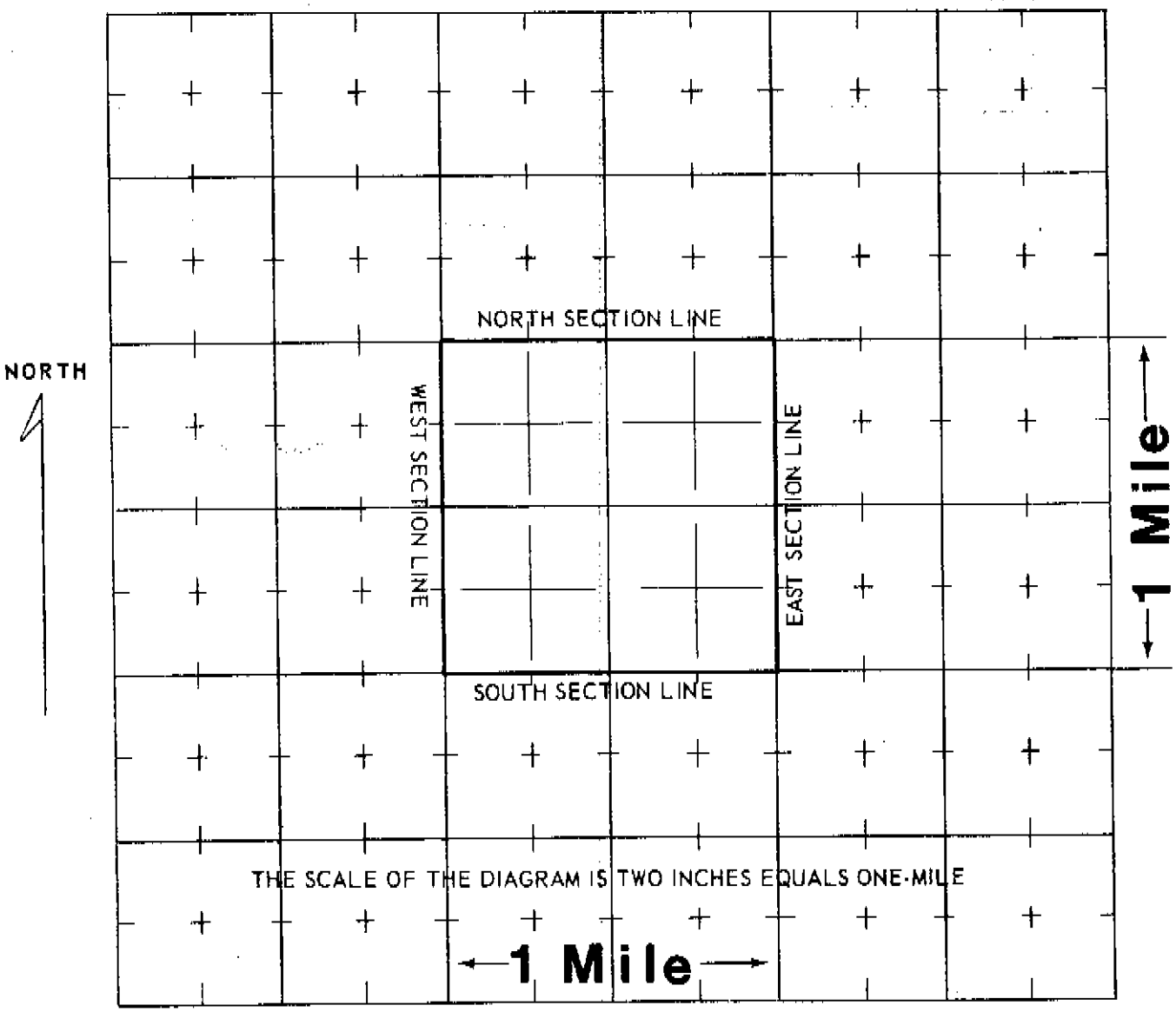
Permanent
Pump installed by _____ Lic. No. _____

Meter Serial No. _____ ☐ Flow Meter Date Installed _____

Owner of land on which
water is being used _____

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the **CENTER SQUARE** (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep.
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
100 gpm pumped continuously for one year produces 160 acre-feet.

**(WHITE AND PINK COPY TO BE FILED WITH THE STATE ENGINEER
PINK COPY WILL BE RETURNED TO OWNER)**

WR-26-72

THIS FORM MUST BE SUBMITTED WITHIN 60 DAYS OF COMPLETION OF THE WORK DESCRIBED HEREON. TYPE OR PRINT IN BLACK INK.

COLORADO DIVISION OF WATER RESOURCES

101 Columbine Bldg., 1845 Sherman St.
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER ~~19513-10~~ 019064-F

RECEIVED
NOV 13 '75
WATER RESOURCES
STATE ENGINEER
COLO.

WELL OWNER OLIVER GOULD AND FAYE GOULD

ADDRESS BOX #2 512 Saguache, Colo.

DATE COMPLETED JUNE 2, 1975 , 19 ___

Center ¼ of the NE ¼ of Sec. 30 ,

T. 44 N , R. 8 E , N. M P.M.

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	58	rock and gravel	
58	64	clay	
64	98	sand and gravel	
98	115	clay	
115	150	sand and gravel	
150	160	clay	
160	200	sand and gravel	

TOTAL DEPTH 200 '

Use additional pages necessary to complete log.

HOLE DIAMETER

20 in. from 0 to 200 ft.

___ in. from ___ to ___ ft.

___ in. from ___ to ___ ft.

CASING RECORD:

Plain Casing

Size 16" & kind ¼ from 0 to 50 ft.

Size ___ & kind ___ from ___ to ___ ft.

Size ___ & kind ___ from ___ to ___ ft.

Perforated Casing

Size 16 " & kind ¼ from 50 to 200 ft.

Size ___ & kind ___ from ___ to ___ ft.

Size ___ & kind ___ from ___ to ___ ft.

GROUTING RECORD

Material ___

Intervals ___

Placement Method ___

GRAVEL PACK: Size PEA

Interval 0 to 200

TEST DATA

Date Tested 5-13 , 19 75

Static Water Level Prior to Test 4 2' ft.

Type of Test Pump 8" turbine

Length of Test 60 hrs.

Sustained Yield (Metered) 900gals. at 1700RPM

Final Pumping Water Level 77'

PUMP INSTALLATION REPORT

Pump Make Peerless

Type R.U.

Powered by U.S. Elec. HP 75

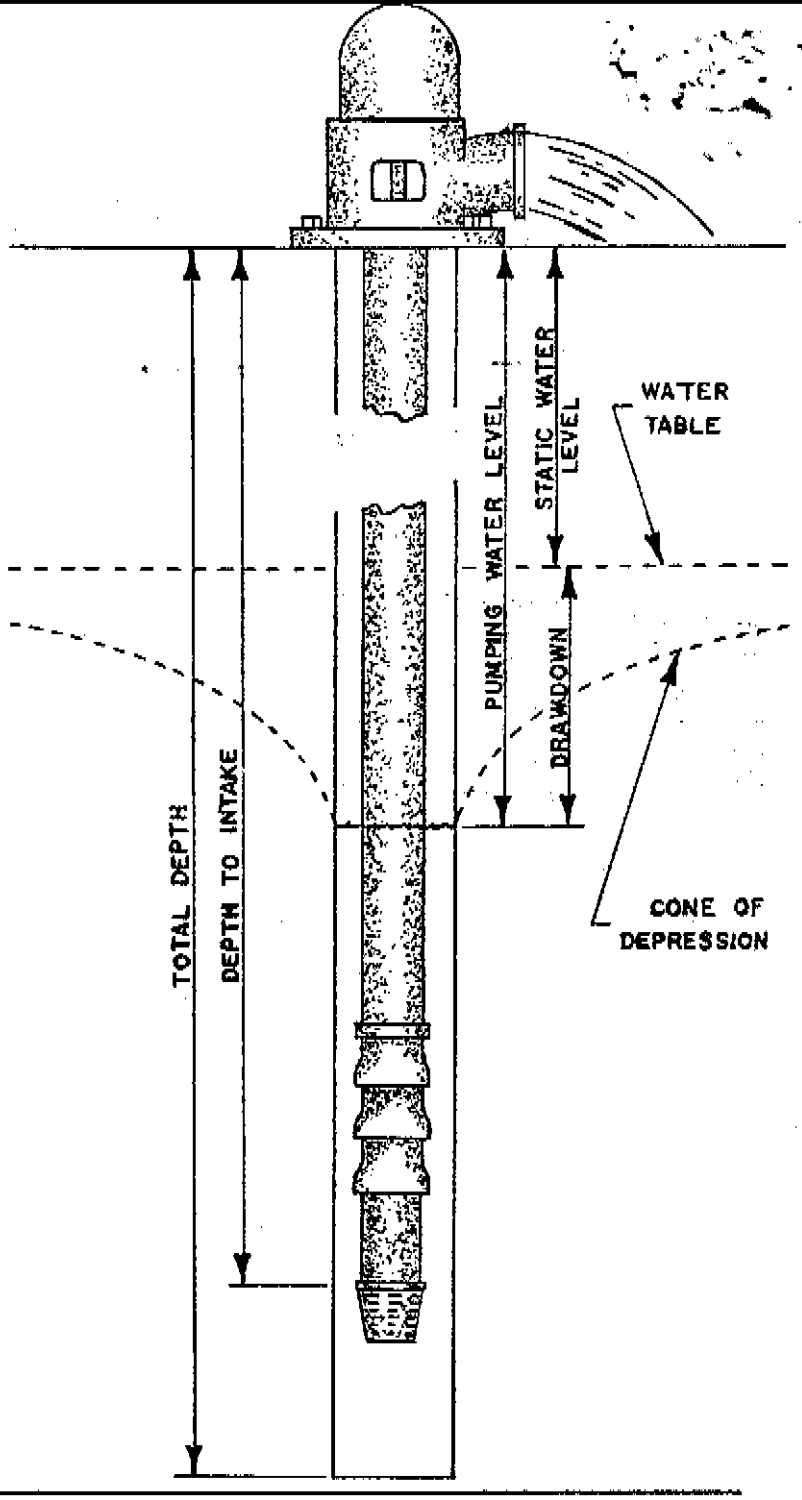
Pump Serial No.

Motor Serial No. R 2089922

Date Installed 5-9-75

Pump Intake Depth 95'

Remarks



WELL TEST DATA WITH PERMANENT PUMP

Date Tested June 2, 1975

Static Water Level Prior to Test 42 '

Length of Test 60 hrs. Hours

Sustained yield (Metered) 900 GPM

Pumping Water Level 77'

Remarks

CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature M. A. Garner License No. 444

State of Colorado, County of Saguache SS

Subscribed and sworn to before me this 9th day of June, 19 75.

My Commission expires: , 19 .

Notary Public Mary A Mann Deputy County Clerk

FORM TO BE MADE OUT IN QUADRUPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer. PINK COPY is for the Owner and YELLOW COPY is for the Driller.

WRJ-5-73

COLORADO DIVISION OF WATER RESOURCES

300 Columbine Bldg., 1845 Sherman St., Denver, Colorado 80203

RECEIVED
NOV 08 '74
WATER RESOURCES
STATE ENGINEER
COLO.

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed. Proper fee must be submitted with the application.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____ Cm
(X) OTHER Alternate point of diversion Permit No. 19513-10

(1) APPLICANT - mailing address

NAME Oliver Gould and Faye Gould
c/o William R. Bartlett
STREET P. O. Box 312
CITY Monte Vista, Colorado 81144
(State) (Zip)
TELEPHONE NO. 852-5135

(2) LOCATION OF PROPOSED WELL

County Saguache
Center ¼ of the NE ¼, Section 30
Twp. 44 N, Rng. 8 E, N.M. P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 950
Average annual amount of ground water to be appropriated (acre-feet): 400
Number of acres to be irrigated: 160
Proposed total depth (feet): 250
Aquifer ground water is to be obtained from:
50 feet to 100 feet
Owner's well designation South Farm Well # 10 A

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
( ) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
(X) IRRIGATION (6)
( ) MUNICIPAL (8)
( ) OTHER (9) _____

(4) DRILLER

Name M. A. Garner
Street _____
City Saguache, Colorado 81149
(State) (Zip)
Telephone No. 655-2293 Lic. No. 44

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 25.00 56971 B, _____
Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

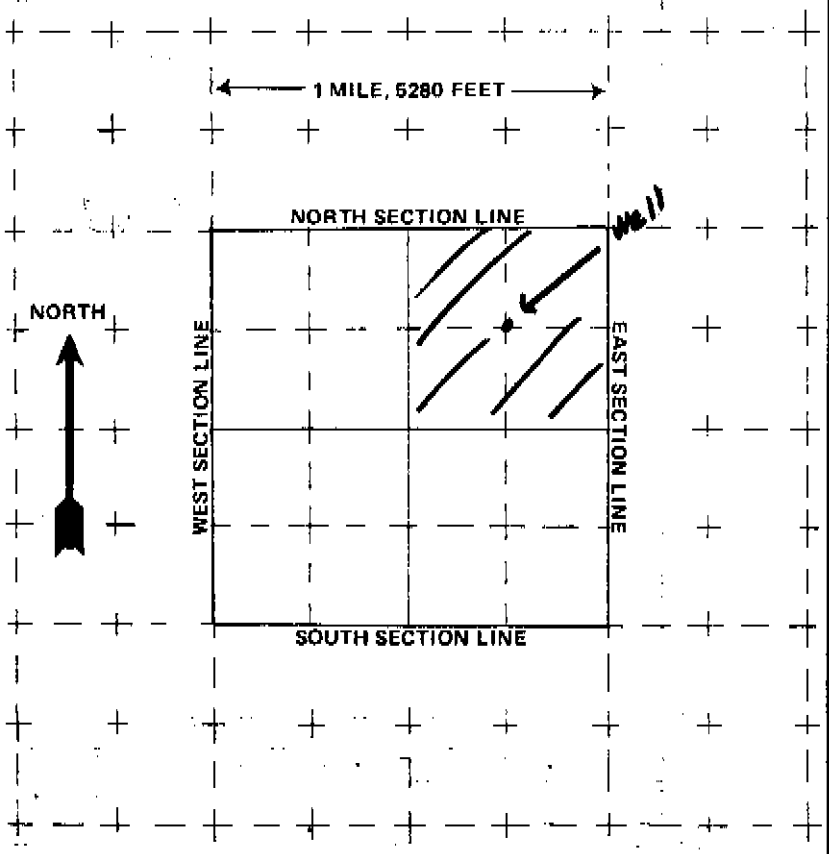
1) APPROVED AS ALTERNATE POINT OF DIVERSION FOR WELL NO. R-19513-10. INSTALLATION OF TOTALIZIN FLOW METERS ON THIS WELL AND ON WELL NO. R-19513-10 IS REQUIRED.
2) WATER DRAWN FROM THIS WELL SHALL BE LIMITED TO IRRIGATION OF THE NE ¼ OF SEC. 30, T. 44 N. R. 8 E., N.M.PM.
3) PRIOR TO THE USE OF THIS WELL, APPLICANT MUST AMEND HIS APPLICATION FOR WATER RIGHT DETERMINATION NOW PENDING IN THE DISTRICT WATER COURT (CASE NO.W-1902) TO INCLUDE THIS ALTERNATE POINT OF DIVERSION WELL. Km 11/25/74.

APPLICATION APPROVED

I.D. 3 W.D. 26 COUNTY 55
PERMIT NUMBER 019064-F
DATE ISSUED NOV 26 1974
EXPIRATION DATE NOV 26 1975

E. J. Dunlap
(STATE ENGINEER)
BY _____

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

1320 ft. from North (north or south) sec. line

1320 ft. from East (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED

No. of acres 160 . Will this be the only well on this tract? Yes

(8) PROPOSED CASING PROGRAM

Plain Casing

16 in. from 0 ft. to 50 ft.

_____ in. from _____ ft. to _____ ft.

Perforated casing

16 in. from 50 ft. to 250 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): Oliver Gould and Faye Gould No. of acres: 160

Legal description: NE¼ 30-44-8, Saguache County, Colorado

(11) DETAILED DESCRIPTION of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Irrigation of crops on above quarter of land by sprinkler

(12) OTHER WATER RIGHTS used on this land, including wells.

Type of right	Used for (purpose)	Legal Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

OLIVER GOULD AND FAYE GOULD by William R Bartlett Attorney

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

THIS FORM MUST BE SUBMITTED PRIOR TO THE EXPIRATION OF THE PERMIT. TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

FOR OFFICE USE ONLY
Div. 3 Cty. 55

COLORADO DIVISION OF WATER RESOURCES

300 Columbine Bldg., 1845 Sherman St.
Denver, Colorado 80203

RECEIVED
NOV 13 '75
WATER RESOURCES
STATE ENGINEER
COLO.

x STATEMENT OF BENEFICIAL USE OF GROUND WATER
____ AMENDMENT OF EXISTING RECORD

PERMIT NUMBER 019064-F

STATE OF COLORADO
COUNTY OF Rio Grande } SS.

LOCATION OF WELL

THE AFFIANT(S) Oliver Gould and Faye Gould
whose mailing address is c/o William R. Bartlett P. O. Box 312
City Monte Vista, Colorado (STATE) 81144 (ZIP)

County Saguache
Center ¼ of the NE ¼, Section 30
Twp. 44 N (N OR S), Rng. 8 E (E OR W), N.M. P.M.

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 1320 feet from the North (NORTH OR SOUTH) section line and 1320 feet from the East (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 13th day of May, 19 75; the maximum sustained pumping rate of the well is 900 gallons per minute, the pumping rate claimed hereby is 900 gallons per minute; the total depth of the well is 200 feet; the average annual amount of water to be diverted is 400 acre-feet; for which claim is hereby made for Irrigation purpose(s); the legal description of the land on which the water from this well is used is NE¼ 30-44-8, Saguache County, Colorado which totals 160 acres and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

OLIVER GOULD AND FAYE GOULD
Signature(s) By William R Bartlett Attorney

Subscribed and sworn to before me on this 11th day of November, 19 75

My Commission expires: 1/14/79
(SEAL)

Shirley M. Dann
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

FOR OFFICE USE ONLY
Court Case No. W-1902
Sec. ____ ____ ¼, ____ ¼, ____ ¼,
Well Use ____ ____ ____ ____
Dist. 26 Basin ____ Man. Dis. ____,
Prior. ____ Mo. ____ Day ____ Yr. ____

DATE ____ STATE ENGINEER ____ BY ____

WILLIAM R. BARTLETT
ATTORNEY AT LAW
116 WASHINGTON STREET
POST OFFICE BOX 312
MONTE VISTA, COLORADO 81144
AREA CODE 303
TELEPHONE 852-5135

December 27, 1976

Mr. Fred M. Loo
Division of Water Resources
1313 Sherman Street
Denver, Colorado 80203

Re: Oliver and Faye Gould
Permit No. 17519-F;
19057-F through 19064-F

Dear Mr. Loo:

In reference to your letter of December 22, 1976, and to your letter of October 26, 1976, referring to the above permits, please be advised that Mr. Gould is presently installing flow meters on these wells and should have the same completed within the near future, at which time the statements of beneficial use and pertinent affidavits will be filed.

Application has been to the Water Court to adjudicate these wells under Case No. W-1902.

Yours very truly,

William R. Bartlett

sd

OW

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION 3
STATE OF COLORADO
CASE NO. W- 1902

FILED IN DISTRICT COURT
WATER DIVISION 3
STATE OF COLORADO
MAY 25 1976
CARLA R. SHAWCROFT
WATER CLERK

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF

ARIZONA-COLORADO LAND AND CATTLE COMPANY, A COLORADO CORPORATION, LEGAL OWNER; AND OLIVER GOULD AND FAYE GOULD, CONTRACT PURCHASERS

IN SAGUACHE COUNTY

REFEREE'S REPORT

AND RULING

South Farm
WELL NO. 25 W-1902.

THIS MATTER coming on to be heard this day before the undersigned Referee, pursuant to Order of Referral herein, and upon examination of the records and files herein, and upon his investigation, hereby makes the following Findings and Rulings therein:

(1) That the application of the applicants above named for an underground water right was filed on the 27th day of June, 1972.

(2) That the Water Clerk for Water Division 3 issued and caused a resume of said application to be published and mailed as required by statute.

(3) That the time for filing statements of opposition expired on the 31st day of December 1972, and no statements of opposition have been filed herein.

(4) That the Referee finds that South Farm Well No. 25 of the applicants above named is located in the Watershed of the Closed Basin at a point 1400 feet from the West section line, and 2500 feet from the South section line, in the NE¼ SW¼

in Section 32, Township 44 North, Range 8 East, NMPM, in the County of Saguache, State of Colorado, and draws its supply of water from a (confined) (~~unconfined~~) subterranean acquifer into which such

W-1902-South Farm-25.

(5) That such appropriation was initiated on the 12th day of December, 1956, by the commencement of drilling operations which were diligently pursued and a producing well obtained. Well Registration No. 6052.

(6) That such South Farm Well No. 25 is used as an independent source of water for irrigation use.

(7) That said South Farm Well No. 25 of the applicant is entitled to appropriation priority as of the 12th day of December, 1956, for 1600 gallons of water per minute, being 3.57 cubic feet of water per second of time, being 7.14 acre feet of water per twenty-four (24) hours, for irrigation purposes,

(8) That said well may be used as an alternate point of diversion for the following surface water rights: Not applied for.

W-1902-South Farm-25.

THEREFORE, IT IS HEREBY RULED AND ORDERED that the application herein be and it is hereby granted the indicated priority as follows:

1. Applicant's name and address:

   Arizona-Colorado Land and Cattle Company, A Colorado Corporation
   Legal Owner, 5001 East Washington Street, Phoenix, AZ 85034.

   Oliver Gould and Faye Gould, Contract Purchasers
   P. O. Box 512, Saguache, CO 81149.

2. Name or designation of well:
   Well No. South Farm 25.

3. Location of well and point of diversion:

   NE¼ SW¼, Section 32, Township 44 North, Range 8 East, NMPM, at a point 1400 feet from West Section line and 2500 feet from South Section line, in Saguache County, Colorado.

4. Alternate points of diversion, if any:

   None.

5. Type of beneficial use:
   Irrigation.

6. Amount and source and means of diversion:
   1600 gallons per minute, being 3.57 cubic feet of water per second of time, being 7.14 acre feet of water in a period of twenty-four hours, from a (confined) (~~unconfined~~) aquifer.

7. Priority date of appropriation:

   December 12, 1956.

8. That said well may be used as an alternate point of diversion for the following surface water rights: Not applied for.

IT IS FURTHER ORDERED that the Water Clerk shall mail copies of this report and ruling as provided by statute.

Dated and entered of record this 25th day of May, 1976.

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION 3
STATE OF COLORADO
CASE NO. W-1902

FILED IN DISTRICT COURT
WATER DIVISION 3
STATE OF COLORADO
MAY 25 1976
CARLA R. SHAWCROFT
WATER CLERK

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF

ARIZONA-COLORADO LAND AND CATTLE COMPANY, A COLORADO CORPORATION, LEGAL OWNER; AND OLIVER GOULD AND FAYE GOULD, CONTRACT PURCHASERS

IN SAGUACHE COUNTY)

REFEREE'S REPORT

AND RULING

South Farm
WELL NO. 25A W-1902.

THIS MATTER coming on to be heard this day before the undersigned Referee, pursuant to Order of Referral herein, and upon examination of the records and files herein, and upon his investigation, hereby makes the following Findings and Rulings therein:

(1) That the application of the applicants above named for an underground water right was filed on the 27th day of June, 1972.

(2) That the Water Clerk for Water Division 3 issued and caused a resume of said application to be published and mailed as required by statute.

(3) That the time for filing statements of opposition expired on the 31st day of December 1972, and no statements of opposition have been filed herein.

(4) That the Referee finds that South Farm Well No. 25A of the applicants above named is located in the Watershed of the Closed Basin at a point 1320 feet from the South section line, and 2640 feet from the West section line, in the SE¼ SW¼ in Section 32, Township 44 North, Range 8 East, NMPM, in the County of Saguache, State of Colorado, and draws its supply of water from a (confined) (unconfined) subterranean acquifer into which such

W-1902-South Farm-25A.

(5) That such appropriation was initiated on the 12th day of December, 19 56, by the commencement of drilling operations which were diligently pursued and a producing well obtained. Well Registration No. 019058-F.

(6) That such South Farm Well No. 25A is not an independent source of water but is solely an alternate point of diversion for South Farm Well No. 25, Permit No. 6052, for irrigation use.

(7) That said South Farm Well No. 25A of the applicant is entitled to appropriation priority as of the 12th day of December, 19 56, for 950 gallons of water per minute, being 2.12 cubic feet of water per second of time, being 4.24 acre feet of water per twenty-four (24) hours, for irrigation purposes,

(8) That said well may be used as an alternate point of diversion for the following surface water rights: Not applied for.

THEREFORE, IT IS HEREBY RULED AND ORDERED that the application herein be and it is hereby granted the indicated priority as follows:

1. Applicant's name and address:

   Arizona-Colorado Land and Cattle Company, A Colorado Corporation
   Legal Owner, 5001 East Washington Street, Phoenix, AZ 85034.

   Oliver Gould and Faye Gould, Contract Purchasers
   P. O. Box 512, Saguache, CO 81149.

2. Name or designation of well:
   Well No. South Farm 25.

3. Location of well and point of diversion:

   SE¼ SW¼, Section 32, Township 44 North, Range 8 East, NMPM, at a point 1320 feet from South Section line and 2640 feet from West Section line, in Saguache County, Colorado.

4. Alternate points of diversion, if any:

   None.

5. Type of beneficial use:
   Irrigation.

6. Amount and source and means of diversion:
   950 gallons per minute, being 2.12 cubic feet of water per second of time, being 4.24 acre feet of water in a period of twenty-four hours, from a (confined) (~~unconfined~~) aquifer.

7. Priority date of appropriation:

   December 12, 1956.

7A. That said Well is not an independent source of water but is solely an alternate point of diversion for South Farm Well No. 25, Permit No. 6052, for irrigation use.

8. That said well may be used as an alternate point of diversion for the following surface water rights: Not applied for.

IT IS FURTHER ORDERED that the Water Clerk shall mail copies of this report and ruling as provided by statute.

Dated and entered of record this 25th day of May, 1976.

WRJ-25-73

THIS FORM MUST BE SUBMITTED PRIOR TO THE EXPIRATION OF THE PERMIT. TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

300 Columbine Bldg., 1845 Sherman St.
Denver, Colorado 80203

RECEIVED
NOV 08 '74
WATER RESOURCES
STATE ENGINEER
COLO.

FOR OFFICE USE ONLY
Div. 3 Cty. 55

____ STATEMENT OF BENEFICIAL USE OF GROUND WATER
_x_ AMENDMENT OF EXISTING RECORD

PERMIT NUMBER 6052

STATE OF COLORADO
COUNTY OF RIO GRANDE } SS.

THE AFFIANT(S) [redacted]
whose mailing address is [redacted]
City [redacted] (STATE) (ZIP)

LOCATION OF WELL

County Saguache

NE ¼ of the SW ¼, Section 32

Twp. 44 N (N OR S), Rng. 8 E (E OR W), N.M. P.M.

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of ____ feet from the ____ (NORTH OR SOUTH) section line and ____ feet from the ____ (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 12th day of December, 1956; the maximum sustained pumping rate of the well is 1600 gallons per minute, the pumping rate claimed hereby is 1600 gallons per minute; the total depth of the well is 215 feet; the average annual amount of water to be diverted is ____ acre-feet; for which claim is hereby made for Irrigation purpose(s); the legal description of the land on which the water from this well is used is as set forth in attached exhibit A which totals 3640 acres and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

Signature(s) By OLIVER GOULD AND FAYE GOULD
William R. Bartlett

1.00
56970

Subscribed and sworn to before me on this 5th day of November, 19 74

My Commission expires: 1/14/75
(SEAL)

Shirley McDaniel
NOTARY PUBLIC

FOR OFFICE USE ONLY
Court Case No. #25 W-1902
Sec. ____ ____ ¼, ____ ¼, ____ ¼,
Well Use ____ ____ ____ ____
Dist. ____ Basin ____ Man. Dis. ____
Prior. ____ Mo. ____ Day ____ Yr. ____

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

DATE

STATE ENGINEER E. J. Kuiper

BY DEPUTY STATE ENGINEER W. W. Erker

Well drilled by _____ Lic. No. _____

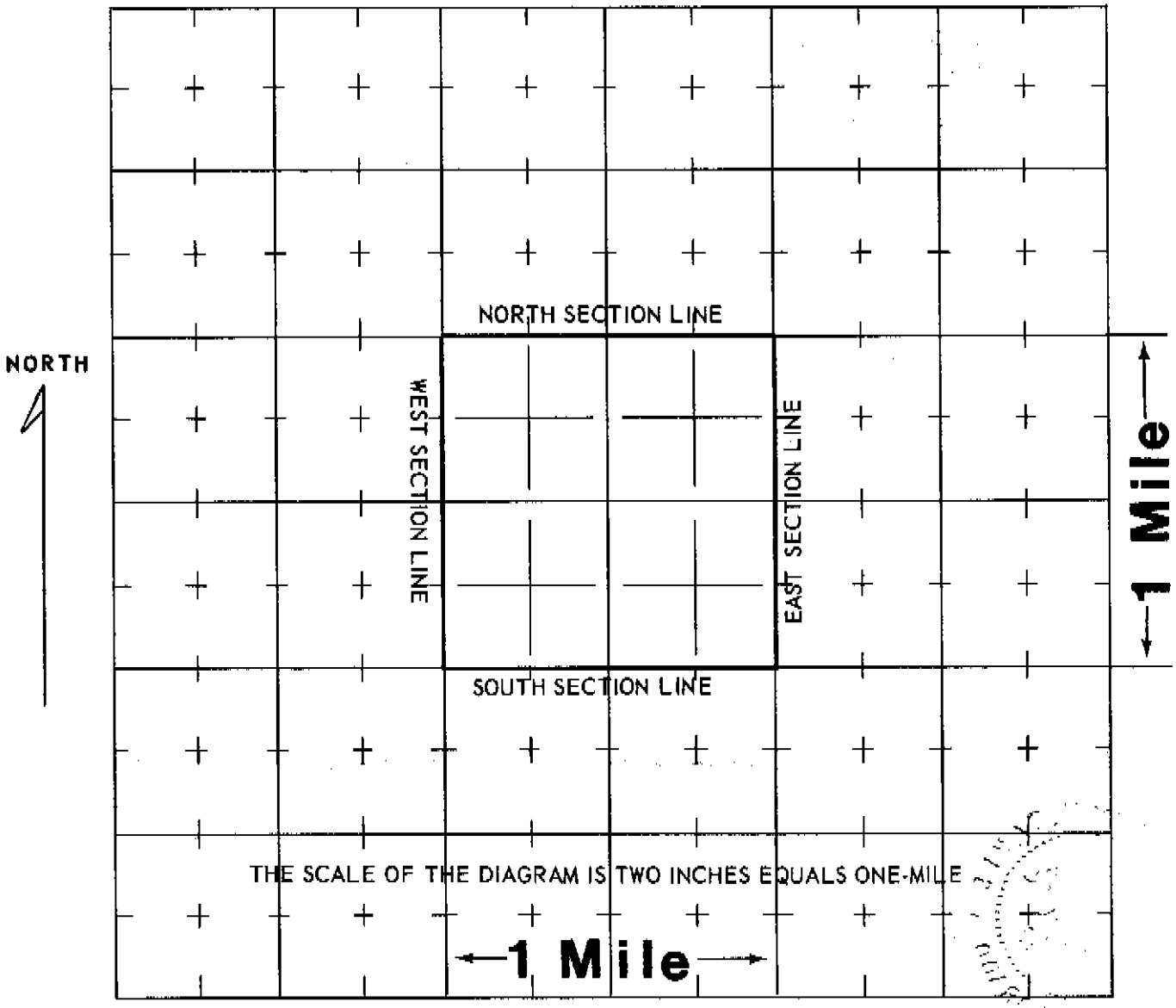
Pump installed by _____ Lic. No. _____

Meter Serial No. _____ ☐ Flow Meter ☐ Electric Meter ☐ Fuel Meter

Owner of land on which water is being used _____

THE LOCATION OF THE WELL MUST BE SHOWN AND THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the **CENTER SQUARE** (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep.
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
100 gpm pumped continuously for one year produces 160 acre-feet.

GWS-25-73

THIS FORM MUST BE SUBMITTED PRIOR TO THE EXPIRATION OF THE PERMIT. TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

300 Columbine Bldg., 1845 Sherman St.
Denver, Colorado 80203

RECEIVED
NOV 08 '74
WATER RESOURCES STATE ENGINEER COLO.

FOR OFFICE USE ONLY
Div. 3 Cty. 55

____ STATEMENT OF BENEFICIAL USE OF GROUND WATER
x AMENDMENT OF EXISTING RECORD

PERMIT NUMBER 6052

STATE OF COLORADO
COUNTY OF RIO GRANDE } SS.

THE AFFIANT(S) OLIVER GOULD AND FAYE GOULD
whose mailing address is c/o William R. Bartlett P. O. Box 312
City Monte Vista, Colorado 81144 (STATE) (ZIP)

LOCATION OF WELL

County Saguache
NE ¼ of the SW ¼, Section 32
Twp. 44 N (N OR S), Rng. 8 E (E OR W), N.M. P.M.

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of ____ feet from the ____ (NORTH OR SOUTH) section line and ____ feet from the ____ (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 12th day of December, 1956; the maximum sustained pumping rate of the well is 1600 gallons per minute, the pumping rate claimed hereby is 1600 gallons per minute; the total depth of the well is 215 feet; the average annual amount of water to be diverted is ____ acre-feet; for which claim is hereby made for Irrigation purpose(s); the legal description of the land on which the water from this well is used is as set forth in attached exhibit A which totals 3640 acres and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

1.00
56970

Signature(s) By OLIVER GOULD AND FAYE GOULD
William R Bartlett

Subscribed and sworn to before me on this 5th day of November, 19 74

My Commission expires: 1/14/75
(SEAL)

Shirley McDaniel
NOTARY PUBLIC

FOR OFFICE USE ONLY
Court Case No. #25 W-1702
Sec. ____ ____ ¼, ____ ¼, ____ ¼,
Well Use ____ ____ ____ ____
Dist. ____ Basin ____ Mon. Dis. ____,
Prior. ____ Mo. ____ Day ____ Yr. ____

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

DATE

STATE ENGINEER E. J. Seifer

BY DEPUTY STATE ENGINEER H. W. Erken

Form F (Rev.)
7-57/5M

RECEIVED
AUG 4 - 1958
GROUND WATER SEC.
COLORADO
STATE ENGINEER

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER, GROUND WATER SECTION

REGISTRATION NO. 6052 OF WELL

Registrant Arizona-Colorado Land & Cattle Co. ~~The Newhall Land and Farming Company~~ Date April 2, 1958

P.O. Address Crestone, Colo. South Farm Well #25

WELL DATA

Depth 215 ft. Diameter 16 in.

Casing : 152 ft. Plain; 63 ft. Perfor.

Static Water Level 25 ft. from top

Yield 1600 (gpm) from 56 ft.

Used for Irrigation on 200 acres on

Refer to land description on back
(legal description of land or site)

Water conveyed by ditch, size 6 cfs cap.

PUMP DATA

Type turbine electric Size 8"

Driven by motor at 1750 RPM

Well was first used December 12, 1956
testing and
for irrigating using 1600 gpm

Well enlarged _____, 19__ to
deepened
_____ (gpm)(cfs)(ft)

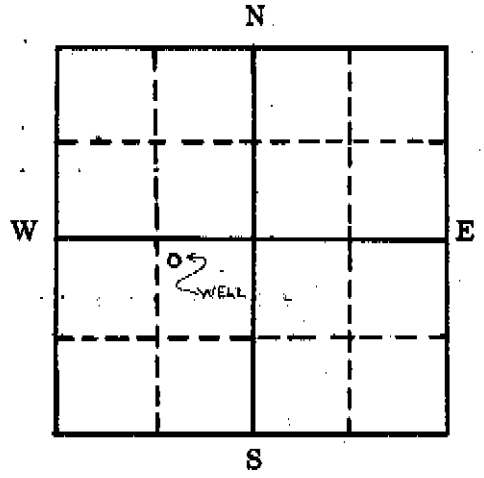
LOG SHOULD BE GIVEN ON REVERSE SIDE IF AVAILABLE

WELL LOCATION

County Saguache 55

NE ¼, SW ¼ Section 32

Twp. 44 N. Rge. 8 E., N.M. PM



WELL TO BE LOCATED AS ACCURATELY AS POSSIBLE WITHIN A SMALL SQUARE WHICH REPRESENTS 40 ACRES; OR IF IN A TOWN OR SUBDIVISION FILL IN THE FOLLOWING:

_____
Town or Subdivision

_____
Street address or Lot and Block

The above well (has) been registered in the Office of the State Engineer prior to May 1, 1957. If Registered give Filing No. 21181.

If NOT Registered prior to May 1, 1957, a $5.00 filing fee accompanies this form.

The above statements are true and correct to the best of my knowledge and belief.

Subscribed and Sworn before me this 1st day of July, 1958.

My commission expires MAR 6 1960

(SEAL) Robert L. Iverson
Notary Public

THE NEWHALL LAND AND FARMING COMPANY
BY George G. Quasius, President
BY _____, Secretary
Registrant

FOR STATE ENGINEER'S USE

Located in 3-26 district, Saguache County for Irrigation

Registration No. 12 in 3-26, on _____, 19__.

Card typed

South Farm Well No. 25
Log of Well:

From (ft)	To (ft)	Description
0	3	Soil
3	65	Gravel and sand
65	75	Gravel, sand and brown clay streak
75	90	Sand and gravel
90	153	Blue clay and sand streak
153	215	Sand and clay streak

The water from the well herein registered is used on the following described land:

The S½, SE¼ of NE¼ of Sec. 19; Sec. 20; Sec. 29; Sec. 30; the N½ of NE¼ of Sec. 31; the E½, E½ of W½ of Sec. 32; the SW¼, SW¼ of NW¼ of Sec. 33, T. 44 N., R. 8 E., N.M.P.M.

The S½, S½ of NE¼ of Sec. 25, T. 44 N., R. 7 E., N.M.P.M.

Lot 2 of Sec. 5, T. 43 N., R. 8 E., N.M.P.M.

76 P

DWR 5-Rev. 76

COLORADO DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

RECEIVED
SEP 0 2 1980
WATER RESOURCES
STATE ENGINEER
COLO.

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: (x) A PERMIT TO USE GROUND WATER
(x) A PERMIT TO CONSTRUCT A WELL
(x) A PERMIT TO INSTALL A PUMP
(x) REPLACEMENT FOR NO. 19058-F
( ) OTHER
WATER COURT CASE NO. W-1902 - Well No. 25-A

916521 V 3
WD 26

(1) APPLICANT - mailing address

NAME Ted Cook
STREET Route 1, Box 181-B
CITY Center, Colorado 81125
(State) (Zip)
TELEPHONE NO. 754-2102

(2) LOCATION OF PROPOSED WELL

County Saguache
Center ¼ of the SW ¼, Section 32
Twp. 44 N (N,S), Rng. 8 E (E,W), N.M. P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 950
Average annual amount of ground water to be appropriated (acre-feet): 380
Number of acres to be irrigated: 160
Proposed total depth (feet): 200 or Blue Clay
Aquifer ground water is to be obtained from:
unconfined
Owner's well designation 16-R-N

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
( ) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
(x) IRRIGATION (6)
( ) MUNICIPAL (8)
( ) OTHER (9)
DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name Licensed driller to be selected
Street
City
(State) (Zip)
Telephone No. Lic. No.

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN
80 CW 198
Receipt No. 7712, B
Basin Dist.

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED AS REPLACEMENT FOR WELL PERMIT NO. 19058-F. THE EXISTING WELL MUST BE PLUGGED AND ABANDONED ACCORDING TO THE RULES AND REGULATIONS ADOPTED BY THE BOARD OF EXAMINERS FOR WATER WELL DRILLING AND PUMP INSTALLATION CONTRACTORS AND THE ENCLOSED AFFIDAVIT MUST BE SUBMITTED WITHIN 90 DAYS AFTER THE NEW WELL IS PUT TO USE.
2) GROUND WATER PRODUCTION FROM THIS WELL IS LIMITED TO THE UNCONFINED AQUIFER. THE DEPTH OF THIS WELL SHALL NOT EXCEED 100 FEET OR THE CONFINING CLAY SERIES, WHICHEVER COMES FIRST.
3) A TOTALIZING FLOW METER MUST BE INSTALLED ON THE WELL DISCHARGE WHEN WATER IS PUT TO BENEFICI USE. DIVERSION RECORDS MUST BE SUBMITTED TO THE DIVISION OF WATER RESOURCES UPON REQUEST.
4) APPROVED FOR A PUMPING RATE NOT TO EXCEED 950 GPM.

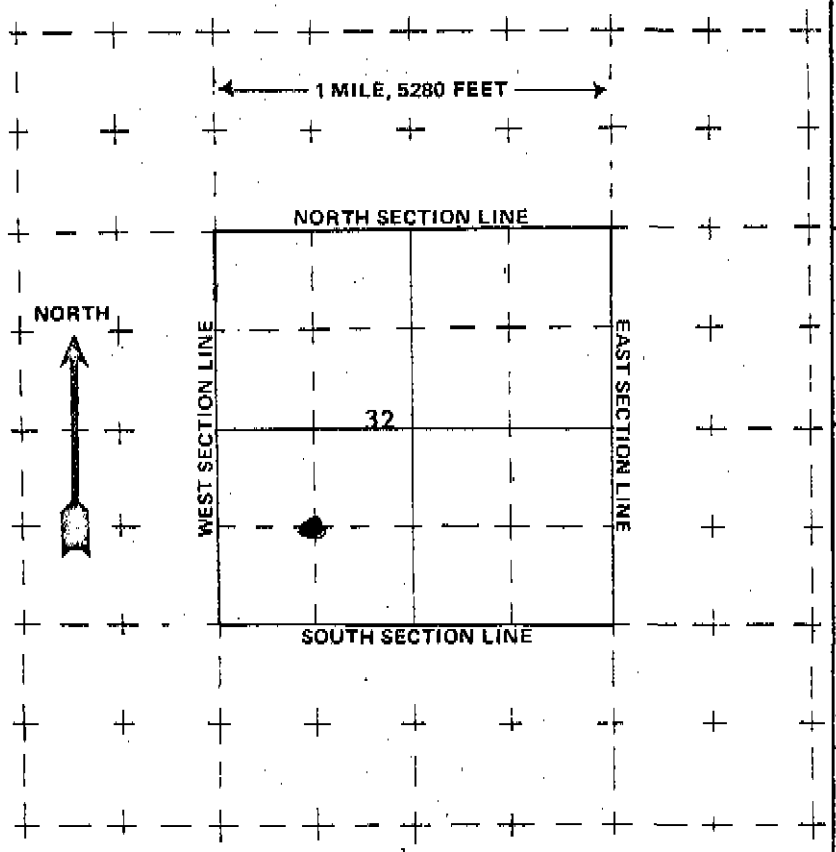
PERMIT EXPIRATION DATE EXTENDED ONE YEAR TO MARCH 10, 1983. 2/23/82 RLL

APPLICATION APPROVED

PERMIT NUMBER 19058-RF
DATE ISSUED MAR 10 1981
EXPIRATION DATE MAR 10 1982

Jim A. Danielson
(STATE ENGINEER)
BY Robert C. Longenbaugh, Asst State Engineer
I.D. 3-26 COUNTY 55

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

1320 ft. from South (north or south) sec. line

1320 ft. from West (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: Ted Cook

No. of acres 160. Will this be the only well on this tract? No.

(8) PROPOSED CASING PROGRAM

Plain Casing

16 in. from 0 ft. to 40 ft.

_____ in. from _____ ft. to _____ ft.

Perforated casing

16 in. from 40 ft. to 200 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

No. 19513-Y-RF is ¼ mile East. Will be plugged and abandoned in accord with Rules of State Engineer.

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): Ted Cook No. of acres: 160

Legal description: SW¼-32-44-8 E.

(11) DETAILED DESCRIPTION of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used. To supply water to center pivot sprinkler system for irrigation.

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
wells only	Irrigation	SW¼-32-44-8 E.

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

Ted Cook Ted Cook August 20, 1980

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

Attachment 2 – Preliminary HCU Analysis

Rio Grande Water Conservation District
8805 Independence Way • Alamosa, Colorado 81101
Phone: (719) 589-6301 • Fax: (719) 992-2026
Protecting & Conserving San Luis Valley Water

December 2, 2024

North Star Farms Partial Purchase – Historic Consumptive Use Analysis
Loan Feasibility Study

This report summarizes an Historic Consumptive Use (HCU) analysis for four fields near Saguache, Colorado. Each of the four fields have been historically irrigated with center pivot sprinklers. The fields range in size from 113 acres to 121 acres and have primarily been used for the production of alfalfa. The fields are shown in Appendix A.

Analysis Period

A period of 1998-2019 was used for this analysis, which spans dry years, such as 2002, wet years such as 2019 and several average years in between. A total of 14 years were used for the analysis. Crop types were determined using irrigated land files from the Rio Grande Decision Support System (RGDSS). Each of the four fields was used in an alfalfa and small grain rotation where alfalfa would be grown for several years followed by one or two years of a small grain crop. The years used in this analysis and the crop types produced on each of the four fields are shown in Appendix B.

Water Supply

Each of the four fields has been irrigated exclusively by groundwater and each field has a single, dedicated well that has been used to supply a center pivot. Each of the four wells has metered diversion records for the period 2009 through the end of the analysis period. For this analysis it was assumed that prior to the installation of meters at the beginning of 2009 that the wells produced the same annual amount as the 2009-2019 average diversion. Additionally, it was assumed that up to 83% of the total diversion would have been available for crop consumption. This assumption is consistent with the RGDSS efficiency for center pivot irrigation.

Distance to groundwater in the vicinity of the fields is generally too large to allow for subirrigation of crops and subirrigation was not considered to be a source of water for this analysis. This assumption is supported by the fact that nearby fields have had their source of irrigation removed over the last couple

of years and precipitation appears to be the only water source sustaining ongoing plant growth. The wells and their diversion records are summarized in Appendix C.

Water Requirements

This HCU analysis is based upon a comparison of available water as summarized above and the demands of the crop. Crop type was determined for each of the 14 years of the analysis period for each of the four fields. Irrigation Water Requirement (IWR) was obtained using StateCU. The Saguache climate station, USC00057337, is the nearest climate station to the four fields and was used for all years when records were available from that station. The Saguache climate station was missing records in multiple years of the analysis period and the following climate stations were used in the listed order until all years had full climate records: Saguache 2WNW, USW00003079; Center CSU San Luis Valley Expt Sta, CTR01; Alamosa San Luis Valley Rgnl, USW00023061.

A modified Blaney Criddle method was used along with the USBR effective precipitation to determine the annual IWR for each of the 14 years of the analysis period. The acreage of each field was determined to be consistent throughout the analysis period and totaled 471.28 acres for the four fields combined. Total water requirements were determined to be the IWR per acre of crop multiplied by field acreage. Total water requirements for each field are summarized in Appendix D.

Analysis and Results

For each year and each field throughout the analysis period the water supply was compared to the water requirements for each field. The available water supply was defined as 83% of the diversion record for the well serving an individual field in that year. Water requirement was defined as the IWR of a particular crop multiplied by acres of the crop. The minimum of water supply and water requirements was determined to be the HCU for each field and each year. HCU ranged from a low of 15.66 AF on field 4 in 2010 to 317.22 AF on Field 1 in 2011. Total HCU for all four fields combined averaged 854.9 AF and ranged from a low of 658.1 AF in 2015 to a high of 1,052.9 AF in 2011. Analysis Results are summarized in Appendix E.

Groundwater Source Analysis

Each of the four wells that served the historically irrigated fields is considered to be completed in the confined aquifer. However, upon further analysis, each well has screened intervals that span parts of multiple defined layers within the RGDSS. In order to ensure no injury to other water rights and to comply with the Confined Aquifer New Use Rules, any future change of water rights must incorporate concepts to mimic the historic operation of the four wells. This HCU analysis also includes an analysis of the RGDSS layers from which the HCU was derived.

For the purposes of this analysis, it is assumed that the water is introduced into the well casing uniformly along the perforated casing length. This assumption is consistent with the RGDSS modelling of these wells. As a result, the amount of water produced from a given layer within each well is a product of the total diversion from the well multiplied by the perforated length within the given layer divided by the total perforated length of the well. Appendix F shows the percentage of each wells production by layer. HCU available in each layer is proportional to the production from each layer. On average, during the analysis period, consumptive use attributable to Layer 1 totaled 152.9 AF for all four wells. The amount attributable to Layer 1 ranged from 126.6 AF to 188.1 AF.

Total production from Layer 2 and 3 combined for all four wells ranged from 640.3 AF to 1,050.1 AF with an average of 870.5 AF. The production from Layers 2 and 3 is 100% consumptive with respect to those layers and the return flows from these layers accrues to Layer 1. The return flow obligation is derived from the historical irrigation efficiency, which averaged 80.6% during the analysis period. The average return flow obligation into layer 1 is therefore 168.6 AF from the average withdrawal of 870.5 AF from layers 2 and3. A portion of this obligation may be satisfied by allowing the 152.9 AF of HCU from Layer 1 to remain in Layer 1. This would result in an obligation of only 15.6 AF that must be recharged into Layer 1 by Layers 2 and 3. By pumping 15.6 AF from Layers 2 and 3 into Layer 1, the full 854.9 AF of HCU from the four wells may be transferred to other Layer 2 and Layer 3 wells. Up to 667.3 AF and 203.3 AF may be withdrawn from Layer 2 and 3, respectively, for return flow obligations and uses at new locations.

APPENDIX A

Property Overview

APPENDIX B

Year	*Crop*			
	Field1	*Field2*	*Field3*	*Field4*
1998	A	A	NA	NA
2002	A	A	A	A
2005	A	A	SG	A
2009	A	NA	A	A
2010	A	A	A	A
2011	A	A	A	A
2012	A	A	A	A
2013	A	A	SG	A
2014	SG	A	SG	A
2015	NA	A	NA	A
2016	A	A	A	SG
2017	A	A	A	NA
2018	SG	A	SG	A
2019	NA	A	NA	A

A = Alfalfa
NA = New Alfalfa
SG = Small Grains

APPENDIX C

	Diversion Records (AF) W1902 WELL NO. S FARM								
Well #	*10A*	*2A*	*25*	*25A*					
Permit	*19064-F*	*19063-F*	*6052-R*	*19058-FR*					
WDID	*2605050*	*2605046*	*2605044*	*2605052*		*Maximum Consumption (AF) @ 83% Eff.*			
Year	*Field1*	*Field2*	*Field3*	*Field4*	*Total Diversion*	*Field1*	*Field2*	*Field3*	*Field4*
1998	308.7	305.6	238.3	204.9	1,057.5	256.2	253.6	197.8	170.1
2002	308.7	305.6	238.3	204.9	1,057.5	256.2	253.6	197.8	170.1
2005	308.7	305.6	238.3	204.9	1,057.5	256.2	253.6	197.8	170.1
2009	330.6	309.6	218.4	230.0	1,088.6	274.4	257.0	181.3	190.9
2010	351.1	322.6	228.0	18.9	920.6	291.4	267.8	189.3	15.7
2011	382.2	334.5	309.8	242.0	1,268.5	317.2	277.6	257.1	200.9
2012	379.5	348.7	187.0	275.1	1,190.3	315.0	289.4	155.2	228.4
2013	321.5	280.8	306.2	52.7	961.1	266.8	233.1	254.1	43.7
2014	211.2	313.3	123.6	266.2	914.3	175.3	260.0	102.6	221.0
2015	222.4	272.7	122.6	175.1	792.9	184.6	226.3	101.7	145.4
2016	379.2	335.6	246.8	183.0	1,144.6	314.7	278.6	204.9	151.9
2017	325.7	296.1	266.8	221.1	1,109.7	270.4	245.8	221.5	183.5
2018	306.4	263.3	306.2	320.0	1,195.8	254.3	218.5	254.1	265.6
2019	186.2	284.0	306.2	270.0	1,046.4	154.6	235.7	254.1	224.1
Average	308.7	305.6	238.3	204.9	1,057.5	256.2	253.6	197.8	170.1

APPENDIX D

					Acreage			
					120.55	120.82	116.32	113.59
	Crop Irrigation Water Requirements (AF/Acre)				Total Field Water Requirements (AF)			
Year	Field1	Field2	Field3	Field4	Field1	Field2	Field3	Field4
1998	2.81	2.81	1.88	1.88	339.2	340.0	218.5	213.4
2002	3.16	3.16	3.16	3.16	380.8	381.7	367.5	358.9
2005	2.57	2.57	1.42	2.57	309.8	310.5	165.2	291.9
2009	2.29	1.49	2.29	2.29	276.2	180.0	266.6	260.3
2010	2.68	2.68	2.68	2.68	322.7	323.5	311.4	304.1
2011	2.80	2.80	2.80	2.80	337.2	338.0	325.4	317.7
2012	3.00	3.00	3.00	3.00	362.0	362.8	349.3	341.1
2013	2.54	2.54	1.57	2.54	306.7	307.4	182.1	289.0
2014	1.46	2.58	1.46	2.58	175.6	311.9	169.5	293.3
2015	1.85	2.60	1.85	2.60	223.1	314.4	215.3	295.6
2016	2.70	2.70	2.70	1.53	325.5	326.2	314.1	173.7
2017	2.57	2.57	2.57	1.72	310.0	310.7	299.2	195.7
2018	1.71	2.90	1.71	2.90	206.1	350.9	198.9	329.9
2019	1.88	2.52	1.88	2.52	227.2	304.6	219.2	286.4

APPENDIX E

	Consumptive Use (AF)				
Year	***Field1***	***Field2***	***Field3***	***Field4***	***Total***
1998	256.2	253.6	197.8	170.1	877.7
2002	256.2	253.6	197.8	170.1	877.7
2005	256.2	253.6	165.2	170.1	845.1
2009	274.4	180.0	181.3	190.9	826.6
2010	291.4	267.8	189.3	15.7	764.1
2011	317.2	277.6	257.1	200.9	1,052.9
2012	315.0	289.4	155.2	228.4	987.9
2013	266.8	233.1	182.1	43.7	725.7
2014	175.3	260.0	102.6	221.0	758.9
2015	184.6	226.3	101.7	145.4	658.1
2016	314.7	278.6	204.9	151.9	950.0
2017	270.4	245.8	221.5	183.5	921.1
2018	206.1	218.5	198.9	265.6	889.1
2019	154.6	235.7	219.2	224.1	833.6
Average	252.8	248.1	183.9	170.1	854.9

APPENDIX F

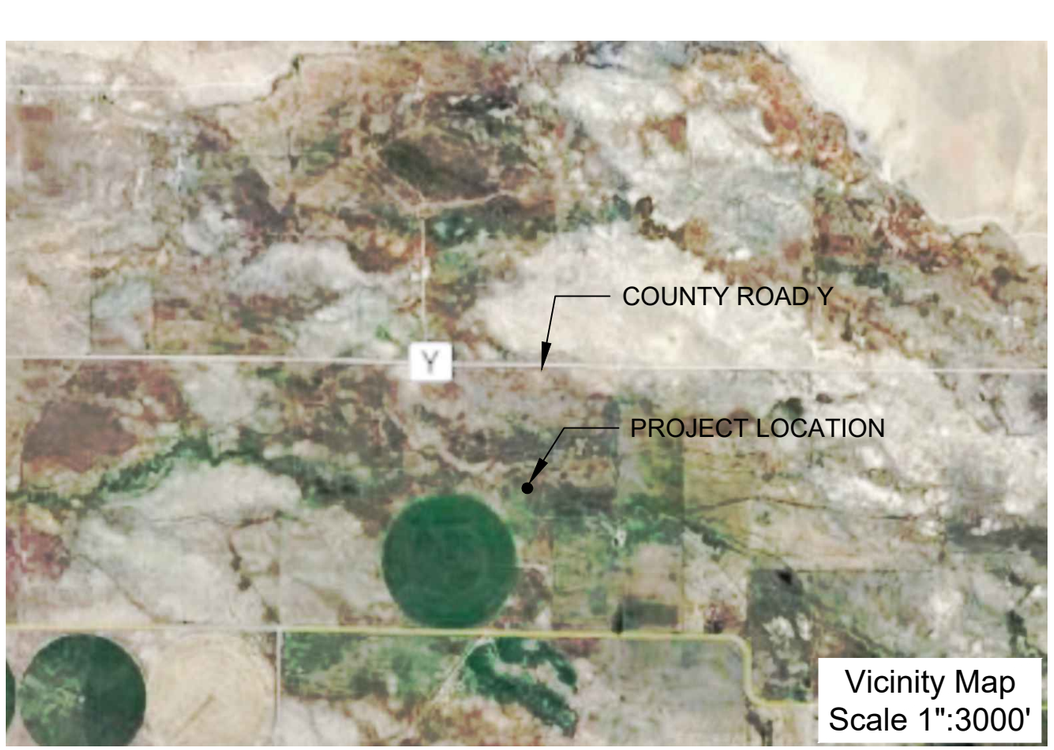
	HCU by Layer and Field (AF)														
	Field 1			Field 2			Field 3			Field 4			Total HCU		
	Layer 1 %	Layer 2%	Layer 3%	Layer 1 %	Layer 2%	Layer 3%	Layer 1 %	Layer 2%	Layer 3%	Layer 1 %	Layer 2%	Layer 3%			
Year	24.6%	62.0%	13.3%	25.6%	65.0%	9.4%	0.0%	52.6%	47.4%	16.0%	74.1%	9.9%	Layer 1	Layer 2	Layer 3
1998	63.1	159.0	34.1	64.9	164.8	24.0	0.0	104.1	93.8	27.2	126.0	16.8	155.2	553.8	168.7
2002	63.1	159.0	34.1	64.9	164.8	24.0	0.0	104.1	93.8	27.2	126.0	16.8	155.2	553.8	168.7
2005	63.1	159.0	34.1	64.9	164.8	24.0	0.0	86.9	78.3	27.2	126.0	16.8	155.2	536.7	153.2
2009	67.6	170.2	36.6	46.0	117.0	17.0	0.0	95.4	85.9	30.5	141.4	18.9	144.2	524.0	158.4
2010	71.8	180.8	38.8	68.5	174.0	25.3	0.0	99.6	89.7	2.5	11.6	1.6	142.8	465.9	155.4
2011	78.1	196.8	42.3	71.0	180.4	26.2	0.0	135.3	121.9	32.1	148.8	19.9	181.3	661.3	210.3
2012	77.6	195.4	42.0	74.0	188.1	27.3	0.0	81.6	73.5	36.5	169.2	22.6	188.1	634.3	165.5
2013	65.7	165.6	35.6	59.6	151.4	22.0	0.0	95.8	86.3	7.0	32.4	4.3	132.3	445.2	148.2
2014	43.2	108.8	23.4	66.5	169.0	24.6	0.0	54.0	48.6	35.4	163.7	21.9	145.0	495.4	118.4
2015	45.5	114.5	24.6	57.9	147.1	21.4	0.0	53.5	48.2	23.3	107.7	14.4	126.6	422.9	108.6
2016	77.5	195.2	41.9	71.2	181.0	26.3	0.0	107.8	97.1	24.3	112.5	15.0	173.1	596.6	180.4
2017	66.6	167.7	36.0	62.9	159.7	23.2	0.0	116.5	105.0	29.4	135.9	18.2	158.8	579.9	182.4
2018	50.8	127.9	27.5	55.9	142.0	20.6	0.0	104.6	94.3	42.5	196.8	26.3	149.1	571.3	168.7
2019	38.1	95.9	20.6	60.3	153.2	22.3	0.0	115.3	103.9	35.9	166.1	22.2	134.2	530.4	169.0
Average	62.3	156.8	33.7	63.5	161.2	23.4	0.0	96.7	87.2	27.2	126.0	16.8	152.9	540.8	161.1

Attachment 3 – Construction Plans

SPECIAL IMPROVEMENT DISTRICT No. 5 LARGE CAPACITY AUGMENTATION WELL #2

Located in Saguache County, Colorado

NE¼ Sec.15, T.44N., R.8E, N.M.P.M



Sheet Index

DAVIS ENGINEERING SERVICE, INC.
DAVIS ENGINEERING SERVICE, INC.
1314 11th STREET - P.O. BOX 1660
ALAMOSA, COLORADO 81101
PHONE: (719) 589-5556
FAX: (719) 589-3712

DESIGNED CMP/WSS | CHECKED | SCALE AS NOTED
DRAWN WSS | APPROVED CMP | DATE 8/23/24

0" 1" 1.5" 2"
ELEVATION BASE ASSUMED

REV.	DATE	BY	APVD.

STAMP

COLORADO LICENSED
CHRISTOPHER M. PHILLIPS
51205
REGISTERED PROFESSIONAL ENGINEER

CLIENT
Special Improvement District No. 5
8805 Independence Way
Alamosa, CO 81101

Large Capacity Augmentation Well #2

Title Sheet and Vicinity Map

E02068

Sheet 1 of 7

GENERAL AND SITE NOTES

1. THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A CONFINED AQUIFER AUGMENTATION WELL TO WITHDRAW FROM RGDSS MODEL LAYER 2, THE UPPER-MOST CONFINED AQUIFER.

2. THE TOTAL DEPTH OF THE AUGMENTATION WELL WILL BE APPROXIMATELY 220'. IN THIS AREA, THE CONFINING CLAY LAYER SEPARATING RGDSS MODEL LAYERS 1 AND 2 LIES FROM APPROXIMATELY 120 TO 125' IN DEPTH.

3. A 28" ø STEEL SURFACE CASING WILL BE INSTALLED TO THE BOTTOM OF THE CONFINING CLAY LAYER. A GROUT SEAL WILL BE INSTALLED IN THE ANNULAR SPACE BETWEEN THE SURFACE CASING AND THE BOREHOLE WALL. THE TOTAL LENGTH OF SURFACE CASING WILL BE APPROXIMATELY 127'.

4. THE PUMP CHAMBER CASING WILL CONSIST OF 20" ø SMOOTH STEEL FROM THE SURFACE TO A DEPTH OF 130'. A 304 STAINLESS STEEL WELL SCREEN WILL BE INSTALLED FROM 130' TO 220'. THE SPECIFIC TYPE AND SLOT SIZE OF THE STAINLESS STEEL WELL SCREEN WILL BE DETERMINED AFTER THE WINNING BID HAS BEEN SELECTED. THE PROJECT SPECIFICATIONS DOCUMENTS CONTAINS TWO SCREEN TYPES FOR BIDDING PURPOSES, A JOHNSON BRAND WIRE WRAPPED TYPE AND A ROSCOE MOSS BRAND LOUVERED TYPE. FOR BIDDING PURPOSES, JOHNSON BRAND SHUR PAK 10-12 FILTER PACK HAS BEEN SELECTED. THE SIZE RANGE OF THIS FILTER MATERIAL IS 0.079 to 0.066".

5. AT THE BASE OF THE WELL A GROUT PAD WILL BE PLACED FROM A DEPTH OF 217' to 220'.

6. THE PUMP AND MOTOR SELECTED FOR BIDDING PURPOSES IS A FRANKLIN ELECTRIC BRAND 75 HP FST 10-FYC ENCLOSED PROPELLOR, 3-PHASE, 480v SUBMERSIBLE. THE ACCOMPANYING VFD IS A FRANKLIN ELECTRIC 75 HP CERUS X-DRIVE MODEL.

7. NO EXCAVATION OR WORK SHALL BEGIN UNTIL THE CONTRACTOR HAS OBTAINED, AT HIS EXPENSE, ANY PERMITS REQUIRED TO PERFORM THE PROPOSED WORK.

8. THE CONTRACTOR SHALL NOT DISTURB AREAS BEYOND THE PROJECT LIMITS.

9. THE APPROXIMATE DISTURBANCE AREA IS 1 ACRE IN SIZE. THE CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. ANY REWORK OF MATERIALS DUE TO LACK OF THIS MAINTENANCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

10. THE PHYSICAL FEATURES WITHIN THE LIMITS OF THE PROJECT HAVE BEEN SHOWN BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL FEATURES PRIOR TO BEGINNING ANY WORK.

11. THE CONTRACTOR SHALL KEEP ALL OPERATIONS WITHIN THE LIMITS OF THE INDICATED EASEMENTS. THE CONTRACTOR SHALL KEEP EQUIPMENT AND MATERIALS WITHIN THESE LIMITS. CONSTRUCTION ACTIVITIES, STAGING, PARKING, OR OFF-SITE DISPOSAL SHALL NOT ENCROACH UPON PRIVATE OR PUBLIC LANDS WITHOUT WRITTEN APPROVAL FROM THE PROPERTY OWNER OR LAND MANAGEMENT AGENCY.

12. SHOULD ANY QUESTIONS ARISE OR ANY DISCREPANCIES BE NOTED IN THE PLANS, THE ENGINEER SHOULD BE CONSULTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEMS.

13. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTS FROM DAMAGE DURING CONSTRUCTION OPERATIONS. ANY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE RESET AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR AND THE ENGINEER SHALL NOTE THESE MONUMENTS IN THE FIELD PRIOR TO CONSTRUCTION.

14. ANY DAMAGE TO PUBLIC ROADWAYS SHALL BE REPAIRED IMMEDIATELY AND PRIOR TO CONTINUING OPERATIONS. DUST SHALL BE PROPERLY CONTROLLED, AND ANY MUD OR OTHER MATERIAL TRACKED OR OTHERWISE DEPOSITED ON THE ROADWAY SHALL BE REMOVED DAILY OR AS ORDERED BY THE ENGINEER.

15. IF THE OWNER HAS LIVESTOCK PRESENT ON THE PROPERTY AT THE TIME OF CONSTRUCTION THE CONTRACTOR IS TO CLOSE ANY GATES THEY OPEN WHEN ACCESSING THE JOB SITE.

UTILITY GENERAL NOTES

1) THE UTILITIES SHOWN ON THE PLANS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN. AS MANY OF THE UTILITIES ARE PRIVATE SERVICE LINES WITHOUT TRACER WIRE, ACCURATE LOCATES ARE NOT AVAILABLE. THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. SOME UTILITIES MAY HAVE BEEN ADDED OR RELOCATED PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE DRAWINGS AND ASCERTAIN WHETHER ANY OTHER STRUCTURE AND UTILITIES MAY EXIST. EVERY REASONABLE MEANS SHALL BE USED, INCLUDING FIELD LOCATION OF THE UTILITY USING WHATEVER PROSPECTING MEANS ARE NECESSARY. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK, AND SHALL HOLD THE OWNER AND THEIR CONSULTANTS HARMLESS FOR ANY AND ALL DAMAGES TO UTILITIES ARISING FROM CONSTRUCTION OPERATIONS.

2) THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST TWO (2) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 OR 1-800-922-1987, TO HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES. ALL OTHER UNDERGROUND FACILITIES SHALL BE LOCATED BY CONTACTING THE RESPECTIVE OWNER. UTILITY SERVICE LATERALS SHALL ALSO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING.

3) THE CONTRACTOR SHALL VERIFY AND DOCUMENT THE CONDITION OF EXISTING UTILITIES (VISIBLE FACILITIES) WITH THE ENGINEER AND REPRESENTATIVES FROM THE UTILITY COMPANIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

4) THE CONTRACTOR SHALL FULLY COORDINATE UTILITY WORK WITH THE AFFECTED UTILITY PROVIDER AS APPROPRIATE.

DAVIS ENGINEERING SERVICE, INC.
DAVIS ENGINEERING SERVICE, INC.
1314 6th STREET - P.O. BOX 340
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PHONE: (719) 589-3741
FAX: (719) 589-3712

DESIGNED CMP/WSS | CHECKED | SCALE AS NOTED
DRAWN WSS | APPROVED CMP | DATE 8/23/24

0" 1" 1.5" 2"
ELEVATION BASE ASSUMED

REV.	DATE	BY	APVD.

COLORADO LICENSED JOHN M. PHILLIPS 51205 REGISTERED PROFESSIONAL ENGINEER

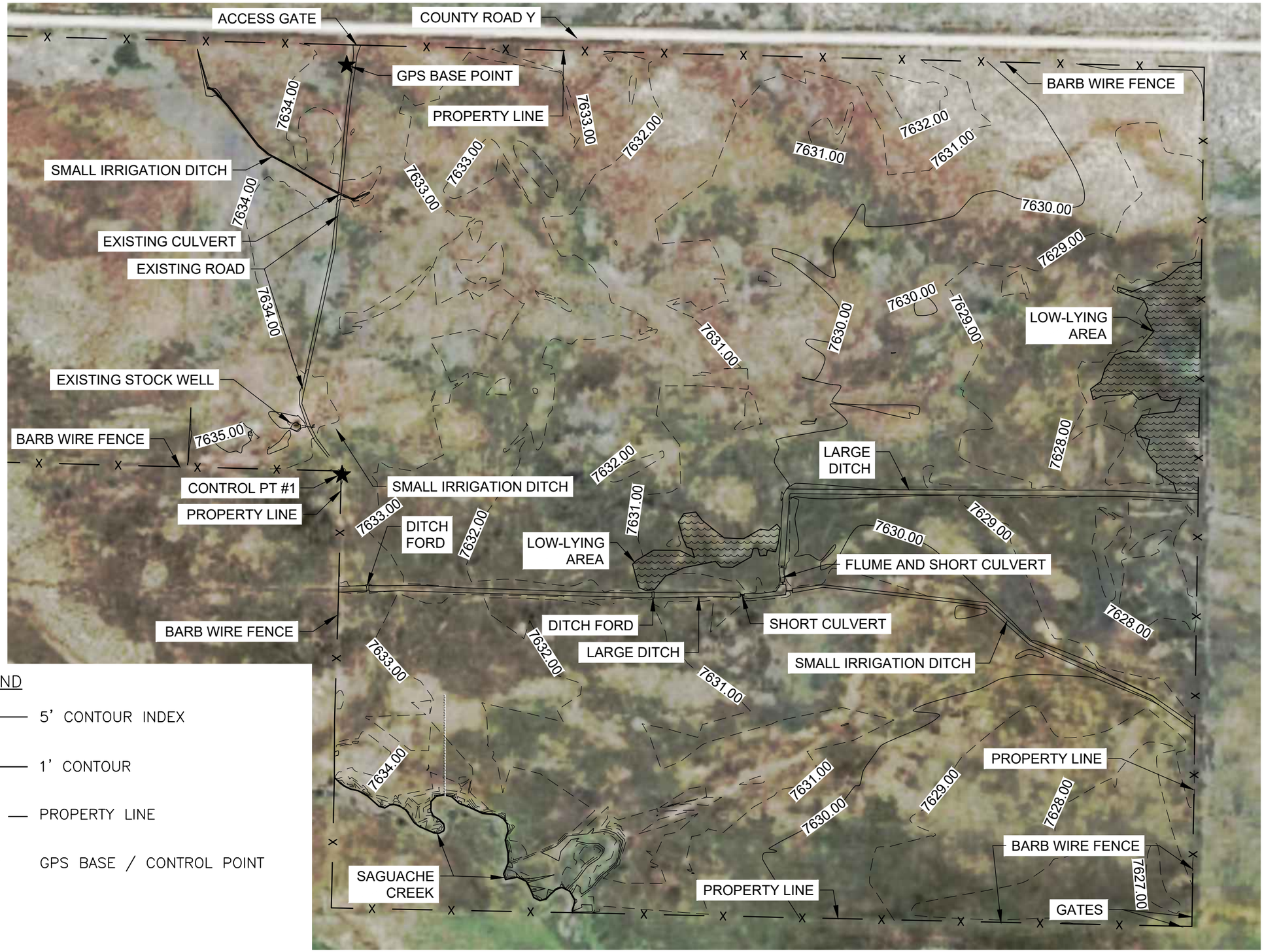
SEAL

CLIENT
Special Improvement District No. 5
8805 Independence Way
Alamosa, CO 81101

Large Capacity Augmentation Well #2

Site & Utility Notes

E02068



LEGEND

- 5' CONTOUR INDEX
- 1' CONTOUR
- PROPERTY LINE
- ★ GPS BASE / CONTROL POINT

EXISTING CONDITIONS SITE MAP
Scale 1":300'

DAVIS ENGINEERING SERVICE, INC.

DESIGNED CMP/WSS
DRAWN WSS
CHECKED
APPROVED CMP
SCALE AS NOTED
DATE 8/23/24

1" 1.5" 2"
0"
ELEVATION BASE ASSUMED

DAVIS ENGINEERING SERVICE, INC.
1314 136 STREET - P.O. BOX 1840
ALAMOSA, COLORADO 81101
PHONE: (719) 589-3116
FAX: (719) 589-3712

REV.	DATE	BY	APVD.

COLORADO LICENSED
CLINTON M. PHILLIPS
51205
REGISTERED
PROFESSIONAL ENGINEER

STAMP

CLIENT
Special Improvement District No. 5
8805 Independence Way
Alamosa, CO 81101

Large Capacity Augmentation Well #2

Existing Conditions Map

E02068

Sheet 3 of 7

GPS BASE POINT

UTILIZE EXISTING GATE FOR SITE ACCESS

100' WIDE ELECTRICAL SERVICE EASEMENT

SLV REC TO INSTALL OVERHEAD ELECTRICAL IN EASEMENT

EXISTING ACCESS ROAD

30' WIDE ACCESS EASEMENT

8"Ø 20 LONG CULVERT ACROSS EXISTING IRRIGATION DITCH

LOW-LYING AREA

CONTROL PT #1

EASEMENTS OVERLAP

LOW-LYING AREA

24" Ø 20' LONG CULVERT ACROSS LARGE DITCH

PROPOSED WELL LOCATION

PROPOSED PIPELINE TO CREEK

SAGUACHE CREEK

PROPERTY LINE

LEGEND

- ℄ 30' ACCESS EASEMENT
- ℄100' ELECTRICAL EASEMENT
- PROPERTY LINE
- PROPOSED AUGMENTATION WELL
- GPS BASE / CONTROL POINT

PROPOSED CONSTRUCTION SITE MAP
Scale 1":300'

DAVIS ENGINEERING SERVICE, INC.

DAVIS ENGINEERING SERVICE, INC.
3110 13th STREET - P.O. BOX 1840
ALAMOSA, COLORADO 81101
PHONE: (719) 589-3116
FAX: (719) 589-3712

DESIGNED CMP/WSS
DRAWN WSS
CHECKED
APPROVED CMP
SCALE AS NOTED
DATE 8/23/24

0" 1" 1.5" 2"
ELEVATION BASE ASSUMED

THIS DRAWING IS THE PROPERTY OF DAVIS ENGINEERING SERVICE, INC. AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN PERMISSION FROM DAVIS ENGINEERING SERVICE, INC.

REV. | DATE | BY | APVD

COLORADO LICENSED PROFESSIONAL ENGINEER JOHN M. PHILLIPS 51205

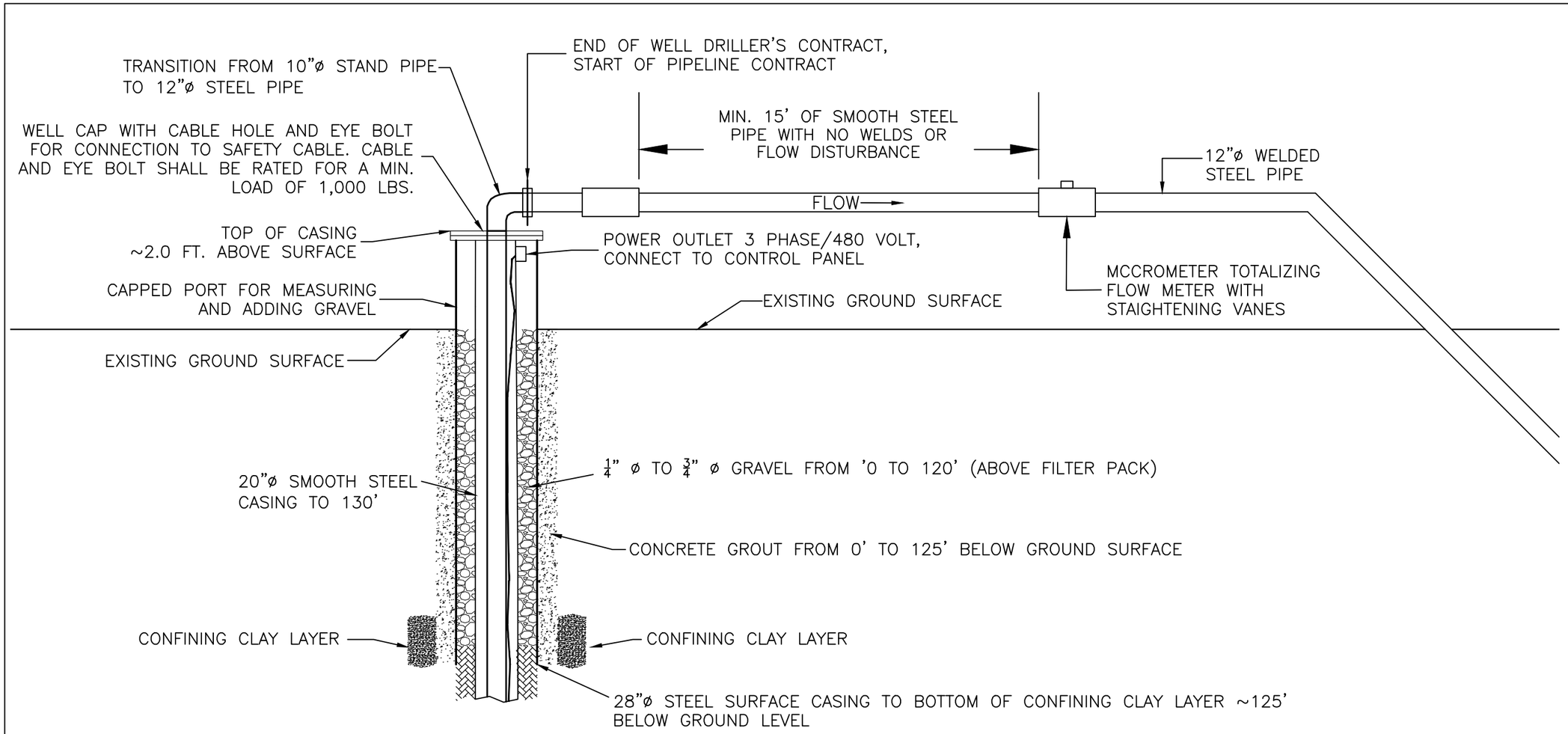
STAMP

CLIENT
Special Improvement District No. 5
8805 Independence Way
Alamosa, CO 81101

Large Capacity Augmentation Well #2

Proposed Construction Site Map

E02068



304–STAINLESS STEEL WELL SCREEN 20"ø W/0.06" SLOT WIDTH FROM 130' TO 220'

NOTE:
SPECIFIC SCREEN TYPE AND SLOT SIZE TO BE DETERMINED AFTER BIDDING PROCESS

EXACT WELL DIMENSIONS WILL BE DETERMINED BY THE PERMIT AND DOWN–HOLE OBSERVATIONS

AUGMENTATION WELL SUBSURFACE DETAIL
NOT TO SCALE

DAVIS ENGINEERING SERVICE, INC.

DAVIS ENGINEERING SERVICE, INC.
1314 6th STREET - P.O. BOX 1840
ALAMOSA, COLORADO 81101
PHONE: (719) 589-5116
FAX: (719) 589-3712

DESIGNED	CHECKED	SCALE	DATE
CMP/WSS		AS NOTED	8/23/24
DRAWN	APPROVED		
WSS	CMP		

0" 1" 1.5" 2"
ELEVATION BASE ASSUMED

REV. | DATE | BY | APVD

COLORADO LICENSED — KENNETH M. PHILLIPS — 51205 — REGISTERED PROFESSIONAL ENGINEER

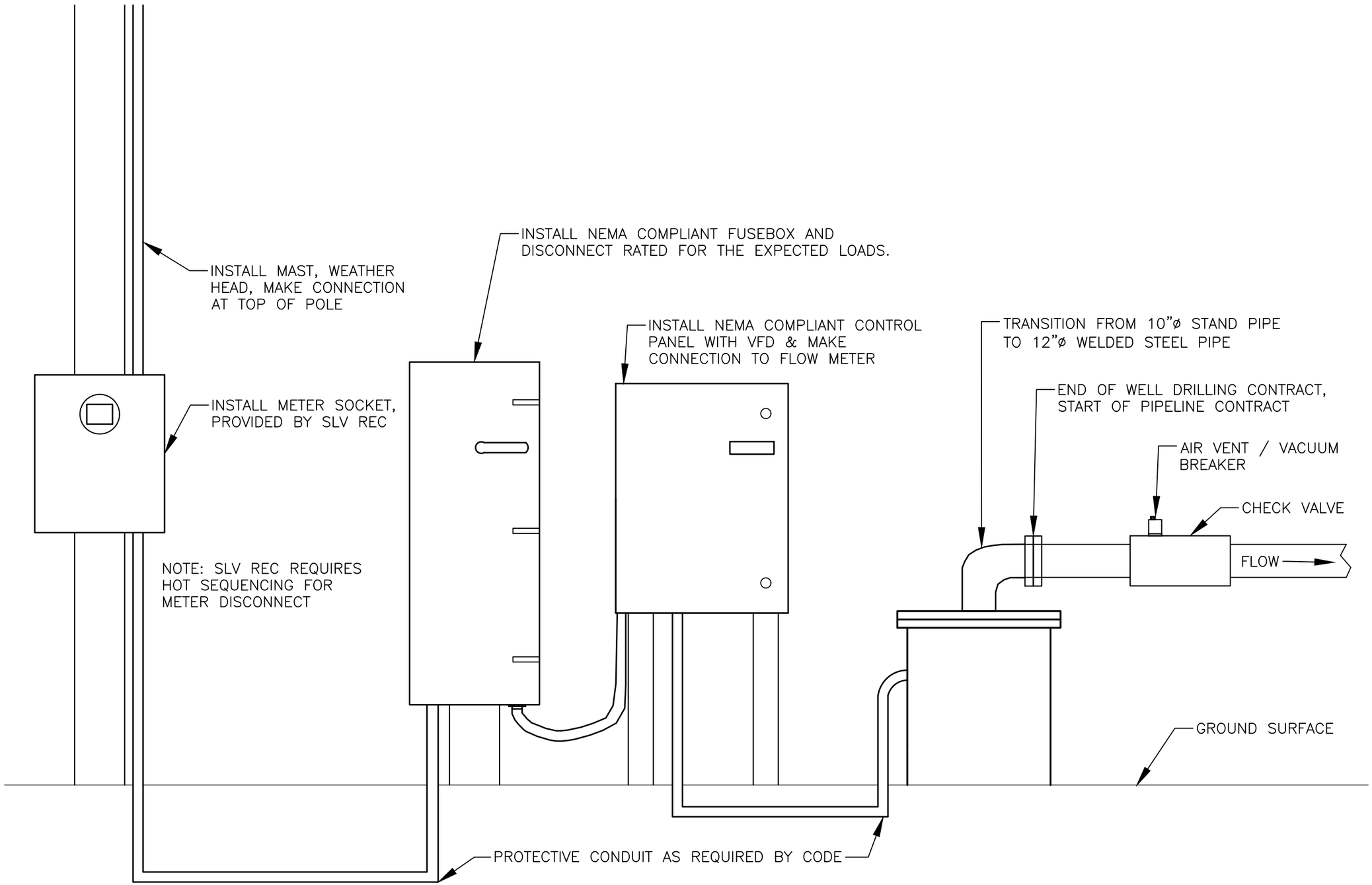
STAMP

CLIENT
Special Improvement District No. 5
8805 Independence Way
Alamosa, CO 81101

Large Capacity Augmentation Well #2

Well Subsurface Detail

E02068



AUGMENTATION WELL SURFACE DETAIL
NOT TO SCALE

DAVIS ENGINEERING SERVICE, INC.

DAVIS ENGINEERING SERVICE, INC.
1314 16-STREET - P.O. BOX 1460
ALAMOSA, COLORADO 81101
PHONE: (719) 589-5156
FAX: (719) 589-3712

DESIGNED	CHECKED	SCALE	AS NOTED
CMP/WSS		DATE	8/23/24
DRAWN	APPROVED		
WSS	CMP		

0" 1" 1.5" 2"
ELEVATION BASE ASSUMED

REV.	DATE	BY	APVD.

COLORADO LICENSED
NO. 51205
M. PHILLIPS CLINTON
PROFESSIONAL ENGINEER

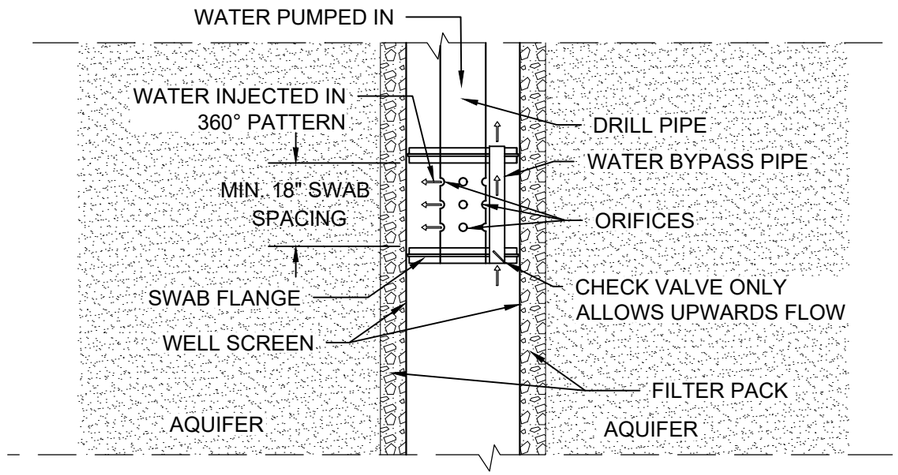
STAMP

CLIENT
Special Improvement District No. 5
8805 Independence Way
Alamosa, CO 81101

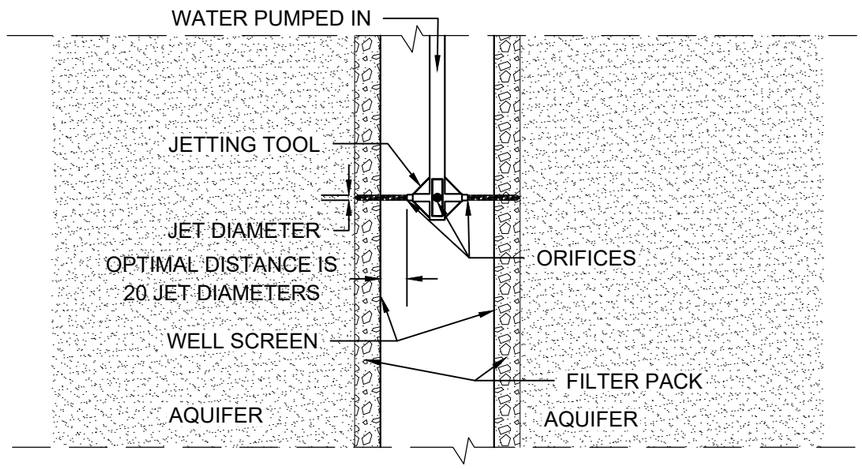
Large Capacity Augmentation Well #2

Well Surface Detail

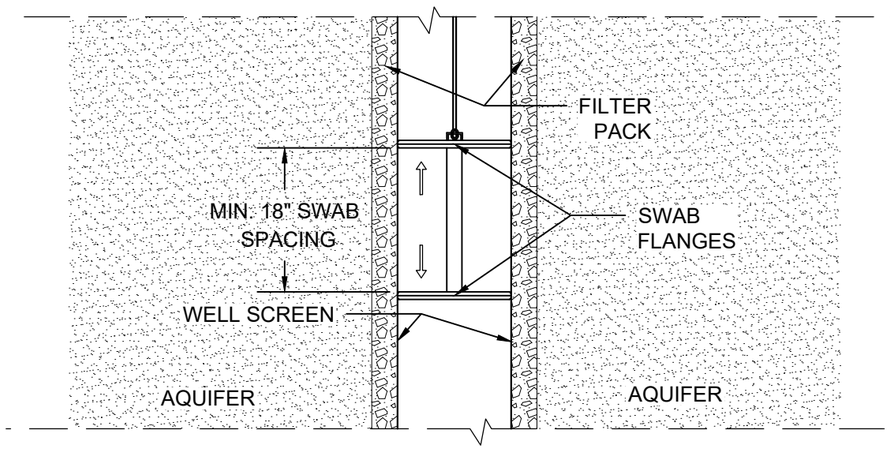
E02068



COMBINED JETTING AND SURGING DEVELOPMENT DETAIL
NOT TO SCALE



JETTING DEVELOPMENT DETAIL
NOT TO SCALE



SURGE BLOCK DEVELOPMENT DETAIL
NOT TO SCALE

DAVIS ENGINEERING SERVICE, INC.
DAVIS ENGINEERING SERVICE, INC.
3143 16th STREET - P.O. BOX 1840
ALAMOSA, COLORADO 81101
PHONE: (719) 589-5116
FAX: (719) 589-3712

DESIGNED CMP/WSS
DRAWN WSS
CHECKED
APPROVED CMP
SCALE AS NOTED
DATE 8/23/24

0" 1" 1.5" 2"
ELEVATION BASE ASSUMED

REV. | DATE | BY | APVD.

THIS DRAWING IS THE PROPERTY OF DAVIS ENGINEERING SERVICE, INC. AND IS ISSUED FOR USE ON THIS AND OTHER PROJECT WITH-OUT THE WRITTEN CONSENT OF DAVIS ENGINEERING SERVICE, INC.

COLORADO LICENSED
CHRISTON M. PHILLIPS
57205
PROFESSIONAL ENGINEER

STAMP

CLIENT
Special Improvement District No. 5
8805 Independence Way
Alamosa, CO 81101

Large Capacity Augmentation Well #2

E02068

Sheet 7 of 7

CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR THE
SPECIAL IMPROVEMENT DISTRICT NO. 5
LARGE CAPACITY AUGMENTATION WELL #2

LOCATED IN

SAGUACHE, COLORADO

Prepared for

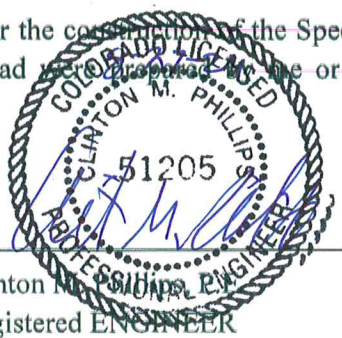
Special Improvement District No. 5 of the Rio Grande Water Conservation District
8805 Independence Way
Alamosa, Colorado 81101

August 27, 2024

TABLE OF CONTENTS

CERTIFICATE

I hereby certify that these plans and SPECIFICATIONS for the construction of the Special Improvement District No. 5 Augmentation Well No.2 Pipeline and Road were prepared by me or under my direct supervision, for the OWNER thereof.



Clinton M. Phillips, P.E.
Registered ENGINEER
Colorado Certificate No. 51205

The Special Improvement District No.5, Alamosa County, Colorado, OWNER, does hereby accept and approve these SPECIFICATIONS and accompanying plans for the construction of the Special Improvement District No. 5 Augmentation Well No.2 Pipeline and Road.

Date: 8/23/2024

Special Improvement District No.5

By: Chris Green

Title: Program Manager

SECTION I
Notice of Request for Proposal

The Rio Grande Water Conservation District (District) is seeking proposals from qualified well drillers to drill a 20-inch, 220 foot deep confined aquifer well in Saguache County. Contact Chris Ivers at the District office at (719) 589-6301 for a BID packet with full details. Additionally, you can access this information online at www.rgwcd.org. In your response, please include your qualifications to drill this type of well, a cost estimate for drilling the well, and your timeline for completing the project. Proposals will be accepted through 1:30 p.m. **September 27, 2024** and may be submitted in person or by mail to 8805 Independence Way, Alamosa, CO, 81101, or by e-mail to chris@rgwcd.org.

SECTION II

INFORMATION TO BIDDERS

BIDS will be received by the Special Improvement District No. 5 (OWNER) at mailing address of 8805 Independence Way, Alamosa, Colorado 81101 until 1:30 P.M. (local time) September 27th, 2024, and then opened at the Rio Grande Water Conservation District Building, 8805 Independence Way, Alamosa, CO and read aloud.

This project will consist of drilling a 20-inch, 220 foot deep confined aquifer well in Saguache County.

BIDS may be submitted in person or by mail to 8805 Independence Way, Alamosa, CO, 81101, or by e-mail to chris@rgwcd.org.

All BIDS must be made on a required BID form. All blank spaces for BID prices and material types must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required. Standard BOND forms for CONTRACT DOCUMENTS may be used in lieu of the forms furnished in the SPECIFICATIONS.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 60 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the DRAWINGS and SPECIFICATIONS including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

No oral interpretation will be made to any BIDDER as to the meaning of the CONTRACT DOCUMENTS or any part thereof. Every request for such an interpretation shall be made in writing to the OWNER and ENGINEER. Any inquiry received seven or more days prior to the date fixed for opening of BIDS will be

given consideration. Every interpretation made to a BIDDER will be in the form of an ADDENDUM to the CONTRACT DOCUMENTS, and when issued, will be on file in the office of the OWNER and the office of the ENGINEER at least five days before BIDs are opened. In addition, all ADDENDA will be mailed to each person holding CONTRACT DOCUMENTS, but it shall be the BIDDER'S responsibility to make inquiry as to the ADDENDA issued. All such ADDENDA shall become part of the Contract and all BIDDERS shall be bound by such ADDENDA, whether or not received by the BIDDERS.

Each BID must be accompanied by a BID BOND payable to the OWNER in the amount of five percent (5%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the bonds of all except the three lowest responsible BIDDERS. When the Agreement is executed the BONDS of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment and performance bonds have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A performance BOND and a payment BOND, each in the amount of 100 percent of the Contract Price, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID, payment or performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the payment and performance BONDS within ten calendar days from the date when NOTICE OF AWARD is delivered to the bidder. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may, at his option, consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER within 10 days of receipt of acceptable payment BOND and performance BOND, and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may, by written notice, withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.

The NOTICE TO PROCEED shall be issued by the OWNER within 10 days of the execution of the Agreement. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR.

If the NOTICE TO PROCEED has not been issued within the 10 day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein or for any other reason not in violation of any State, Federal or Local law.

A conditional or qualified BID will not be accepted.

Award will be made at the discretion of the OWNER.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout. This paragraph does not limit the standards to which the BIDDER will be held to perform, and the BIDDER may be required to comply with codes not legally or officially adopted within the jurisdiction.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID. The unit price for each of the several items in the proposal of each BIDDER shall include its pro rata share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price BID represents the total BID. Any BID not conforming to this requirement may be rejected as informal. The special attention of all BIDDERS is called to this provision, for should conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities nor will adjustments in unit prices be allowed, provided the net monetary value of all such additive and subtractive changes in quantities of such items of WORK (i.e., difference in cost) shall not increase or decrease the original CONTRACT PRICE by more than twenty five (25) percent, except for WORK not covered in the DRAWINGS and TECHNICAL SPECIFICATIONS as provided for in the CONTRACT DOCUMENTS.

A project walk-through trip for prospective Bidders will be held at the project site on September 11th, 2024 at 10:00 A.M. Prospective Bidders must notify the Chris Ivers of their intent to attend by September 9th, 2024 at 5:00 P.M. Contact Chris Ivers at (719) 589-6301 or chris@rgwcd.org.

SECTION III

BID

Proposal of_____(hereinafter called "BIDDER"), organized and existing under the laws of the State of _____, doing business as a_____*.
to the Special Improvement District No. 5 (hereinafter called "OWNER").

In compliance with your Advertisement for BID, BIDDER hereby proposes to perform all WORK for the construction of the Special Improvement District No. 5 Large Capacity Augmentation Well #2 in accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within **172** consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum of $2,500.00 for each consecutive calendar day thereafter as provided in Section 15 of the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM:

_____

_____

_____

*Insert "a corporation, "a partnership", or "an individual" as applicable.

BID SCHEDULE

All of the items under this BID Schedule are alternates and may be accepted at the OWNER'S discretion. BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

Base Bid Items

Item	Description	Quantity	Unit	Unit Price	Extension
1	Mobilization, Demobilization, Bonding	1	l.s.	_____	_____
2a	Well Drilling	220	ft.	_____	_____
2b	Surface Casing – 28" O.D.	127	ft.	_____	_____
2c	Pump Chamber Casing – 20" O.D.	132	ft.	_____	_____
2d	Grout Seal & Grout Pad	1	l.s.	_____	_____
2f	Filter Pack	1	l.s.	_____	_____
2g	Developing Well	48	hrs.	_____	_____
2h	Installation of Test Pumping Equipment	1	l.s.	_____	_____
2i	Step Drawdown and Sustained Yield Testing	96	hrs.	_____	_____
3a	Augmentation Well Pump Installation	1	ea.	_____	_____
3b	Control Panel and VFD Installation	1	ea.	_____	_____
4	Electrical Connection to Augmentation Well	40	l.f.	_____	_____

TOTAL BASE BID _____

Selective Alternate Items

Item	Description	Quantity	Unit	Unit Price	Extension
2e-Option A	Wire Wrapped Well Screen and Installation	90	ft.	_____	_____
2e-Option B	Louvered Well Screen and Installation	90	ft.	_____	_____

TOTAL BID WITH SELECTIVE ALTERATE OPTION A _____

TOTAL BID WITH SELECTIVE ALTERATE OPTION B _____

CERTIFICATE AS TO CORPORATE BIDDER

_____, the secretary of the_____, in the name of which corporation the above and foregoing BID has been executed, hereby certifies that the is a corporation duly organized under the laws of the State of _____, and that_____, the _____of said corporation was duly authorized by the Board of Directors to make said BID in behalf of said corporation.

Dated this_____day of_____, 2024.

_____

Secretary

CERTIFICATE AS TO PARTNERSHIP BIDDER

_____one of the partners in the partnership doing business as and under the firm name of_____, certifies that such partnership is composed of as copartners, and that the foregoing BID has been executed, whether by all or less than all of said partners, as the act and on behalf of said partnership in its firm name.

Dated this_____day of_____, 2024.

_____

A Partner in

_____

A Partnership

SECTION IV

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____as Principal, and _____as, Surety, are hereby held and firmly bound unto _____ _____ as OWNER in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns. Signed, this _____day of _____, 2024. The Condition of the above obligation is such that whereas the Principal has submitted Special Improvement District No. 5 a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Large Capacity Augmentation Well #2.

NOW THEREFORE,

(a) If said BID shall be rejected, or in the alternate

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first forth above.

By:_____(L.S.)_____
Principal

Surety:_____

By:_____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

SECTION V
NOTICE OF AWARD

To: _____
_____
_____

Project Description: Large Capacity Augmentation Well #2.

The OWNER has considered the BID submitted by you for the above described WORK in response to its Invitation to BID dated the ___ day of _____2024, and Instructions to BIDDERs.

You are hereby notified that your BID has been accepted for items in the amount _____ _____.

You are required by the Instructions to BIDDERs to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND and Payment BOND within ten calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law. You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 2024.

Special Improvement District No. 5
OWNER

By:_____

Title:_____

Acceptance of Notice

Receipt of the above Notice of
Award is hereby acknowledged

By (Company): _____
this ____ day of _____, 2024

By:_____

Title:_____

SECTION VI
AGREEMENT

This Agreement, made this ___ day of _____, 2024, by and between the Special Improvement District No. 5, hereinafter called "OWNER" and _____, doing business as an individual hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payment and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of the Special Improvement District No. 5 Large Capacity Augmentation Well #2.
2. The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the PROJECT described herein.
3. The CONTRACTOR will commence the WORK required by the CONTRACT DOCUMENTS within 5 calendar days after the date of the NOTICE TO PROCEED and will complete the same within 172 calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

   Intermediate Goals:

   - We would like the well drilled the fall of 2024.

   Completion Date:

   - **Entire project to be completed no later than April 1st, 2025**
4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS for the sum of _____ _____.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
   - (A) Request for Proposal
   - (B) Instructions to Bidders
   - (C) Bid
   - (D) Bid Bond
   - (E) Agreement
   - (F) General Conditions
   - (G) Supplemental General Conditions
   - (H) Payment Bond
   - (I) Performance Bond
   - (J) Notice of Award
   - (K) Notice to Proceed
   - (L) Change Orders
   - (M) Drawings prepared by Davis Engineering Service, Inc. numbered 1 to 7 and dated August 23, 2024.
   - (N) Specifications prepared or issued by Davis Engineering Service, Inc., dated August 27, 2024.
   - (O) Addenda

     _____.

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.
7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, the Agreement in triplicate counterparts each of which shall be deemed an original on the date above written.

OWNER: Special Improvement District No. 5

By: _____

Name:_____ (Please Type)

(SEAL)

Title: _____

ATTEST: _____

Name: _____
(Please Type)

Title: _____

CONTRACTOR:_____

By: _____

Name: _____
(Please Type)

Address: _____

(SEAL) _____

ATTEST: _____

Name: _____
(Please Type)

Title: _____

SECTION VII

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of _____, do hereby certify as follows:

I have examined the attached contract(s) and performance and payment BONDS(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

By:_____Date:_____

SECTION VIII

PERFORMANCE BOND

KNOW ALL MEN THESE PRESENTS: that _____
(Name of CONTRACTOR)

_____
(Address of CONTRACTOR)

a_____ , hereinafter called Principal, and
(Corporation, Partnership, or Individual)

_____
(Name of Surety)

_____
(Address of Surety)
hereinafter called Surety, are held and firmly bound unto_____
(Name of OWNER)

_____
(Address of OWNER)
hereinafter called OWNER, in the penal sum of _____ Dollars, ($) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2024, a copy of which is hereto attached and made a part hereof for the construction of _____.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties all the undertakings, covenants, terms, conditions and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if the Principal shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expenses which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in counterparts, each one of which shall be deemed an original, this_____ day of _____, 2024.

Principal _____

ATTEST:

_____ By: _____(S)
(Principal) Secretary

(SEAL)

_____
(Witness as to Principal) (Address)

ATTEST:

_____
(Surety) Secretary

(SEAL)

_____ By:_____
Witness to Surety Attorney-in-fact

_____ _____
(Address) (Address)

NOTE: Date of the BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute the BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the state where the PROJECT is located.

SECTION IX

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that_____
(Name of CONTRACTOR)

_____
(Address of CONTRACTOR)
a _____,hereinafter called Principal, and _____
(Corporation, Partnership or Individual) (Name of Surety)

_____
(Address of Surety)
hereinafter called Surety, are held and firmly bound unto _____
(Name of OWNER)

_____
(Address of OWNER)

hereinafter called OWNER, in the penal sum of_____ Dollars, $(_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the ____ day of _____, 2024, a copy of which is hereto attached and made a part hereof for the construction of _____.

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

In WITNESS WHEREOF, this instrument in executed in _____ number counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20 ___.

_____
Principal

ATTEST:

_____ By:_____(s)
(Principal) Secretary

(SEAL)

_____ _____
(Witness as to Principal) (Address)

_____ _____
(Address) Surety

ATTEST:

_____
(Surety) Secretary

(SEAL)

_____By:_____
Witness to Surety Attorney-in-fact

_____ _____
(Address) (Address)

NOTE: Date of the BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute the BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

SECTION X

Workmen's Compensation Insurance Certificate

to be inserted in place of this page.

SECTION XI

Certificate of Insurance for CONTRACTOR'S general liability and property insurance to be inserted in place of this page.

SECTION XII

NOTICE TO PROCEED

To: _____
_____
_____

Date: _____

Project: Special Improvement District No. 5 Large Capacity Augmentation Well #2

You are hereby notified to commence WORK in accordance with the Agreement dated _____, on or before _____, 2024, you are authorized to commence WORK on the PROJECT, and you are to complete the WORK within **172** consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 2024.

Special Improvement District No. 5
OWNER

By:_____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above Notice to
Proceed is hereby acknowledged by

this _____ day of _____, 2024

By:_____

Title:_____

SECTION XIII
GENERAL CONDITIONS

1. Definitions
2. Additional Instructions and Detail Drawings
3. Schedules, Reports and Records
4. Drawings and Specifications
5. Shop Drawings
6. Materials, Services and Facilities
7. Inspection and Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in the Work
14. Changes in Contract Price
15. Time for Completion and Liquidated Damages
16. Correction of Work
17. Subsurface Conditions
18. Suspension of Work, Termination and Delay
19. Payments to Contractor
20. Acceptance of Final Payment as Release
21. Insurance
22. Contract Security
23. Assignments
24. Indemnification
25. Separate Contracts
26. Subcontracting
27. Engineer's Authority
28. Land and Rights-of-Way
29. Guaranty
30. Taxes
31. Environmental

1. DEFINITIONS

1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.2 ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications, or corrections.

1.3 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BONDS – Bid, Performance, and Payment BONDS and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.5 BIDDER - Any person, firm or corporation submitting a BID for the WORK.

1.6 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion, or revision in the WORK within the general scope of the CONTRACT DOCUMENTS or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.7 CONTRACT DOCUMENTS - The contract, including Information for BIDDERS, BID, BID BONDS, Agreement, Performance BOND, Notice of Award, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.

1.8 CONTRACT PRICE - The total moneys payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.9 CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.

1.10 CONTRACTOR - The person, firm or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS - The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.

1.12 ENGINEER - The person, firm or corporation named as such in the CONTRACT DOCUMENTS.

1.13 FIELD ORDER - A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE TO PROCEED - Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.15 OWNER - The Rio Grande Water Conservation District, acting for and on behalf of Special Improvement District No. 5, for whom the WORK is to be performed.

1.16 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.17 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.18 SHOP DRAWINGS - All DRAWINGS, diagrams, illustrations, brochures, schedules, and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER, or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.19 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship.

1.20 SUBCONTRACTOR - An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

1.21 SUBSTANTIAL COMPLETION - That date as certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.

1.22 SUPPLEMENTAL GENERAL CONDITIONS - Modifications to General Conditions required by a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS, or such requirements that may be imposed by applicable state laws.

1.23 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.24 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.25 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address or delivered in person to said party or his authorized representative on the WORK.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

2.1 The CONTRACTOR may be furnished ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional DRAWINGS and instructions thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail DRAWINGS and instructions.

3. SCHEDULES, REPORTS AND RECORDS

3.1 The CONTRACTOR shall submit to the OWNER such SCHEDULE of quantities and costs, progress SCHEDULES, payrolls, REPORTS, estimates, RECORDS, and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.

3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress SCHEDULES showing the order in which the CONTRACTOR proposes to carry on the WORK, including dates at which the CONTRACTOR will start the various parts of the WORK, estimated date of completion of each part, as applicable:

3.2.1 The dates at which special detail DRAWINGS will be required; and

3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing, and the installation of materials, supplies and equipment.

3.3 The CONTRACTOR shall also submit a SCHEDULE of payments that the CONTRACTOR anticipates the CONTRACTOR will earn during the course of the WORK.

4. DRAWINGS AND SPECIFICATIONS

4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental WORK necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy, or operation by the OWNER.

4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.

4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. SHOP DRAWINGS

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S review of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The acceptance of any SHOP DRAWING which substantially deviates from the requirements of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that the CONTRACTOR has reviewed the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been reviewed by the ENGINEER. A copy of each reviewed SHOP DRAWING and each sample shall be kept in good order by the CONTRACTOR at the site and shall be available from the ENGINEER.

6. MATERIAL, SERVICES AND FACILITIES

6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

6.2 Materials and equipment shall be so stored as to ensure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer.

6.4 Materials, supplies or equipment shall be in accordance with samples submitted by the CONTRACTOR and reviewed by the ENGINEER.

6.5 Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7. INSPECTION AND TESTING

7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.5 Inspections, tests, or reviews by the ENGINEER or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and his representatives will at all times have access to the WORK. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation, and replaced at the CONTRACTOR'S expense.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose, or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found

that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

8. SUBSTITUTIONS

8.1 Whenever a material, article, or piece of equipment to be identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products or similar capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of similar substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of similar substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are accepted, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9. PATENTS

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. The CONTRACTOR shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, however if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, the CONTRACTOR shall be responsible for such loss unless the CONTRACTOR promptly gives such information to the ENGINEER.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the ENGINEER shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile location and other working points, lines, elevations and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, the CONTRACTOR shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, the CONTRACTOR shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

11. PROTECTION OF WORK, PROPERTY AND PERSONS

11.1 The CONTRACTOR will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury, or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designed for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction. The CONTRACTOR will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. The CONTRACTOR will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER, or OWNER, shall act to prevent threatened damage, injury, or loss. The CONTRACTOR will give the

ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

12. SUPERVISION BY CONTRACTOR

12.1 The CONTRACTOR will supervise and direct the WORK. The CONTRACTOR will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

13. CHANGES IN THE WORK

13.1 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.

13.2 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or TIME, or both, in which event the CONTRACTOR shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

14. CHANGES IN CONTRACT PRICE

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

(a) Unit prices previously approved.

(b) An agreed lump sum.

(c) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the WORK. In addition there shall be added an amount to be agreed upon but not to exceed fifteen percent (15%) of the actual cost of the WORK to cover the cost of general overhead and profit.

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to ensure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15.3 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount to liquidated damages as specified in the BID for each calendar day that CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To, priority or allocation order duly issued by the any preference OWNER.

15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of GOD, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

16. CORRECTION OF WORK

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in

the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

17. SUBSURFACE CONDITIONS

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS; or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if the OWNER finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless the CONTRACTOR has given the required WRITTEN NOTICE; provided that the OWNER may, if the OWNER determines the facts so justify, consider, and adjust any such claims asserted before the date of final payment.

18. SUSPENSION OF WORK, TERMINATION AND DELAY

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

18.2 If the CONTRACTOR is adjudged a bankrupt or insolvent, or if the CONTRACTOR makes a general assignment for the benefit of the CONTRACTOR's creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if the CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if the CONTRACTOR repeatedly fails to supply sufficient skilled workman or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or if the CONTRACTOR disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if the CONTRACTOR disregards the authority of the ENGINEER, or if the CONTRACTOR otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method the OWNER may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the CONTRACT. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than one hundred twenty (120) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum recommended by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days WRITTEN NOTICE to the

OWNER and the ENGINEER stop the WORK until the CONTRACTOR has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19. PAYMENTS TO CONTRACTOR

19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his recommendation for payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within ten (10) days of presentation to him of a recommended partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the recommended partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all WORK covered by the CONTRACT DOCUMENTS. The OWNER at any time, however, after fifty (50) percent of the WORK has been completed, if the OWNER finds that satisfactory progress is being made, shall reduce retainage to five (5%) percent on the current and remaining estimates. When the WORK is SUBSTANTIALLY COMPLETE (operational or beneficial occupancy), the retained amount may be further reduced below five (5) to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.

19.3 Prior to the SUBSTANTIAL COMPLETION, the OWNER, with the review of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or SUBSTANTIALLY COMPLETED portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.4 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted by the ENGINEER under the conditions of the CONTRACT DOCUMENTS.

19.6 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnisher of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.7 If the OWNER fails to make payment thirty (30) days after review by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said paid is due and continuing until the payment is received by the CONTRACTOR.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in

connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the PERFORMANCE BOND.

21. INSURANCE

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect the CONTRACTOR from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by the CONTRACTOR or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

21.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

21.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

21.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained by (1) any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR or (2) any other person; and

21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled unless at least fifteen (15) days prior WRITTEN NOTICE has been given the OWNER.

21.3 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, liability insurance as hereinafter specified;

21.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting the CONTRACTOR from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him, or anyone directly or indirectly

employed by the CONTRACTOR or by a SUBCONTRACTOR under the CONTRACTOR. Insurance shall be written with a limit of liability of not less than $2,000,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than $2,000,000 aggregate for any such damage sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability not less than $500,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than $500,000 aggregate for any such damage sustained by two or more persons in any one accident.

21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.4 The CONTRACTOR shall procure and maintain at the CONTRACTOR's own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the WORK is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of the CONTRACTOR's employees at the site of the PROJECT and in case any WORK is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous WORK under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

21.5 The CONTRACTOR shall secure, if applicable, "All RISK" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, the ENGINEER, and the OWNER.

22. CONTRACT SECURITY

22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE of AWARD furnish the OWNER with a Performance BOND and a Payment BOND in a penal sum equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be

executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

23. ASSIGNMENTS

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title, or interest therein, or his obligations thereunder, without written consent of the other party.

24. INDEMNIFICATION

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or review of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs, or SPECIFICATIONS.

25. SEPARATE CONTRACTS

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate the CONTRACTOR's WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT by himself, or the Owner may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if the Owner is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, WRITTEN NOTICE thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, the CONTRACTOR may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING

26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty (50) percent of the CONTRACT PRICE, without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as the CONTRACTOR is for the acts and omissions of persons directly employed by him.

26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

26.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

27. ENGINEER'S AUTHORITY

27.1 The ENGINEER shall act as the OWNER'S representative during the construction period. The ENGINEER shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. The ENGINEER shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the workmanship and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

28. LAND AND RIGHTS-OF-WAY

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

28.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

28.3 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY

29.1 The CONTRACTOR shall guarantee all WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give

notice of observed defects with reasonable promptness in the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The PERFORMANCE BOND shall remain in full force and effect through the guarantee period.

30. TAXES

30.1 The CONTRACTOR will pay all sales, consumer, use and other similar taxes required by the law of the place where the WORK is performed.

31. ENVIRONMENTAL REQUIREMENTS

The CONTRACTOR, when constructing a PROJECT involving trenching and/or other related earth excavation, shall comply with the following environmental constraints.

31.1 WETLANDS - The CONTRACTOR, when disposing of excess, spoil, or other construction materials on public or private property, WILL NOT FILL IN or otherwise CONVERT WETLANDS.

31.2 FLOODPLAINS - The CONTRACTOR, when disposing of excess, spoil, or other construction materials on public or private property, WILL NOT FILL IN or otherwise CONVERT 100 YEAR FLOODPLAIN areas delineated on the latest FEMA Floodplain Maps.

SECTION XIV

SUPPLEMENTAL GENERAL CONDITIONS

1. Preconstruction Conference: Prior to the commencement of WORK at the site, a preconstruction conference will be held at a mutually agreed time and place. The conference shall be attended by:

   - CONTRACTOR and the CONTRACTOR's superintendent.
   - Representative of principal SUPPLIERS and manufacturers as appropriate.
   - ENGINEER and the ENGINEER's RESIDENT PROJECT REPRESENTATIVE.
   - Representatives of OWNER.
   - Representatives of funding agencies.
   - Others as required by CONTRACTOR, OWNER, or ENGINEER.

   Unless previously submitted to ENGINEER, CONTRACTOR shall bring to the conference a tentative SCHEDULE for each of the following:

   - Progress.
   - Procurement.
   - Values for progress payment purposes.
   - SHOP DRAWINGS and other submittals.
   - Construction SCHEDULE

   The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:

   - CONTRACTOR'S tentative SCHEDULES.
   - Transmittal, review, and distribution of CONTRACTOR'S submittals.
   - Processing applications for payment.
   - Maintaining RECORD documents.
   - Critical WORK sequencing.
   - Field decisions and CHANGE ORDERS.
   - Use of premises, office and storage areas, security, housekeeping, and OWNER'S needs.
   - Major equipment deliveries and priorities.
   - CONTRACTOR'S assignments for safety and first aid.

   ENGINEER will preside at the conference and will arrange for keeping the minutes and distributing the minutes to all persons in attendance.

2. DRAWINGS AND SPECIFICATIONS: Reference to the standards of any technical society, organization, or association, or codes of local or state authorities, shall mean the latest standard,

code, SPECIFICATIONS, or tentative standard adopted and published at the date of taking BIDS, unless specifically stated otherwise. Should any standard, code, SPECIFICATION, or tentative standard be in conflict with these CONTRACT DOCUMENTS, the provisions of these CONTRACT DOCUMENTS shall govern.

3. Sanitary Facilities: The CONTRACTOR shall provide and properly maintain acceptable sanitary facilities for all construction personnel and shall enforce the use thereof.

4. Testing: The OWNER shall pay all charges for testing services in connection with all tests made on materials incorporated in the PROJECT that meet the requirements of the SPECIFICATIONS. The CONTRACTOR shall pay for all tests that do not meet the requirements of the SPECIFICATIONS. The location and number of tests to be run will be determined by the ENGINEER. The CONTRACTOR shall pay for all other testing in accordance with the provisions of Section 7 of the General Conditions.

5. Time for Completion: The completion time will be extended if the CONTRACTOR can provide a bona fide materials order, which indicates a substantial delay in materials delivery. Such order must be presented to the ENGINEER no later than 15 days after receipt of the NOTICE TO PROCEED.

6. Liquidated Damages: The OWNER shall have the right to deduct the amount of liquidated damages imposed on the CONTRACTOR from any money in its hands, otherwise due, or to become due, to the CONTRACTOR, or to use for and recover compensation for damages for nonperformance of this contract within the time stipulated.

7. Measurement of Partial Payment: The ENGINEER or his representative will make necessary measurements of completed WORK with the assistance and in the company of the CONTRACTOR to provide necessary information for periodic partial payments. If the CONTRACTOR cannot, or will not, assist in such measurement, the measurements shall be made by the ENGINEER or his representative.

8. Fire Insurance: Fire Insurance will not be required on PROJECT or portions of PROJECTS, which can suffer no damage from fire, e.g. earth-fill embankments, excavations.

9. Colorado State Sales Tax: The CONTRACTOR shall obtain, from the Colorado Department of Revenue, a Colorado State Sales Tax exemption certificate. This certificate shall exempt the CONTRACTOR from paying Colorado State Sales Tax on all materials incorporated into the WORK. The CONTRACTOR shall not include in his unit prices or lump sums on the BID schedule the costs associated with Colorado State Sales Tax.

   This exemption of the Colorado State Sales Tax does not necessarily apply to other Federal, County or Local sales consumer, use or other similar taxes.

10. Acquisition of Rights of Way and Easements: All land, rights of way and easements required for this PROJECT will be obtained by the OWNER prior to the construction of any facilities thereof. When the CONTRACTOR carries on WORK outside of the lines designated for such easements the CONTRACTOR shall make his own arrangements with the adjacent property owners and shall keep the OWNER free from any claim resulting from his WORK.

11. Plans and SPECIFICATIONS for BIDDING: BIDDERS and SUPPLIERS shall use only those sets of Plans and SPECIFICATIONS which have a red circle and red number inked on the title page of said plans and SPECIFICATION, in the upper right corner thereof. The number shall be entered on a Planholder's List by the ENGINEER together with the name, address and telephone number of the person, or firm, to whom the sets of plans and SPECIFICATIONS are issued.

12. Quality of WORK: All WORK shall be conducted in a skilled, workmanlike manner and finished lines and grades shall conform to the drawing related thereto.

13. Final Cleanup: Before the WORK shall be considered completed, all rubbish, waste and unused material due to or connected with the CONTRACTOR'S activities shall be removed from the site of the WORK and the premises left in a condition satisfactory to the ENGINEER.

14. General and SUPPLEMENTAL GENERAL CONDITIONS: In the case of any discrepancies between the General Conditions and the SUPPLEMENTAL GENERAL CONDITIONS, the SUPPLEMENTAL GENERAL CONDITIONS shall govern.

SECTION XV

GENERAL REQUIREMENTS

SCOPE OF WORK: The WORK to be performed under this Contract shall be for the construction of Special Improvement District No. 5 Large Capacity Augmentation Well #2. This well is intended to withdraw groundwater exclusively from the upper-most confined aquifer as determined by the RGDSS Model. The model specifies that layer 2 starts at approximately 125 feet in this area. The well will be grouted with concrete to the bottom of the confining clay layer at approximately 125 feet. A tentative submersible pump has been selected; this will be finalized based on the test-pumping results. The scope of this contract will include well construction, testing, pump installation, control panel w/VFD installation, etc., and will end at the connection of the elbow to the pipeline at the surface.

The CONTRACTOR, unless otherwise specified, shall furnish all materials, equipment, tools, labor, supervision, and transportation necessary to complete the WORK in accordance with the foregoing SPECIFICATIONS and accompanying DRAWINGS.

The CONTRACTOR shall assume full responsibility and expense for the protection of all public and private property, structures, utilities both above and below the ground, at or near the site, or sites, of the WORK being performed under the contract, or which are in any manner affected by the prosecution of the WORK or the transportation of men and materials in connection therewith. The CONTRACTOR shall give reasonable WRITTEN NOTICE, in advance, to the department, agency, county, or municipality having charge of any property or utilities owned by them and to any other owner, or owners, of public or private property or utilities when they will be affected by the WORK to be performed under the contract, and shall make all necessary arrangements with such department, departments, owner or owners for moving, removing and replacing, or protecting in place such property or utilities. The determination of whether such property or utilities shall be moved, removed, and replaced, or protected in place, shall be made by the department, departments, owner or owners of the property or utilities. If the CONTRACTOR damages any utility, which has been properly located by the OWNER, the CONTRACTOR shall be responsible for immediate repair of the utility. During the course of the WORK, all lawn grass, shrubbery, flowers, other vegetation, and fences, which interfere with the WORK shall be protected or removed and replaced to their original or better condition.

DEVIATIONS NECESSITATED BY OTHER STRUCTURES: Whenever obstructions not shown on the DRAWINGS are encountered during the progress of the WORK and interfere to such an extent that an alteration in the line or grade is required, the ENGINEER shall have the authority to change the line or grade and, if necessary, help the CONTRACTOR negotiate, or arrange, with the owners of the obstruction for the removal, relocation, or reconstruction of the same. If the change in line or grade results in an increase in the amount of WORK performed by the CONTRACTOR, such additional WORK shall be paid for on the basis of the unit price BID in the BID schedule.

Existing underground installations such as water lines, sewer lines, gas lines, telephone lines, television lines, power lines, utility services and similar buried structures in the vicinity of the PROJECT may be shown approximately on the DRAWINGS. The CONTRACTOR shall be solely responsible for locating all existing underground installations, including service connections, in advance of excavation or trenching, by contacting the owners thereof and prospecting. The CONTRACTOR shall use his own information and shall not rely upon any information shown on the DRAWINGS concerning existing underground installations.

BRAND NAME OR SIMILAR: Many items are specified by brand name, make and model to indicate the type, characteristics, and quality of the item to be furnished and, in some instances, to indicate the specific item which the ENGINEER feels is best suited for the particular application. The "or similar" clause is used to permit the CONTRACTOR to use equipment which, for one reason or another, may be to his or the OWNER'S advantage.

All BIDDERS are requested to BID the WORK to be performed and the equipment to be supplied under this contract as specified. After the contract is awarded, the successful BIDDER is requested to submit proposals to the ENGINEER for alternate methods of execution and equipment. No submittal is required if the CONTRACTOR uses the makes and models specified. Sufficient descriptions and materials specifications shall be submitted to permit evaluation and comparison of the proposed alternative. Whenever a material, article or piece of equipment is identified on the DRAWINGS or in the SPECIFICATIONS be reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance of other salient requirements and that other products with similar capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, articles, or piece of equipment of similar substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of similar substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are accepted, no major changes in function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without change in the CONTRACT PRICE or CONTRACT TIME. Only those alternate proposals which the ENGINEER opines to similar to or better than "as specified" and which will be compatible with the remainder of the system will be accepted. The "or similar" clause makes no reference that items must be identical in all respects if the above conditions are satisfied.

Alternate proposals must be submitted as soon as possible after award is made so as not to delay orders for materials and execution of the WORK. Requests for review of similarity will not be accepted from anyone except the CONTRACTOR, and such requests will not be considered until after the contract has been awarded. Substitutions made without review of the ENGINEER are made at the CONTRACTOR'S own risk.

NOTIFICATION OF UTILITY COMPANIES: The CONTRACTOR shall be responsible for notifying all utility companies having underground or overhead utilities in the construction area. Such notification shall be made prior to the commencement of any construction and shall advise the companies of the CONTRACTOR'S construction SCHEDULE and nature of WORK.

HANDLING OF MATERIALS: All materials furnished by the CONTRACTOR shall be delivered and distributed at the site by the CONTRACTOR.

Pipe and accessories shall be loaded and unloaded by lifting with hoists, or skidding, so as to avoid shock or damage to materials as well as to coatings. Under no circumstances shall such materials be dropped. Pipe handled on skidways shall not be skidded or rolled against pipe already on the ground.

Each piece of material shall be unloaded opposite or near the site of the WORK where it is to be installed unless storage requirements make it necessary to do otherwise for the protection of the materials.

Pipe or pumping equipment shall be handled in such a manner that bells, coatings, linings, facings, etc. are protected from damage. If such damage should occur the repair or replacement shall be made by the CONTRACTOR, at his expense, in a manner satisfactory to the ENGINEER.

POWER: All power for lighting, operation of the CONTRACTOR'S plant or equipment, or for other use by the CONTRACTOR, shall be provided by the CONTRACTOR at his sole expense.

WATER: It is the CONTRACTOR'S responsibility to provide water for the PROJECT. A water source will be provided within 1 mile of the proposed well site. It will be the CONTRACTOR'S responsibility to provide all pumps, piping, hoses, accessories, and labor required to load and transport the water.

WAIVERS AND VARIATIONS: Waivers for or variations to the following Technical Requirements may be granted by the ENGINEER if, in his opinion, such waivers or variations are in the best interests of the PROJECT and the OWNER.

DETAILED TECHNICAL REQUIREMENTS: The detailed technical requirements are identified by item number, which refers to the items of WORK on the BID schedule. Item numbers on the BID schedule, which are followed by a letter, refer to the same item of material but a different size, class, or division of WORK.

Items with numbers under 100 are items for which payments shall be made. Items with numbers over 100 are items of WORK for which payment will not made, but are included for the direction of the CONTRACTOR in performing such items of WORK which are subsidiary to and necessary for the satisfactory completion of the pay item to which they refer.

SECTION XVI

TECHNICAL SPECIFICATIONS

Item 1 – MOBILIZATION, DEMOBILIZATION, AND BONDING

1.1 SCOPE: This SPECIFICATION covers mobilization and demobilization of personnel, equipment, and supplies at the PROJECT site in preparation for and at the conclusion of WORK on the PROJECT. This item also includes the cost of all the BONDING to be obtained by the CONTRACTOR as required by this contract.

1.2 PROCEDURE: This item shall include the establishment of the CONTRACTOR's office and other necessary facilities as well as all other costs incurred or labor and operations which must be performed prior to beginning the other items under the Contract and at the completion of all items under the Contract.

The OWNER will provide a location for the staging of equipment and supplies required for the completion of this PROJECT. The location and condition of the staging area(s) will be identified and inspected during the PROJECT walkthrough.

1.3 METHOD OF MEASUREMENT AND PAYMENT: Payment for mobilization, demobilization, and BONDING shall be made at the contract lump sum. Payment for this item shall be full compensation for all required mobilization and demobilization as required by this contract.

ITEM 2 - DRILLING AND TESTING AUGMENTATION WELL

2.1 GENERAL

The WORK required under this solicitation includes drilling one water well; furnishing and installing surface casing, pump chamber casing, and well screen assemblies; furnishing and placing filter pack, grout pads and seals; furnishing, installing, and removing developing equipment; developing and cleaning the well; sterilizing the well; furnishing, installing, and removing test pumping equipment; test pumping the well; capping the well; cleaning up and restoring the drill site, keeping RECORDS and providing a well construction drawing, well construction and pumping REPORT to OWNER.

The CONTRACTOR shall be a State licensed well driller and pump setter. The CONTRACTOR, at the CONTRACTOR's own expense, shall procure all permits, certificates and licenses required by him by law for the execution of his WORK, with the exception of the well permit. The well shall be constructed in accordance with the laws of the State of Colorado, this solicitation, and the DRAWINGS. The OWNER has in his possession the necessary permit for drilling the well.

The approximate location of the well is shown on the DRAWINGS. The final location of the well will be determined by the OWNER.

The water well shall have a nominal screen size of ±20 inches O.D. in diameter, as specified herein.

The depth of the water well will depend upon subsurface conditions. It is expected the total depth of the well will be approximately 220 feet, depending on strata encountered, the final well permit, and the CONTRACTOR'S estimation of well production.

The dimensions of the well shall be as shown on the DRAWINGS.

Subsurface materials to a depth of 220 feet are described in the supplemental well information below.

2.2 DRILLING PROGRAM

Within **10 calendar days** after date of receipt of NOTICE TO PROCEED, the CONTRACTOR shall submit to the ENGINEER for approval a complete and practicable drilling program. The program shall show in detail the proposed drilling methods and sequence of drilling operations and shall provide for orderly performance of the WORK.

The program shall be in such form and detail as to show the following:

A. Sequence of drilling operations.

B. The days of week and month that WORK is to be performed.

C. The number and length of each shift per day. The length of a shift may be extended in the field as required to avoid interrupting a drilling and testing operation.

D. Type of drilling fluid to be used and plans for mud pits and pumps.

The CONTRACTOR shall revise the program as necessary to keep it current, and such revisions shall be submitted to the ENGINEER for approval.

Timely submittal of the drilling program and any revisions are required. The OWNER must have the information contained in the drilling program for such purposes as scheduling of inspectors and survey crews.

The cost of all WORK required by this paragraph shall be included in the prices BID in the schedule for other items of WORK.

2.3 EQUIPMENT

A. Drilling and test pumping equipment: The CONTRACTOR shall provide standard drilling and test pumping equipment of types approved by the ENGINEER, but such approval shall not constitute any assurance by the OWNER of the adequacy of the equipment approved for use in performing the WORK specified. The drilling and test pumping equipment shall be disinfected with a sodium hypochlorite solution of the strength specified below. The method and procedure of disinfecting the equipment shall be according to State of Colorado regulation for water supply wells.

Hypochlorite Concentration Percentage (approximately)

5%	10%	15%	20%
6 liquid ounces	3 liquid ounces	2 liquid ounces	1-1/2 liquid ounces

B. Costs: The cost of complying with the requirements of this paragraph shall be included in the prices BID in the schedule for other items of WORK.

2.4 SEQUENCE OF CONSTRUCTION FOR THE WELL

The CONTRACTOR shall follow the sequence listed below for construction of the well:

A. Drill the hole for the surface casing to the specified depth or as directed by the ENGINEER. The diameter of the hole shall be large enough to provide a minimum 1-1/2-inch-thick grout seal around the surface casing.

B. Install the surface casing to the top of the confining clay. Plumb the casing.

C. Grout the annular space around the outside of the surface casing. Grout is to extend from the surface to the bottom of the confining clay layer separating RDGSS model layers 1 and 2. Pull temporary casing, if used. Permit minimum 24-hour grout setup time.

D. Stockpile and assemble at the site all necessary casing, well screen, filter pack, other materials, equipment, and tools necessary to drill and complete the well. This will be required before beginning WORK in step (e) below.

E. Drill the hole for the pump chamber casing, well screen, and filter pack from the bottom of the surface casing to the total depth of the well as directed by the ENGINEER. Circulate fluid or otherwise clean the hole.

F. Pull the drilling tools and sound the hole for depth and condition. The hole shall be cleaned of sediment to the satisfaction of the ENGINEER prior to installation of the grout pad, pump chamber casing, and well screen.

G. Place a pre-cast grout pad of suitable size in the bottom of the hole using a string of pipe with a disconnect joint.

H. Install the screen assembly and the pump chamber casing down to the grout pad (measure exact length of assembly before installing).

I. Place filter pack such that the screen and smooth casing assembly remains centered in the hole.

J. Weld plate supports between pump chamber casing and surface casing.

K. Develop the well immediately following installation of well components. Pump from the well while developing.

L. Sterilize well.

M. Install test pump and test the well.

N. Replace test pump with production pump (if different) and seal the well.

2.5 DRILLING

E. General: The well shall be drilled to diameters adequate to accommodate casings, grout seals, and filter pack as shown on the DRAWINGS.

The well shall be drilled by the reverse rotary method or by other methods approved by the ENGINEER so as to properly maintain the hole and not damage the aquifer. If other drilling methods are proposed by the CONTRACTOR, the CONTRACTOR shall satisfy the ENGINEER that the methods proposed to be used will result in a well meeting the requirements and intents of the plans and SPECIFICATIONS set forth herein.

B. Drilling fluid: Use of drilling fluid shall be limited to water or water with bentonite type drilling fluid additive. No chemicals shall be used to clean out the well after drilling. NO CHEMICALS CONTAINING PHOSPHORUS SHALL BE USED IN ANY STAGE OF THE WELL DRILLING. Regardless of the fluid used for drilling, fluid properties and circulation velocity must be adequate to maintain the hole and remove all solids, including gravels from the hole. The use of formaldehyde, hydrochloric acid, and other similar chemicals in the construction of the well will not be allowed.

Regardless of the drilling fluid used, the CONTRACTOR shall disinfect the water used for drilling fluid with sodium hypochlorite. The addition of the disinfectant shall produce a concentration of about 50 parts per million (p/m) of chlorine in the water. To obtain a concentration of 50 p/m, the following dosages, depending on the sterilant concentration, shall be added to each 50 gallons of water.

Hypochlorite Concentration Percentage (approximately)

5%	10%	15%	20%
6 liquid ounces	3 liquid ounces	2 liquid ounces	1-1/2 liquid ounces

C. Drilling: The well shall be drilled and cased sufficiently straight and plumb to meet the requirements of section 2.7 in order to permit the installation and removal of test pumping equipment provided for in section 2.13. If the well fails to meet the plumbness requirements, it shall be corrected by the CONTRACTOR at his/her own expense or may be rejected and considered an abandoned well as provided for in section 2.8.

The well shall be overdrilled at least 1 foot, and a grout pad shall be placed in the bottom as specified in section 2.9 and shown on the DRAWINGS.

The CONTRACTOR shall be responsible for providing water for drilling, developing, and other purposes, and for disposal of such water. A water source will be available within 1 mile of the PROJECT site. The water shall be clear and free from foreign matter. Disposal of water from developing and test pumping will be in accordance with provisions of section 2.13.

D. Landscape Preservation: Materials excavated from the well shall be disposed of and spread in an area within ±30 feet of the well in a manner and at a location approved by the ENGINEER. Generally, these materials shall be spread and leveled to conform as nearly as possible to the original ground surface at the drill location, any equipment ruts and mud pits shall be filled, and cleanup shall be performed as follows:

(E) General: The CONTRACTOR shall exercise care to preserve the natural landscape and shall conduct his/her construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the WORK.

No special reseeding or replanting will be required under this solicitation; however, on completion of the WORK, all WORK areas shall be scarified and left in a condition which will facilitate natural revegetation, provide for proper drainage, and

prevent erosion. All unnecessary destruction, scarring, damage, or defacing of the landscape resulting from the CONTRACTOR'S operations shall be repaired, replanted, reseeded, or otherwise corrected as directed by the ENGINEER and at the CONTRACTOR'S expense.

(2) Mud pits: When no longer required by the CONTRACTOR, mud pits shall be filled in and smoothed over to conform as nearly as possible with the original ground surface.

(3) Costs: The cost of all WORK required by this paragraph shall be included in the prices BID in the schedule for other items of WORK.

E. Measurement: Measurement for payment for drilling holes to accommodate surface casing and grout seal shall be made to the nearest foot from the original ground surface to the bottom of the grout seal. Measurement for payment for drilling holes for the well shall be made to the nearest foot from the bottom of the grout seal to the bottom of the hole or to the depth of drilling, whichever is less. The CONTRACTOR shall make all such measurements in the presence of the ENGINEER.

F. Payment: Payment for drilling holes will be made at the applicable contract unit prices per linear foot BID, which unit prices shall include all costs of furnishing, operating, and removing equipment; all costs of providing, sterilizing, and disposing of drilling water and other fluids; all costs of disposing of excavated materials and unused supplies; and all costs of normal site cleanup, which includes cleaning up and restoring the drill site to as near its original condition as practicable.

Payment for placing the grout pad will be made in accordance with the provisions of section 2.9.

2.6 CASING

A. General: Permanent well casing shall be furnished and installed by the CONTRACTOR as shown on the DRAWINGS. Casing for the well shall be new black steel pipe and shall be manufactured in accordance with API Standard 5L of the American Petroleum Institute or equivalent ASA or ASTM Standards. Each piece of permanent casing shall be factory-stenciled or otherwise marked to properly identify the casing.

Sections of casing shall be joined by butt-welding. Welding shall be performed by a qualified welder, and such welding shall be multiple pass, full continuous running welds in accordance with standards of the American Welding Society. Casing ends shall be beveled before welding. All pump chamber-casing interiors will be free of slag, burrs, or other roughness after welding. The CONTRACTOR shall provide and utilize a jig to assure that casing is accurately aligned during welding. The jig provided will be subject to approval by the ENGINEER.

Casing strings shall be suspended in tension from the surface during well construction.

B. Surface casing: Surface casing shall be installed in the well to the depth as shown on the DRAWINGS and/or as directed by the ENGINEER. The casing shall be centered in the hole. The casing shall be driven approximately 1 foot into the bottom of the hole, and the annular space around the casing shall be filled with a grout seal in accordance with the provisions of section 2.9.

Diameter, weight, and wall thickness of the surface casing are shown in Table 2A.

Table 2A. – Surface casing		
Size, outside diameter (inches)	Weight (lb per ft)	Wall thickness (inches)
28	110.6	0.375

C. Pump chamber casing: Pump chamber casing shall be attached to the well screen and installed in the well as shown on the DRAWINGS and/or as directed by the ENGINEER. The length of the pump chamber casing installed at the well shall be as shown on the DRAWINGS.

The pump chamber casing shall be centered in the well and shall be supported on two ¼ inch-thick steel plate supports welded between the pump chamber casing and the surface casing as shown on the DRAWINGS.

Diameter, weight, and wall thickness of the pump chamber casing are shown in Table 2B.

Table 2B. – Pump chamber casing		
Size, outside diameter (inches)	Weight (lb per ft)	Wall thickness (inches)
20	78.60	0.375

D. Temporary casing: The CONTRACTOR may use temporary casing as required for construction of the well; provided that such temporary casing shall be removed on completion of the well.

No separate payment will be made for furnishing, installing, and removing temporary casing.

E. Capping well: On completion of all WORK, including testing at the site, the well shall be capped and sealed with an elbow extending out of the top as shown on the DRAWINGS. The cap will have a cable hole and eye bolt for connection to safety cable. The eye bolt shall be rated for a minimum load of 1,000 lbs. While under construction and no personnel are present at the well site, the well shall be temporarily capped as approved by the ENGINEER.

F. Measurement and payment: Measurement for payment for furnishing and installing surface casing and pump chamber casing will be made to the nearest 0.5 foot measured along the centerline of the casing. Such measurement shall include only the permanent casing actually installed and left in place as specified herein and shown on the DRAWINGS.

Payment for furnishing and installing surface casing and pump chamber casing will be made at the applicable contract unit prices per foot BID. The unit prices BID in the schedule shall include all costs of furnishing and installing the casing; all costs of furnishing, installing, and removing temporary casing; and all costs of furnishing and installing casing supports, cover plates, and fittings.

2.7 PLUMBNESS

The well shall be completed plumb and straight. When installed, the pump chamber casing shall not deviate out of plumb more than 50 percent of its inside diameter, measured between the ground surface and the top of the screen assembly.

On request by the ENGINEER, the CONTRACTOR shall test the well for plumbness by running a plumb ring or cage to the top of the screen assembly in accordance with AWWA Standard A100, Section A1-9. The plumb ring or cage shall be approximately 1 foot long and ¼ inch smaller in diameter than the inside diameter of the casing.

Any correction to the well necessary to meet the plumbness requirements shall be made by and at the expense of the CONTRACTOR. The cost of testing the well for plumbness shall be included in the prices BID for the various items of WORK.

2.8 ABANDONMENT

Any well that does not meet the plumbness or other requirements or is "lost" (abandoned by CONTRACTOR due to not fulfilling requirements of this solicitation) before reaching the required depth or completion, or any well on which the CONTRACTOR voluntarily stops WORK before completion will be considered an abandoned well. The ENGINEER may require abandonment of a well if the hole below the surface casing has collapsed and has been redrilled to a point that it is considered excessively oversized. The CONTRACTOR, at his/her own expense, shall pull any ungrouted casing and screen assembly from an abandoned well and shall seal the well in accordance with State of Colorado regulations. No payment will be made for any item of WORK on an abandoned well. In the event that a well is abandoned, a new well shall be drilled in the drill site vicinity at a location designated by the ENGINEER.

2.9 GROUT SEAL AND PRECAST GROUT PAD

A. Grout seal: The annular space between the surface casing and the wall of the hole shall be sealed with grout as specified in this paragraph and shown on the DRAWINGS. Grout shall be placed by pumping through a tremie pipe extending initially to the bottom of the hole or by other approved methods which will assure complete filling of the annular space from the bottom upward in one continuous operation. Pipe shall be black iron or PVC plastic. Under no circumstances shall galvanized pipe or aluminum pipe be used. Temporary conductor casing, if used, shall be gradually pulled back as the grout is placed. At no time shall the grout level be permitted to fall below the bottom of the conductor casing during grouting. The minimum thickness of the grout seal shall be 1½ inches.

The surface casing shall be installed from the bottom of the confining clay layer separating RGDSS Model Layers to the surface. This grout seal shall extend from the surface of the borehole to the bottom of the confining clay layer.

B. Grout plug: A grout plug shall be placed in the bottom three feet of the well. The grout plug shall be installed through the use of a tremie pipe or attached to the bottom of the well screen and set when the screen is installed.

C. Materials: The grout shall be either neat cement grout or neat cement grout with accelerator as directed by the ENGINEER. The neat cement grout shall consist of one sack (94 pounds) of Portland cement and approximately 5½ gallons of water. The neat cement grout with accelerator shall consist of one sack (94 pounds) of Portland cement, approximately 5½ gallons of water, and a maximum of 2 pounds of 70 to 80 percent calcium chloride flakes. Cement shall be type II, low-alkali Portland cement in accordance with ASTM C 150. Water shall be free from objectionable quantities of silt, organic matter, salts, and other impurities.

The CONTRACTOR is to provide to the ENGINEER a receipt or other documentation of the quantity of grout seal placed in the annular space between the surface casing and borehole. The ENGINEER is to be contacted at least (2) days prior to installation of each grout seal to permit observation of installation.

D. Placement of grout: The neat cement grout shall be placed within 1½ hours after mixing and before the temperature of the grout exceeds 90 degrees F. Any neat cement grout not placed within 1½ hours after mixing or exceeds 90 degrees F shall be wasted at the expense of the CONTRACTOR.

The neat cement grout with accelerator shall be placed immediately after mixing and before the temperature of the grout exceeds 90 degrees F. Any neat cement grout with accelerator that is not placed immediately after mixing or that exceeds 90 degrees F shall be wasted at the expense of the CONTRACTOR.

Following placement of the grout seal, no WORK shall be done on the well for a period of at least 24 hours.

E. Measurement and payment: Measurement and payment for furnishing and placing grout in the annular space around casing and for furnishing and placing the bottom grout plug will be made on a lump sum basis in the BID schedule for furnishing and placing grout seals and pads, which unit price shall include all cost of furnishing, mixing, and placing the grout and all costs of providing cement, water, and any additives used.

Payment will not be made for grout that is wasted.

2.10 WELL SCREEN ASSEMBLIES

A. General: The CONTRACTOR shall furnish the well screen in sufficient numbers of 10-, 20- and 40-foot lengths to make up the well screen assemblies in the specified lengths. Well screen assembly components will be furnished by the CONTRACTOR and shall be welded

together and installed by the CONTRACTOR in the well as shown on the DRAWINGS and as directed by the ENGINEER.

As part of this BID, two well screening options are to be provided. The ENGINEER, CONTRACTOR, and OWNER will discuss the optimal screening type and opening dimensions after the winning BID has been selected.

Option A)

Option A shall be 0.060" slot Johnson 304-stainless steel Wire Wrapped Screen, or similar. The length of well screen will be from approximately 90 feet. The screen slot size may change based on the results of the test hole analysis.

Option B)

Option B shall be 0.060" slot 304-stainless steel Super Flo Louvered Well Screen, or similar. The length of well screen for the will be from approximately 90 feet. The screen slot size may change based on the results of the test hole analysis.

B. Well Screen Specifications for Each Option

Option A: Johnson well screen assemblies or similar:

(1) General: Well screen assemblies shall consist of wire wound, cage-type well screen with collar extension for welding.

The well screen shall be constructed of stainless steel and be of continuous slot type design. The screen shall be fabricated by welding to insure adequate strength to resist the external forces to which it will be subjected during and after installation. Screen openings shall be V-shaped, widening inwardly to permit fine particles to pass through without clogging during development of the well.

(2) Well screen: The well screens shall be wire wound, cage-type, continuous slot, shaped wire, V-slot screen of all-welded construction, conforming to the SPECIFICATIONS shown in Table 2C.

Screen slot widths shall not vary more than ±0.004 inches from the specified widths shown in Table 2C. The slot width shall be clearly marked on each section of screen. The slots shall be completely clean and free of burrs, frayed ends, or cuttings. Each length of screen shall be joined by welding to make up the total screen length for the well.

Table 2C. – Well screen dimensions

1 Screen outside diameter	2 Type of steel	3 Slot width	4 Minimum intake area	5 Minimum collapse resistance
(in) 19.9	304-Stainless Steel	(in) 0.060	(in^2/ft) 237	(lbs/in^2) 56

Option B: Roscoe Moss louvered well screen assemblies or similar:

(1) General: Well screen assemblies shall consist of a casing perforated with machine made opening facing downwards. All openings are to be horizontal to the axis of the casing and of a louver style.

The well screen shall be constructed of 304 stainless steel and be of louvered slot type design. The screen shall be fabricated by a perforating machine and welding to ensure adequate strength to resist the external forces to which it will be subjected during and after installation. Screen opening shall widen inwardly to permit fine particles to pass through without clogging during development of the well.

(2) Well screen: The well screens shall be machine perforated louver type screen of all-welded construction, conforming to the SPECIFICATIONS shown in Table 2D.

Screen slot widths shall not vary more than ±0.004 inches from the specified widths shown in Table 2C. The slot width shall be clearly marked on each section of screen. The slots shall be completely clean and free of burrs, frayed ends, or cuttings. Each length of screen shall be joined by welding to make up the total screen length for the well.

Table 2D. – Well screen dimensions

1 Screen outside diameter	2 Type of steel	3 Slot width	4 Minimum intake area	5 Minimum collapse resistance
(in) 20.625	304-Stainless Steel	(in) 0.060	(in^2/ft) 83.2	(lbs/in^2) -

D. Welding well screen assemblies: The welding of screen assemblies, including the welding of sections of screen to one another and to fittings, shall only be done in conformance with the screen manufacturer's recommendations and standards of the American Welding Society by experienced and competent welding personnel. The CONTRACTOR shall obtain from the screen manufacturer specific welding recommendations in manual or similar form for field welding. Such recommendations shall include electrode types, polarity, etc. One copy of the recommendations shall be provided to the ENGINEER 20 days prior to installation of the screen assemblies. The CONTRACTOR shall furnish all welding equipment and rods necessary for welding the well screen components together. All well screen interiors and exteriors shall be free of slag, burrs, or other roughness after welding. The CONTRACTOR shall provide and utilize a jig to assure that the well screen is accurately aligned during welding. The jig provided shall be subject to approval of the ENGINEER.

E. Installation: The well screen assembly shall be installed in one string to the bottom of the well. Each screen or smooth casing joint shall be welded to the next as it is installed.

F. Measurement and payment: Measurement for payment for furnishing and installing steel well screen assemblies will be made to the nearest tenth of a foot of the actual well screen and collar furnished and installed in the well.

Payment for furnishing and installing the various sizes of steel well screen assemblies will be made at the applicable contract unit prices per linear foot, which unit prices shall include all costs of furnishing, hauling, handling, welding, and installing the screen assemblies as required by this paragraph.

Two well screen options are to be provided by the BIDDER as per the above SPECIFICATIONS. The final screen selected for installation will be chosen by the OWNER from the options.

2.11 FILTER PACK

A. General: Filter pack shall be furnished and placed by the CONTRACTOR into the well as specified in this paragraph and shown on the DRAWINGS. The typical size of pack that may be used in the well is 0.066" to 0.079". This SPECIFICATIONS is to be used for BIDDING purposes only. The size of the filter pack material may change based on the recorded formation as observed during drilling.

B. Pack material: Pack material shall be Johnson Brand Shur Pak 10-12.

The filter pack delivered to well sites in the field shall be subject to analysis and will be rejected, if found to fall outside the specified limits with allowed variation.

C. Placement: If water has been used in drilling, the pack shall be placed by adding at the surface through a hopper with a minimum capacity of 2 cubic feet or by other means approved by the ENGINEER. Placement shall be slow and continuous in such a manner as to minimize bridging or segregation of the pack.

Filter pack placement shall begin following installation of the well screen/pump chamber casing assembly. The pack level shall be brought to 10 feet above the well screen.

Following placement of filter pack, the well shall be lightly surged above the screen for a period of not less than 15 minutes in order to settle the pack.

During development and test pumping, the level of the pack shall be measured periodically and replenished as necessary to ensure that the pack level does not fall to less than 10 feet above the screen. On completion of development and test pumping, pack material shall be added to bring the pack level to 10 feet above the screened portion.

D. Measurement and payment: Measurement and payment for furnishing and placing filter pack will be made on a lump sum basis therefore in the schedule, which unit price shall include the cost of furnishing and placing the pack and surging the well to settle the pack. The material specified herein shall be subject to change.

2.12 DEVELOPING WELL

A. General: The augmentation well shall be initially developed by airlift pumping. A secondary step of development will consist of a minimum (1) of these (3) options below:

1. Jetting, as per section 2.12 B
2. Combined Jetting and Surging as per section 2.12 C
3. Cable tool Surging, as per section 2.12 D

Prior to and upon completion of development, the CONTRACTOR shall bail or pump any material remaining in the bottom of the well.

Any water used for well development must be hauled to the site, however; a water supply is available within 1 mile of the proposed well site. The water shall be sterilized in accordance with section 2.5 B, however chlorine concentration of water shall be no less than 200 p/m.

Final development shall be done by surging and pumping as provided for in section 2.12 E.

If at any time during development that the depth of material accumulated in the bottom of the well exceeds 2 feet, the material shall be removed by bailing or pumping before developing can be resumed.

On completion of development, all equipment shall remain the property of the CONTRACTOR.

B. Developing by Jetting: The CONTRACTOR shall provide to the ENGINEER specific sequences of development by jetting.

Equipment for jetting shall include (1) a high-pressure jetting tool similar to that shown on the DRAWINGS; (2) a high-pressure pump; (3) necessary hoses, valves, gauges, pipes, etc.

A pressure gauge showing pumping pressure up to 400 pounds per square inch shall be installed on the pumping system. All components of the jetting equipment shall be designed to safely operate at a maximum pressure of 350 pounds per square inch with an adequate safety factor.

During jetting, approximately 5-foot intervals of the screen shall be developed by slowly raising and lowering the jetting tool while rotating the tool a few degrees after each cycle of raising and lowering until the entire interval has been jetted. Following this, each successive 5-foot interval shall be covered.

The development shall be done in a careful and systematic manner to assure complete development without damage to the aquifer or screen. Development shall continue until the sand particles in the pump discharge are reduced to a concentration acceptable to the ENGINEER.

At no time shall both the rotational and vertical movement of the tool be permitted to stop while jetting is underway.

Upon completion of development by jetting, the well shall be cleaned of accumulated material. Filter pack shall be added during and following development of the well in accordance with section 2.11.

C. Developing by combined jetting and surging: The CONTRACTOR shall provide to the ENGINEER specific sequences of development by jetting and/or combined jetting and surging.

Equipment for combined jetting and surging shall include (1) a string of drop pipe (2) necessary hoses, valves, gauges, pipes, etc.; (3) a centrifugal pump; and (4) a surge block similar to that shown on the DRAWINGS.

Also required for development by combined jetting and surging will be a drill rig capable of operating the combined jetting-surging tools at a minimum rate of 8 strokes per minute to a maximum rate of 20 strokes per minute using the drilling action of the rig. Stroke lengths shall be 24 to 36 inches. A surface-mounted pump or pumps capable of discharging up to 360 gallons per minute shall be provided to pump from the well to maintain drawdown during development. The pump shall be equipped with suction hose or pipe of suitable diameter and length and a discharge with valve or engine throttle and a means of measuring discharge.

During combined jetting and surging, each screen interval equal to the surge stroke length shall be covered in a similar manner while jetting and surging.

The development shall be done in a careful and systematic manner to assure complete development without damage to the aquifer or screen. Development shall continue until the sand particles in the pump discharge are reduced to a concentration acceptable to the ENGINEER.

At no time shall both the rotational and vertical movement of the tool be permitted to stop while jetting is underway.

Upon completion of development by combined jetting and surging, the well shall be cleaned of accumulated material. Filter pack shall be added during and following development of the well in accordance with section 2.11.

D. Developing by Cable Tool Surging: The CONTRACTOR shall provide to the ENGINEER specific sequences of development by cable tool surging. This development method is NOT SUITABLE for a wire wrapped screen casing. If the wire wrapped screen selective alternate option is chosen by the OWNER, cable tool surging will NOT be permitted.

Equipment for cable tool surging shall include: (1) a cable tool surge block as shown on the DRAWINGS and, (2) a cable tool drilling rig capable of generating sufficient rates of upwards lift in a well of this diameter.

During cable tool surging an interval of screen corresponding to the associated cable drilling rig stroke length shall be developed at one time. Each screen interval equal to the stroke length shall be covered in a similar manner.

The development shall be done in a careful and systematic manner to assure complete development without damage to the aquifer or screen. Periodically the well is to be pumped to remove any sediment and check the progress of the well development process. Development shall continue until the sand particles in the pump discharge are reduced to a concentration acceptable to the ENGINEER.

At no time shall the CONTRACTOR allow the velocity of the surge block to put excessive stress on the well screen or casing. Cable tool surging is to take place in the screened section of the well only in order to avoid creating excessive negative pressures within the smooth steel casing.

Upon completion of development by cable tool surging, the well shall be cleaned of accumulated material. Filter pack shall be added during and following development of the well in accordance with section 2.11.

E. Final Developing by surging and pumping: As directed by the ENGINEER, the well shall be developed by surging and pumping, starting at a low discharge rate, and increasing to the maximum. Pumping and surging shall consist of pumping the water to the surface and shutting off the pump to allow the water to flow back down the column pipe. At the discretion of the CONTRACTOR, the test pumping equipment referenced in section 2.13 may be installed prior to final development and used for surging. Alternatively, an airlift method may be employed at this time.

This shall be done repeatedly with periodic intervals of pumping to remove sand. The surging and pumping shall continue until the discharge is relatively sand free as determined by the ENGINEER. Upon completion of final development, the well shall be cleaned of accumulated material.

F. Measurement and Payment: Payment for developing the well, will be made at the contract unit price per hour, which unit price shall include all costs of operating the developing equipment and the cost for lowering or raising the equipment into a new position within the well for developing. No payment will be made for time spent maintaining equipment, or for time spent at the surface of the well removing one type of equipment and installing another. The equipment shall include jetting tools, surge blocks, drop pipe strings, fittings, hose and pipe valves, high-pressure jetting pump, pressure gauges, centrifugal pump, drilling rig, and all other equipment necessary for developing the well.

2.13 TEST PUMPING EQUIPMENT

A. General: The CONTRACTOR shall provide test pumping equipment for the testing of the supply well.

The CONTRACTOR must supply his own engine-generator.

The test pumping equipment shall consist of a pump, column pipe assembly, discharge elbow, water-level observation pipe, tank, pipeline with throttling valve, flow meter, and other miscellaneous equipment, including lighting.

The CONTRACTOR'S test pumping equipment shall be capable of operating for a period of up to 4 days without stopping for maintenance or other reason.

Test pumping of the well will be required immediately following completion and developing of the well unless directed otherwise by the ENGINEER.

Upon completion of all testing, the CONTRACTOR-furnished test pumping equipment shall be removed from the site and shall remain the property of the CONTRACTOR.

B. Test pump: The test pump shall be a submersible or vertical turbine pump. The pump shall have a capacity range of 1000 to 2000 gallons per minute while pumping from a maximum depth of 205 feet below natural ground surface.

The pump and column pipe shall be adequately supported at the surface of the well. The pump may be supported on either the surface or production casing.

If the test pump is to be used for the final phase of development, as per section 2.12 E, the pump shall not be equipped with a ratchet or other type device which will restrict backspin when the pump is stopped.

C. Discharge pipeline: A discharge pipeline furnished by the CONTRACTOR shall convey the water away from the well site.

The CONTRACTOR shall provide 500 linear feet of pipeline, which shall have sufficient capacity to convey the highest required discharge of 2000 gallons per minute away from the well site. At the option of the CONTRACTOR, two or more pipelines, each up to 250 feet in length, may be used instead of a single pipeline.

The pipeline joints shall not leak more than 2 gallons per minute at each joint.

The pipeline shall be installed from the new well and shall be located in a direction as approved by the ENGINEER to minimize damage by erosion.

D. Water-level observation pipe: A 1-inch-diameter or larger metal pipe for measuring water-level drawdown in the well shall be installed at the same time as the pump. The pipe shall extend from near the base of the discharge head to the top of the pump bowls. The lower 5 feet of this pipe shall have a minimum of two ¼-inch drill holes or saw cuts per foot, and the lower end shall have a cap, which shall have a ¼-inch drill hole. The top of the pipe shall be arranged to permit easy access for insertion of a tape or electric probe for measuring depth to the water level during testing.

E. Miscellaneous equipment: The CONTRACTOR shall provide at least two electric lights with minimum 75-watt rating each for nighttime operations. Also, cribbing or other type support shall be provided to maintain the discharge-throttling valve and measuring equipment in a level, stable position.

F. Measurement and Payment: Payment for furnishing, installing, and removing test pumping equipment will be made at the contract lump sum price, which unit price shall include all costs of furnishing, installing, and removing the test pump and motor, generator, discharge elbow, discharge tank, discharge pipeline, valve, meter, water-level observation pipe, and miscellaneous equipment. Equipment furnished by the CONTRACTOR shall remain the property of the CONTRACTOR.

2.14 STEP DRAWDOWN AND SUSTAINED YIELD TESTING

A. General: Following installation of all test pumping equipment, a step drawdown test, followed by a sustained yield test shall be conducted.

Operation of the pumping equipment shall not begin until after the well has been completed and developed as per section 2.12. The CONTRACTOR shall notify the ENGINEER not less than 48 hours in advance of the date and time he/she will be ready to start operation of the test pumping equipment. The date and hour selected shall be a regular day shift, Monday through Friday, excluding holidays.

The CONTRACTOR will be responsible for efficient and reliable operation of the test pumping equipment.

Test pumping shall only be done under the direction of the ENGINEER. An estimated minimum 2 days at the well will be required for the step drawdown test, excluding sustained yield testing.

On completion of all test pumping and removal of test pumping equipment, the well shall be sounded by tape to the bottom. If more than 1 foot of material has accumulated in the bottom, the well shall be bailed or pumped clean using sterilized equipment.

Filter pack shall be added during and following test pumping in accordance with section 2.11.

C. Preliminary capacity test: Following test pump installation, at the option of the ENGINEER, the augmentation well shall be pumped at rates of discharge as directed by the ENGINEER to determine the limits of the step drawdown test to follow. On completion of the preliminary capacity tests, the well shall be permitted to recover for not less than 8 hours.

D. Step drawdown test: Based on the apparent capacity of the well during the previous tests, the well shall be tested in three to six successive steps of approximately equal increments (for example, 1000, 1200, 1400, and 1700 gallons per minute and up to 2000 gallons per minute). During each step, the pump discharge shall be maintained at the required rate as directed for periods of up to 2 hours duration.

Should the equipment malfunction for any reason, the test shall be stopped and the well permitted to recover for a period at least 1½ times as long as the test had been in operation. No payment will be made for pumping or well recovery time on an uncompleted test unless the interruption is due to causes over which the CONTRACTOR has no control. Following

completion of a step drawdown test, the well shall be permitted to recover for not less than 1 hour for each hour of test operation, if sustained yield test is required.

E. Sustained yield test: Following an adequate recovery period from previous testing, a sustained yield test shall be run on the well for a time period as determined by the ENGINEER.

For sustained yield testing at the well, the CONTRACTOR shall continuously operate the pumping equipment at a constant rate of discharge for a period up to 4 days. The rate of discharge will be determined by the ENGINEER.

If failure of the pumping equipment, water disposal pipeline, or similar cause necessitates interruption of the test during the first 72 hours, the CONTRACTOR shall permit the water level to recover to its original position and shall start the test again. All WORK performed prior to such failure shall be at the CONTRACTOR'S expense.

F. Measurement and Payment: Payment for step drawdown test and for sustained yield test will be made at the contract unit price per hour BID in the schedule for step drawdown and sustained yield testing, which unit price shall include all costs of operating the pumping equipment and bailing or pumping material from the well on completion of testing. Measurement will be made for the actual time the test pump is operated. No payment will be made for an incomplete test caused by malfunctioning of the testing equipment or disposal facilities or for water-level recovery periods between tests.

2.15 RECORDS

The CONTRACTOR shall maintain and provide all RECORDS and forms required by State of Colorado regulations for the well. The RECORDS for the well shall be furnished to the ENGINEER within 10 working days after completion of all WORK on the well, except for test pumping.

Failure by the CONTRACTOR to maintain accurate up-to-date RECORDS shall constitute cause for rejection of the WORK.

Cost: The cost of keeping RECORDS shall be included in the price BID in the schedule for other items of WORK.

2.16 COLD WEATHER DRILLING

A. If temperatures drop to a level where heating of water and drilling fluid is needed to proceed with the drilling of the well, the CONTRACTOR shall supply and operate an appropriate boiler to heat the fluid. Use of such equipment shall be contingent upon the approval of the ENGINEER.

B. Costs: The cost of operating a boiler otherwise heating water and drilling fluid shall be included in the prices BID in the schedule for other items of WORK.

Item 3 – AUGMENTATION WELL PUMP INSTALLATION

3.1 SCOPE: This SPECIFICATION covers supply and installation of new well pumping system equipment by the CONTRACTOR at the augmentation well.

3.2 EQUIPMENT FOR PERMANENT WELL PUMPING SYSTEM: The pumping system shall include but not be limited to the following equipment:

A. Submersible Pump: The submersible pump shall be as manufactured by Franklin 75 HP FST-10-FYC Enclosed Propellor, 3-phase, 480 V., submersible pump or similar, capable of delivering 2000 GPM at a total head of 142 feet. The impellers and shaft shall be stainless steel. Approximately 207 feet of ten inch diameter, standard weight schedule 40 threaded steel column pipe shall be set to a depth of approximately 207 feet below the top of the well casing. This pump SPECIFICATION is for BIDDING purposes only. Final selection of required pump head and discharge will be provided after completion of the well testing. The CONTRACTOR shall order the pump only after well testing is complete and ENGINEER has provided final SPECIFICATIONS for pump.

B. Pump Controls: The well controls shall be Franklin Electric Brand Cerus X-Drive Model 75HP Output Variable Frequency Drive (VFD), or similar. The well controls will include a Variable Frequency Drive installed a UL Type 3R enclosure and one pressure transducer 1-11 v, 0-150 psi. Two sets of I/O/M manuals shall be provided. Test pumping and submersible pump selection shall be done before the specific pump controls can be ordered.

The VFD will need to be connected to the flow meter (installed by others), so the well production can be controlled through the VDF.

To protect the pump from operation under conditions of inadequate water supply in the well, the pump control system shall be equipped with a pressure transducer. If the water level in the well is drawn below the "off" level, the pump shall be stopped. Any signal to start the pump after it has been stopped shall be over-ridden until the water level in the well recovers to a depth which will activate the "on" level.

This pump controls SPECIFICATION is for BIDDING purposes only. Final selection of equipment will be performed after completion of the well testing. The CONTRACTOR shall order the controls only after well testing is complete and the ENGINEER has provided final SPECIFICATIONS for the pump.

C. dV/dT Filter: A dV/dT filter will be installed between the VFD and the well pump motor, unless the VFD includes one. The dV/dT filter will mitigate both high frequency components and voltage spikes between the VFD and the well pump motor.

3.3 SUPPLY AND INSTALLATION: Due to the complex nature of the permanent pumping, power, and control system required for this PROJECT, all permanent pump and control equipment covered under this item shall be furnished by one SUPPLIER who shall be responsible for the complete

coordination and compatibility of the operation of all equipment which is a part of the complete pumping system.

If the CONTRACTOR wishes to supply equipment other than exactly as specified herein the CONTRACTOR shall furnish to the ENGINEER, not less than ten working days prior to the date of ordering, copies of complete engineering details of the proposed equipment, showing that all substitutions meet the SPECIFICATIONS as far as performance and compatibility with all other equipment within the system is concerned. ENGINEER'S review of individual components will not be performed. Complete system details are to be furnished so that engineering coordination may be checked. The ENGINEER'S concurrence with submittals does not remove the CONTRACTOR'S responsibility for proper operation of components in accordance with the design intent.

The CONTRACTOR shall be responsible for making all arrangements and coordinating his electrical WORK with the local power company. The CONTRACTOR shall pay all costs for permits and hookup charges and provide and install all equipment, not installed or provided by the power company, necessary to bring power to the pump. This shall include, but not limited to, buried cable from the well to the control panel in the pump house. The electrical cable shall meet all local and state codes and be of sufficient size and material to properly operate the pump.

Well pump installation shall be performed by a Colorado licensed pump installer. Well pump, electrical supply, fuse box, electrical disconnect, pump control panel and associated miscellaneous components shall be installed in accordance with this SPECIFICATION, equipment manufacturer's recommendations, PROJECT plans relating thereto and applicable State regulations. Upon completion of the pump installation, the pump installer shall complete and submit a pump installation form to the appropriate department of the Colorado Division of Water Resource. A copy of the completed pump installation form shall be provided to the ENGINEER.

Following the installation of permanent pumping equipment, the well and equipment shall be properly disinfected. Disinfection shall be accomplished as required by Rule 15 – Minimum Disinfection Standards as contained in State of Colorado "Rules and Regulations for Water Well Construction, Pump Installation, and Monitoring and Observation Hole/Well Construction.

3.4 Measurement and Payment: Payment for well pump installation shall be made on each well pump installed. Payment for the permanent pump, motor, all controls, buried electrical cable, and all other appurtenances and materials thereto required to provide a complete workable pumping system as indicated on the plans and SPECIFICATIONS for this PROJECT, shall be on each well pump installed, including disinfection. The price shall include full compensation for all transportation, materials, equipment, labor, supply of power to pumps, tie into existing control panel, and other expenses required for a complete installation ready for operation and review by the ENGINEER.

Item 4 – ELECTRICAL CONNECTION TO AUGMENTATION WELL

4.1 SCOPE: This SPECIFICATION covers supply and installation of the electrical connection by the CONTRACTOR from the service provider's line to the augmentation well.

It is the CONTRACTORS responsibility to install a mast and weather head on the new pole and make the connection to the meter socket (to be provided by SLV REC). Hot sequencing is required for the meter disconnect. A further connection is required from the meter to the fuse box. Then, from the fuse box connect to the control panel, and then to the motor/pressure transducer. The CONTRACTOR is also responsible for making the connection from the control panel to the flowmeter.

4.2 MATERIALS: The electrical service connection line shall be installed at the location shown on the DRAWINGS. For BIDDING purposes, the wiring will be 250 MCM. If the selected electrician determines that a different wiring size is required, then the wiring SPECIFICATIONS could change.

4.3 INSTALLATION: The wiring will be connected, trenched, and buried per the national electrical code. Backfill surrounding conduit or cables must be smooth granular material without rocks. Buried wiring runs that transition from underground to above ground must be protected in conduit as per code requirements.

4.3 METHOD OF MEASUREMENT AND PAYMENT: Measurement for payment for furnishing and installing the electrical connection to the augmentation well will be made to the nearest foot of actual cable installed.

Payment for furnishing and installing the electrical connection to the augmentation well will be made at the applicable contract unit prices per linear foot, which unit prices shall include all costs of furnishing, hauling, handling, and installing the electrical connection.

Item 101 – ENVIRONMENTAL POLLUTION AND EROSION CONTROLS:

101.1 SCOPE: This SPECIFICATION covers the Best Management Practices (BMPS) to minimize impacts to water quality and site vegetation.

101.2 BEST MANAGEMENT PRACTICES:

The following Best Management Practices (BMPs) will be utilized in order to minimize impacts to water quality and site vegetation:

- Use of mufflers or spark arresters on all vehicles and equipment will be required for fire prevention.

- Temporary access roads and staging areas will be located sufficiently far from streams or other water bodies, and wetlands to preclude discharges of non-PROJECT related fill material into these areas.

- CONTRACTOR, foremen, supervisors, and superintendents will be cognizant of erosion control measures outlined in the erosion control plan and will be held responsible for the correct implementation of erosion control measure. Erosion control SPECIFICATIONS will be included on all PROJECT DRAWING sets.

- Best management practices will be implemented to control sedimentation, erosion, and aeolian (i.e., wind) deposition. These measures include: controlling surface water runoff in relation to slopes and other graded areas; placing hay bale barriers, silt fencing, sandbags and/or straw wattles along the toes of graded slopes, constructing water diversion bars on larger slopes to reduce flow velocity of storm runoff and bank material; restoring vegetation to impacted areas as soon as possible after completion of grading; seeding areas with appropriate species where needed; placing biodegradable erosion control blanketing over seeded areas where needed; placing silt curtains around construction areas to reduce erosion of disturbed soils and siltation of natural drainage channels; and applying water to graded areas and temporary (haul) roads during construction to control fugitive dust.

- The timing of land disturbing activities and installation of erosion and sedimentation control measures will be coordinated to minimize water quality and erosion impacts.

- Fueling and routine maintenance of construction equipment will occur at least 100 feet from wetland and aquatic habitats and away for storm water drains or gutters, to preclude adverse water quality impacts to existing drainages and wetland habitats. It is the CONTRACTOR'S responsibility to prevent adverse impacts to water quality. Major repairs to equipment will be made in designated staging areas only.

- Equipment used on site will be monitored for signs of fluid leakage or other possible contaminant emissions, and will be removed from the site for repair if found to be "unclean". Maintenance operations will be scheduled during dry weather inasmuch as possible. No fuel or other equipment fluids shall be stored on site. A properly equipped maintenance vehicle supplied and operated by the CONTRACTOR will provide maintenance services. Equipment

for the immediate and complete removal of any soils contaminated during the maintenance operation, as well as sealed tanks or drums for the daily removal from the site of used fluids will also be supplied and properly handled. During fluid changes the use of adequate drip pans and other practices, such as direct pumping of the used fluid from the equipment being serviced to its sealed container in the maintenance vehicle for removal, are encouraged. During refueling operations no fueling hose shall be left unattended by the maintenance personnel or the equipment operator.

- In the event of an above minor spillage of contaminant, especially if it occurs during wet weather, the CONTRACTOR or CONTRACTOR'S designated representative, if not present, shall notify the ENGINEER immediately. These instructions also apply if the on-site person in charge deems it necessary to immediately notify any other agency.

  The normal procedure for cleanup of a minor spill or observed fluid leakage will be to immediately remove the contaminated soil to a covered container for removal from the site. The urgency of completing the cleanup will be dictated by existing or predicted weather. In no case will polluted soils be left overnight without being placed into an approved lidded container. A lidded dumpster should be placed at the designated refueling and maintenance area, along with shovels and other appropriate tools sufficient to handle a small amount of contaminated soil. For a larger spill, a backhoe or excavator, if needed, will be expeditiously brought to the spill site for the necessary removal of contaminated soil.

- Water inflow into the trench will be minimized to the extent possible. Where groundwater inflow is unavoidable, excess groundwater that contains excessive sediment and suspended solids material will be pumped from the trench and discharged into adjacent upland areas.

- Trash dumpsters must be conveniently located and a trash cleanup program supervised by the CONTRACTOR'S superintendent.

- The CONTRACTOR will provide portable sanitary facilities and insure completion of their scheduled periodic maintenance.

101.3 METHOD OF MEASUREMENT AND PAYMENT: There will be no payment for implementation of soil erosion and water pollution control and wetland construction measures, as the cost of all such control shall be considered subsidiary to those items requiring such control and for which payment is made. This SPECIFICATION is included for the guidance of the CONTRACTOR.

Attachment 4 – Schedule of Revenues and Expenditures

	Annual Revenue	Annual Expenditures								
			Contract No. CT2021-3846, Saguache Pipeline Project			Current Loan Feasibility Study - Saguache Augmentation Project				
			CWCB Loan Reserve Fund			CWCB Loan Reserve Fund				
Year of Operation	Groundwater Withdrawal Fees	Operation and Maintenance	Annual	Accumulated	Payments on CWCB Loan	Annual	Accumulated	Payments on CWCB Loan	Other Remedy Costs	Total Expenditures
1	$637,270.78	$35,000.00	$24,253.94	$24,253.94	$242,539.37	$27,770.68	$27,770.68	$277,706.79	$30,000.00	$637,270.78
2	$637,270.78	$35,000.00	$24,253.94	$48,507.87	$242,539.37	$27,770.68	$55,541.36	$277,706.79	$30,000.00	$637,270.78
3	$637,270.78	$35,000.00	$24,253.94	$72,761.81	$242,539.37	$27,770.68	$83,312.04	$277,706.79	$30,000.00	$637,270.78
4	$637,270.78	$35,000.00	$24,253.94	$97,015.75	$242,539.37	$27,770.68	$111,082.72	$277,706.79	$30,000.00	$637,270.78
5	$637,270.78	$35,000.00	$24,253.94	$121,269.69	$242,539.37	$27,770.68	$138,853.40	$277,706.79	$30,000.00	$637,270.78
6	$637,270.78	$35,000.00	$24,253.94	$145,523.62	$242,539.37	$27,770.68	$166,624.07	$277,706.79	$30,000.00	$637,270.78
7	$637,270.78	$35,000.00	$24,253.94	$169,777.56	$242,539.37	$27,770.68	$194,394.75	$277,706.79	$30,000.00	$637,270.78
8	$637,270.78	$35,000.00	$24,253.94	$194,031.50	$242,539.37	$27,770.68	$222,165.43	$277,706.79	$30,000.00	$637,270.78
9	$637,270.78	$35,000.00	$24,253.94	$218,285.43	$242,539.37	$27,770.68	$249,936.11	$277,706.79	$30,000.00	$637,270.78
10	$637,270.78	$35,000.00	$24,253.94	$242,539.37	$242,539.37	$27,770.68	$277,706.79	$277,706.79	$30,000.00	$637,270.78
11	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
12	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
13	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
14	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
15	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
16	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
17	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
18	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
19	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
20	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
21	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
22	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
23	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
24	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
25	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
26	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
27	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
28	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
29	$585,246.16	$35,000.00		$242,539.37	$242,539.37		$277,706.79	$277,706.79	$30,000.00	$585,246.16
30	$65,000.00	$35,000.00		$0.00	$242,539.37		$0.00	$277,706.79	$30,000.00	$585,246.16
Totals	$17,557,384.80	$1,050,000.00	$242,539.37		$7,276,181.10	$277,706.79		$8,331,203.70	$900,000.00	$18,077,630.96