FINAL

RESPONSE TO ADPC&E'S MEMORANDUMS REGARDING EDC'S WASTE MINIMIZATION PLAN AND DEVELOPMENT OF RISK-BASED TARGET MONITORING LEVELS

Prepared for
El Dorado Chemical Company
El Dorado, Arkansas

Project No. 97B061

Woodward-Clyde

Woodward-Clyde
Three Financial Centre
900 S. Shackleford, Suite 412
Little Rock, AR 72211
501-223-2582

RESPONSE TO ADPC&E COMMENTS
PENNY WILSON'S JUNE 5, 1998 MEMORANDUM REGARDING
EL DORADO CHEMICAL COMPANY'S
REVISED WASTE MINIMIZATION PLAN

Enclosed are El Dorado Chemical Company's (EDC's) responses to Arkansas Department of Pollution Control & Ecology's (ADPC&E's) comments (ADPC&E internal memorandum dated June 5, 1998 from Penny Wilson, Inspector Hazardous Waste Division to David Brown, Coordinator, Hazardous Waste Division) regarding the revised Waste Minimization Plan. The following responses were written by Woodward-Clyde with additional information supplied by EDC where necessary.

Comment: *Section 3.2, Hazardous Waste Amounts by Year, Page 3-8, Table 1: For reporting Year 1993, Table 1 lists 57,000 pounds of Total Hazardous Waste Managed On-Site. According to the 1993 Annual Report that I have, this amount was not reported. How did EDC come up with this amount of waste generated and why wasn't it included in the Annual Report?*

Response: **The 57,000 pounds reported for 1993 in the revised Waste Minimization Plan were from El Dorado Chemical Company (EDC) spill logs. These logs were totaled by Woodward-Clyde while preparing the waste minimization report. The actual 1993 report which was submitted by EDC did not provide a number for hazardous waste managed on-site.**

Comment: *Section 3.2, Hazardous Waste Amounts by Year, Page 3-8; In the narrative following Table 1, the Plan states that " The total amounts of hazardous waste managed on-site are from de minimus leaks and spills of nitric or sulfuric acid which result in low pH wastewater". Regulation No. 23 Section 261.3 (a) (2) (iv) (D) defines "de minimus" losses as those from normal material handling operations; minor leaks of process equipment, storage tanks or containers; leaks from well maintained pump packings and seals; sample purgings; etc. The amounts of D002 waste that EDC has reported to the Department are not de minimus losses.*

Response: **In previous years, EDC reported actual losses from individual spills of nitric and sulfuric acid. Until meetings with the Arkansas Environmental Federation and the ADPC&E in early 1998 regarding reporting year 1997, EDC was unclear as to what the ADPC&E required. EDC made as accurate as possible estimate of *de minimus* losses for 1997. Now based upon this June 5, 1998 comment, EDC can only attempt to estimate *de minimus* losses from previous years, since there is no way to calculate**

losses with any degree of accuracy based upon ADPC&E's 1997 clarification.

Based upon recent EPA guidance, the requirement to report *de minimus* losses has been discontinued on a national level. Also, EDC through its involvement with the Arkansas Environmental Federation has learned that this reporting requirement has been discontinued on a regional (neighboring state) level. Therefore, the ADPC&E potentially could discontinue the reporting of *de minimus* losses, as well, and this issue could no longer be debatable.

To estimate the amount of hazardous waste that entered the waste water treatment plant for 1993 to 1997, EDC selected a ten day period out of each of the years of interest. The pH strip charts for the 3rd street sewer were reviewed. The number of minutes the pH was under 2 was counted. The total minutes for the ten day period were put into a ratio to give the total minutes for the year. A flow rate of 590 gallons per day (gpd) and a density of 8.34 lbs/gal were then used to calculate the total pounds for the year. The estimates of hazardous waste that entered the waste water treatment plant and the dates used for the ten day periods for the years 1993 through 1997 are as follows:

Year	10-day Period	Pounds per year
1997	March 3, 1997 thru March 13, 1997	261,323,225 lbs/year
1996	July 6, 1996 thru July 16, 1996	228,453,616 lbs/yr
1995	August 29, 1995 thru September 8, 1995	90,519,358 lbs/yr
1994	June 6, 1994 thru June 16, 1994	344,835,648 lbs/yr
1993	March 8, 1993 thru March 18, 1993	73,277,575 lbs/yr

Comment: *Table 4, Waste Minimization Strategies for EDC Hazardous Waste Streams, pages 4-2 through 4-4; The Suggested Technologies or Procedures do not address the condition of the 3rd Street Sewer that is used as a conveyance for the corrosive wastes.*

Response: **In June of 1998, EDC designed and installed a replacement conveyance for the existing vitrified clay 3rd Street Sewer line. The specifications for this line are as follows:**

- **New conveyance is constructed of 18-inch High Density Polyethylene (HDPE) Pipe;**

- **The HDPE pipe is of a double-layer design for added mechanical strength:**

- **The HDPE pipe is compatible with most concentrations of nitric and sulfuric acids; and**

- **The HDPE pipe was installed with Ethylene Propylene Terpolymer (EPDM) gasketed, bell and spigot type couplings to provide water-tight connections.**

Additionally, the EDC plant has initiated a facility-wide source control program which will include major reduction of the loadings and flows to the new wastewater treatment facility. The replacement of the 3rd Street sewer is part of the overall process and stormwater drainage plan for the facility.

Comment: *Table 4, Waste Minimization Strategies for EDC Hazardous Waste Streams, page 4-2 through 4-4; The schedules for implementing the suggested Technologies or Procedures need to be included in the Plan.*

Response: **The specific items listed in Table 4 are an integral part of the overall Waste Minimization/ Stream Segregation program the EDC facility initiated in 1997. Woodward-Clyde has prepared an internal schedule for implementing the engineering projects for this program to meet the schedule as specified in Paragraph 2 of the proposed Order & Agreement. The engineering projects include: facility-wide stream characterization and segregation, stormwater run-on and run-off control via site grading/topography and process area curbing/ containment projects, and waste stream loading reduction via roofing and curbing and implementation of improved housekeeping procedures. Waste minimization project activities at the EDC plant will be an ongoing process and are projected to continue through the next five years.**

With respect to other constituents of concern (COCs), COCs were screened and selected in the approved Work Plan dated September 1996.

The CAO 95-070 specifies the methodology for addressing groundwater contamination in Paragraphs 18 and 19:

- Paragraph 18 requires an assessment of the groundwater for nitrates, sulfates, lead and chromium. El Dorado Chemical Company (EDC) completed this assessment in accordance with an approved work plan.

- Paragraph 19 requires EDC to establish a groundwater protection standard for any constituent in excess of background following the applicable requirements of Regulation No. 22, Section 22.1205(h) or (i). EDC submitted a work plan for establishing the groundwater protection standard. The work plan was a risk assessment protocol, following the format and criteria specified in Regulation No. 22, 22.1205(i). The work plan identified nitrates as the only constituent of concern requiring a groundwater protection standard. Although the MCL for nitrates is listed in Appendix III of Regulation No. 22 at 10.0 mg/l, nitrate is not an Appendix II constituent, which means that the provisions of 22.1205(h) for establishing a groundwater protection standard do not apply. Accordingly, EDC proposed to establish the groundwater protection standard for nitrates through a risk assessment following Regulation No. 22, 22.1205(i). The work plan for establishing a groundwater protection standard for nitrates was approved by ADPC&E, and the work has been completed in accordance with the approved work plan.

Nitrate is the constituent with the greatest potential to exceed a health based action level at a receptor, based on nitrate's concentrations, extent, and mobility.

The document is not a baseline risk assessment. Rather it develops a monitoring level for the shallow groundwater at the site using risk-based procedures in accordance with the approved work plan.

Executive Summary

Comment: *Page ES-1, third paragraph: Risk assessment like procedures were utilized in this report, but the report discusses the results of the TML established for nitrates. This paragraph indicates this approach was presented in a work plan subsequently approved by ADPC&E on October 31, 1996. This is not the typical risk assessment standard the HWD would accept in evaluating a site.*

Response: **As discussed previously, nitrate was the COC selected in the approved Work Plan. The approach presented in the Work Plan was used to develop the TML. Additionally, the Work Plan was submitted per Solid Waste Regulation 22, not HWD criteria.**

Comment: *Page ES-1, fourth paragraph: The receptor population is limited in scope (i.e., only addresses off site child and adult resident).*

Response: **Offsite receptors were addressed. There is no potential exposure of onsite receptors to the shallow groundwater. Shallow groundwater is not used onsite and the only wells completed in the shallow groundwater are monitor wells. Potential exposure during installation or sampling of monitor wells is limited to trained workers completing the work in accordance with a health and safety plan.**

Comment: *Page ES-1, fifth paragraph: Nitrate is the only COC evaluated. The CAO required an assessment of at least nitrates, sulfates, lead, and chromium. Regulation No. 22 requires GWPS be established for Appendix II constituents.*

Response: **The groundwater assessment addressed nitrates, sulfates, lead, and chromium. Nitrate is the COC, as addressed in the Work Plan and the response to general comments.**

Comment: *Page ES-2, Ecological Evaluation: This section is limited in scope. The site evaluation referenced for Lake Kildeer and the small unnamed creek is not included in the report. The last sentence does not account for possible surface water contamination below the point of outfall 001. The CAO requires Lake Lee, Lake Kildeer, plant drainage system, nitric acid concentration area, and all product loading and unloading areas to be evaluated for potential impact from the process wastewater treatment system. These other areas are not discussed in the body of this report.*

Response: **The ecological site evaluation is included in Section 4.4. The other process areas, which are upstream of outfall 001, are not areas of ecological concern because the areas are developed and used for industrial purposes, but are addressed by the groundwater assessment and the waste minimization and wastewater treatment actions. The unnamed tributary and Lake Kildeer are the areas that were considered for potential ecological concern.**

Comment: *Page ES-3, last paragraph: The TML was established for the onsite monitoring wells where the nitrate concentration in said wells would be below the MCL at the defined receptor location. The defined receptor used in establishing the TML is offsite. The TML does not account for exposure to an onsite receptor. It seems EDC calculated a TML for as a "not to exceed" point of the MCL at an offsite location. This does not account for onsite exceedance of the MCL. There are other aspects of exposure to groundwater other than a drinking water source. Dependent on the appropriately defined COCs, the groundwater pathway should be evaluated for inhalation, ingestion, and/or dermal exposures to said COCs.*

Response: **As discussed previously there is no onsite exposure to shallow groundwater except for installation and sampling of monitor wells. Nitrate is not of concern for inhalation because it is not a volatile constituent. The calculations for ingestion and dermal exposure to nitrate resulted in a TML higher than the MCL. Consequently, the MCL was used to be conservative.**

Comment: *Page ES-4, Conclusions and Recommendations: The receptors evaluated are limited in scope. The establishment of TMLs for offsite receptors does not take into account onsite receptors. MCLs were not established to be risked away. The suggested 5-year semiannual groundwater monitoring program for nitrate is limited to four wells when EDC reports having 17 wells onsite. This seems limited in scope.*

Response: **As before, there is no onsite exposure to shallow groundwater except for trained workers working in accordance with a health and safety plan for installation and sampling of monitor wells. EDC proposed four monitor wells, to be monitored semiannually, in the Development of Risk-Based Target Monitoring Levels (February 1997). The monitor wells chosen were MW-EDC-2, 8, 17, and 18. MW-EDC-2 was selected because it is hydrologically upgradient. MW-EDC-8 was selected because it had the highest concentration of nitrate. MW-EDC-17 and 18 were selected because they are hydrologically downgradient.**

Introduction

Comment: *Page 1-1, first paragraph: The language indicates EDC's objective was to establish a human health risk-based target monitoring level (TML) for nitrate. No onsite receptors were evaluated nor were all COCs related to the areas of the site defined in the order evaluated. This report did not represent a risk assessment for all pathways of concern nor all of the COCs of concern for the*

site: only nitrate in the groundwater for off site receptors. The result does not tell the risk the nitrates in the groundwater pose to current and/or possible future receptors. It only conveys what level is not to be exceeded onsite to avoid an excess of the MCL for nitrate in the offsite receptor well (s).

Response: **The objective was to establish a human health risk-based TML for nitrate in the shallow groundwater. As discussed in the approved Work Plan, onsite receptors were evaluated and the exposure pathways were not complete or potentially complete. That is, onsite receptors are not potentially exposed to the shallow groundwater except for trained workers working under a health and safety plan to install or sample monitor wells. Offsite receptors could potentially be exposed to nitrate if a water well was completed within the shallow groundwater and used for supply of water, as for domestic or commercial uses. The water well survey identified the closest downgradient shallow commercial and domestic water wells and these were used as potential receptors in the development of TMLs. Closer receptors (new shallow water wells in the Cockfield formation) are not realistic since the area between the site and the identified receptors is within the city limits of El Dorado. Based upon previous interviews with the El Dorado municipal water supply company, coverage for municipal water supply is provided to residents within the city of El Dorado. All residents are supplied with municipal water service from municipal wells in El Dorado, Arkansas, the closest of which is approximately 1.4 miles south of the EDC site. The municipal supply well is 700 feet deep and is located in the El Dorado aquifer. The El Dorado aquifer is separated from the Cockfield formation by two thick clay layers and the Greensand aquifer. Additionally, there are several factors that impact the probability that an individual within the city limits would install a well at his/her residence to use groundwater. First is the cost of well installation versus the cost of hookup to the municipal water supply. The following is a summary of the cost comparison:**

Shallow Private Well	Municipal Hookup
≈ $2,000 for installation plus operation and maintenance costs	$65 installation plus $6.20 per month.

Based upon previous site reports and interviews with El Dorado Public Works personnel and the Arkansas Department of Health, there are currently no known private wells used for drinking water within the city of

El Dorado. It is unlikely that any wells for drinking water supply would be installed in the Cockfield formation in this area.

Second, the quality of the water is also a factor when considering the probability of using groundwater as a household water source. Municipal water systems must adhere to strict water quality standards to provide the assurance that the water is safe and pleasant to drink. In contrast, there are no such continuous water quality measurements that are required of private wells. However, the groundwater of the Cockfield formation in the area of the site is generally potable in regards to salinity, total dissolved solids, taste, and odor; however, iron concentrations are sometimes high and may make the water undesirable for domestic supply.

The third factor to consider in the comparison of municipal water versus well water is the difficulty in hookup and installation. The hookup to municipal water requires only a call to make an appointment for city personnel to complete the hookup at the needed location. In contrast, well installation would require much more homeowner involvement in both planning and development of the well.

Comment: *Page 1-2, last paragraph: This sentence comments an ecological evaluation was conducted, but the evaluation is not included in the report. The HWD requests, at a minimum, a survey for Federal and State endangered and threatened animals and plants are conducted. Once this has been accomplished, the HWD recommends a facility follow the EPA guidance for conducting ecological risk assessments (June 1997). This guidance lays out the procedures for conducting problem formulation, toxicity evaluations, exposure estimates, and risk calculations for ecological aspects. Appendix A of this guidance document contains a checklist for conducting an ecological screening and sampling event.*

Response: **Section 4.4 presents the one-day site evaluation. The Work Plan was approved in October 1996, prior to the date of the referenced EPA Guidance Document, and the referenced checklist was not used. Again, the Work Plan was based upon Solid Waste Regulation 22, not HWD.**

Data Evaluation and Identification of Constituents of Concern

Comment: *Page 2-1, second paragraph: The Phase II Groundwater Assessment Report is referenced as containing the comparison of the COCs to published health criteria, including primary MCLs and EPA proposed corrective action levels. What about secondary MCLs? What is meant by EPA proposed corrective action levels?*

Response: **MCLs, proposed MCLs, or EPA action levels at the tap for drinking water were used for comparison, as discussed in the response to general comments. The referenced EPA proposed corrective action levels were from the proposed Subpart S Corrective Action Rules.**

Exposure Assessment

Comment: *Page 4-1, Section 4.1, first paragraph: The third sentence states "Because the current land use is industrial, there is no realistic exposure potential for on-site receptor population to groundwater." The zoning of the site has no impact on the receptor population unless there is specific language in the deed prohibiting groundwater use onsite. A preliminary assessment conducted on EDC in 1992 indicated EDC had onsite wells used for potable, process water and fire fighting events. In addition, other contaminated media, such as the soil exposure pathway could impact the groundwater: groundwater migration pathway can impact the surface water migration pathway. This report is centered around the use of groundwater for drinking water purposes. However, dependent on the COCs there are other routes of exposure to groundwater besides ingestion (i.e., inhalation, dermal). The statement "no use of groundwater from the shallow aquifer for drinking water" does not account for process water or fire fighting events use. This needs to be more clearly addressed in a risk assessment.*

Response: **The industrial use precludes development of shallow domestic water wells. The industrial wells at EDC are completed in the Sparta Sand. The Sparta Sand is separated from the shallow groundwater by thick clay units (i.e., Cook Mountain Formation and the middle confining bed of the Sparta Sand) and is not at risk from nitrate in the shallow groundwater, as discussed in Section 5.3. There is no use of the shallow groundwater at the site.**

Comment: *Page 4-1, Section 4.1, second and third paragraphs: The scope of the receptors is too limited. The evaluation of groundwater for drinking water only is limited in scope based on other possible exposures to groundwater.*

Response: **As discussed previously possible use of groundwater from an offsite domestic water well is the only potentially complete exposure pathway. Consequently, adult and child off site receptors using a shallow domestic water well are the appropriate and conservative receptors.**

Comment: *Page 4-2, Section 4.1: The well survey has not been submitted as part of this report. There seems to be a lot of assumptions made as to the current use of these wells based on the fact city water is available. The survey to support these assumptions should be part of the risk assessment report.*

Response: **The well survey is included as an attachment to this memorandum. The well survey shows that shallow wells are not used closer to the site than the identified potential domestic water well. The availability of city water at locations between the site and that well demonstrates that future installation and use of a shallow domestic water well within that area is not a realistic exposure pathway.**

Comment: *Page 4-3, Section 4.2.1: "The migration of nitrate in the groundwater of the Cockfield formation to a water well used for drinking water is the pathway of concern." Is the focus of the "risk" to determine unacceptable exposure for drinking water purposes only or to determine whether groundwater poses a risk to the defined receptors? This report is focused on drinking water exposures solely and does not account for other potential exposures related to groundwater.*

Response: **As discussed previously, there are no onsite potential exposures to shallow groundwater other than trained workers working under a health and safety plan for installation and sampling of monitor wells. Use of an offsite domestic water well completed in the shallow groundwater is the potential pathway of concern.**

Comment: *Page 4-5, first bullet item: The same comment as issued previously. There are other ways to be exposed to groundwater besides drinking water consumption.*

Response: **As discussed previously, use of an offsite domestic water well is the potential pathway of concern. The MCL for nitrate is protective for this exposure pathway.**

Comment: *Page 4-5, second bullet item: Discussion is focused on the probability of a current city of El Dorado resident installing a private water well for drinking water consumption. What about the residents outside the city limits: What about the receptors onsite.*

Response: **The discussion was included to illustrate that shallow domestic water wells would be unlikely to be drilled within the city limits in the future. The site is at the northern edge of the city limits. The direction of flow for the shallow groundwater is to the southeast. The closest domestic water well, which was used as a receptor, is at or near the southeastern city limits and would be a conservative receptor for evaluating the wells outside of the city limits. That is, the well used is as close or closer to the site in the downgradient direction as any well outside of the city limits would be. The commercial well within the city limits was also evaluated and is much closer to the site.**

Comment: *Page 4-6, Section 4.3.1: The equations presented in this section represent intake factors. These factors do not take into account the concentration of the chemical in the media being evaluated.*

Response: **The information used in the development of the TML for nitrate is presented in the document. The calculation of intake factors, as is used in the development of TMLs (RAGS Part B, EPA 1991), does not incorporate compound concentration. As per RAGS (EPA 1989) Section 6, the compound concentration is used in the calculation of Chronic Daily Intake (CDI). The CDI is then used in the estimation of risk or hazards associated with a site. However, the intent of the TML development is to identify a site-specific concentration which is risk-based and health-protective. Therefore, the CDI is not applicable in the development of a site-specific TML and is not incorporated into this risk assessment. Rather a site-specific estimate of intake, defined by receptor behavior, is incorporated into the assessment in conjunction with the identified acceptable risks/hazards to calculate a site- and compound-specific TML.**

The target hazard quotient is discussed in Section 6. Appendix B presents the spreadsheets for the calculation of the TML for nitrate. The hazard quotient/hazard index (HI) for this risk assessment is identified as 1. Only one compound is identified as a COC for the site (as per the approved Work Plan). Therefore no apportionment is appropriate or necessary.

The noncarcinogenic reference dose (RfD) for nitrate, which is incorporated into the development of the TML, is presented and referenced in Table 3.1. In addition, the RfD is presented in the intake factor and TML calculation spreadsheets which are included in Appendix B of the risk assessment report.

Comment: *Page 4-7, Section 4.4: Lake Kildeer, the discharge (outfall 001) and the creek receiving said discharge are the only areas mentioned for being evaluated. What about the other areas onsite which are listed in the CAO? There is no mention of a survey being requested by the Arkansas Natural Heritage Commission (ANHC) on the existence of endangered and/or threatened species or plant life on or near the site.*

Response: **The other areas are process areas which have been or are currently being addressed with the groundwater assessment, waste minimization and wastewater treatment but are not considered for the ecological evaluation. The ANHC was not contacted for the one-day evaluation; however, this was not in the approved Work Plan.**

Comment: *Page 4-9, Section 4.4.1: The same comments apply to this section as mentioned previously in relation the potential ecological receptors and the flow rate of the creek.*

Response: **See previous comments.**

Fate and Transport Modeling of Contaminants

Comment: *Page 5-1, Section 5.1: This section discusses the horizontal transport of nitrate. The model has simulated the TML or the MCL of nitrate would not be exceed for the nearest downgradient receptor domestic well in about 7,250 years nor to the nearest downgradient receptor commercial well in about 3,000 years. What about the condition of the water at the site and the interim points between?*

Response: **Concentrations were considered at the potential downgradient receptors nearest the site. There are no onsite exposures to the shallow groundwater other than trained workers working in accordance with a health and safety plan for installation or sampling of monitor wells. As discussed previously, the area between the site and the existing water wells is served by City water and future installation of additional shallow water wells at interim points is not a realistic exposure pathway.**

Target Monitoring Level Development

Comment: *Page 6-1, Section 6.0: Show all the data inputs for deriving the Chronic daily intake, target hazard quotient, and reference dose (i.e., show your work).*

Response: **The TML calculations are shown as Appendix B. See also response to the comment on Page 4-6.**

Comment: *Page 6-1, Section 6.0, third paragraph: Nitrates were the only COC evaluated in this report. Therefore, the only source of noncarcinogenic toxicity data should be obtained from IRIS. The HWD sets the priority for obtaining toxicity information in the following order: IRIS, HEAST, and then other EPA references.*

Response: **The values used are those from IRIS. The text can be changed as suggested.**

Comment: *Page 6-2, Section 6.2: MCLs at all receptor points, whether onsite or offsite, should be used. The language for comparing TMLs with modeling results is confusing. The last paragraph of this section (6.2) on page 6-3 indicates MCLs were utilized to be conservative since the MCL is lower than the calculated TML. MCLs should not be exceeded.*

Response: **There are no potentially complete pathways onsite for exposure to shallow groundwater. MCLs were used as the maximum allowable concentration at the receptors for the potentially complete pathways, which are offsite.**

Comment: *Page 6-4: EDC has applied an attenuation factor (AF) to the maximum onsite nitrate concentration and the maximum concentration simulated to reach an offsite receptor. In summary, EDC has stated the MCL times the Nitrate AF (MCL x AF) yields an acceptable monitoring level for onsite wells. This is a step to establish action levels for their groundwater protection program as related to the onsite monitoring wells. This is not how a human health or ecological risk assessment (baseline) would be conducted. In addition, these onsite TMLs are back calculated from an offsite receptor standpoint and do not account for onsite potential exposure.*

Response: **As presented in the approved Work Plan, this was not a baseline risk assessment. The purpose was to establish a risk based target monitoring level (TML) for nitrate in the shallow groundwater at the site. As discussed previously, there are no onsite receptors for exposure to shallow groundwater other than trained workers working under a health and safety plan for installation and sampling of monitor wells.**

Conservative Risk Factors

Comment: *Page 7-1, Section 7.1: There is a statement the amount of nitrate present was estimated using conservative interpretations of the data. The data should be presented as part of this report to allow a quality review of the data to take place.*

Response: **Appendix C (Section 4.4) describes the general approach for calculating the amount of nitrate present for input in the model. Specifically, the shallow groundwater nitrate concentrations from the Phase I and the Phase II Assessments were placed on a map of the facility and the nitrate concentrations were contoured in a conservative manner. The mass of nitrate in the groundwater between two contours was then calculated by multiplying the average nitrate concentration between the two contours by the amount of water in that area. The total mass of nitrate was then calculated by summing the calculated masses for all pairs of contours. The total mass of nitrate obtained from the site data was 90,428 pounds. A spread sheet showing this calculation is attached. Mass of nitrate was input in solute to conservatively approximate the contours and total mass from the site data. The total mass of nitrate input into the solute model was 92,775 pounds. A spreadsheet showing the calculation of the amount of mass of nitrate input into the solute model is attached. The total amount of nitrate input into the model was 2,347 pounds greater than calculated as present using the site data. Consequently, the nitrate input is considered to be a conservative factor in the fate and transport model.**

Comment: *Page 7-3, second paragraph: Again there is mention of individuals within the city limits installing private wells. The installation should not be limited to city limits. Secondly, there is reference to primary source of the groundwater. What about secondary uses?*

Response: **As discussed in the response to the comment on page 4-5, second bullet item, possible water wells outside the city limits were also considered. The domestic well used as a receptor is a conservative approach for possible domestic wells outside of the city limits. The commercial well within the city limits that was also used as a receptor is a more conservative receptor that is much closer to the site than any downgradient well outside of the city limits.**

Comment: *Page 7-3, third paragraph: The survey for private wells was limited to use within the city limits. What about installation of private wells outside the city limits?*

Response: **The survey for private wells was not limited to use within the city limits. See also the above response.**

Project Conclusions and Recommendations

Comment: *Page 8-3: EDC has proposed to conduct a five year groundwater monitoring program for four wells. There were ten of the seventeen monitoring wells sampled which exceeded the nitrate MCL. Why only propose sampling for these four locations and not of at least the 10 wells that exceeded the MCL or the seventeen monitoring wells? After all, EDC comments in this report the data contained "gaps".*

Response **The monitor wells chosen were MW-EDC-2, 8, 17, and 18. MW-EDC-2 was selected because it is hydrologically upgradient. MW-EDC-8 was selected because it had the highest concentration of nitrate. MW-EDC-17 and 18 were selected because they are hydrologically downgradient.**

Tables

Comment: *Table 3.1: Footnote (A) is defined as USEPA Region IX PRGs for obtaining the oral and dermal reference dose for nitrate. IRIS is the appropriate reference for obtaining this information. Where Region IX has the RfDs listed in their table, the most current RfD obtained from IRIS should be used (note: the 1.6 is the most current IRIS number).*

Response: **The value used is the IRIS value. The footnote can be changed to list IRIS as the source.**

Figures

Comment: *Figure 4.1: If onsite wells are located EDC property for potable use, process use, and/or fire fighting events, these wells should be identified.*

Response: **The onsite industrial wells are not completed in the shallow groundwater. If desired they can be added to the Figure.**

Comment: *Figure 4.2: What about onsite receptors (i.e. workers)? The Air Pathway may be incomplete in relation to volatilization of nitrate, but what about any other COCs? What about soil to groundwater releases: What about groundwater to surface water releases?*

Response: **Onsite workers are not exposed to the shallow groundwater(except trained workers working in accordance with a health and safety plan for installation and sampling of monitor wells). Volatilization would also not be a factor if lead, chromium, or sulfate were also considered. There are no site data concerning the soil to groundwater pathway for nitrate. Nitrate does not significantly sorb to soil and is highly soluble. Nitrate would be expected to preferentially fraction within the groundwater rather than the soil. Surface soils are being addressed through the waste minimization program. As discussed in Section 4.4.1, groundwater discharge should be minimal compared to the flow of the creek which is primarily flow from outfall 001.**

Appendix C

Comment: *Page C-16: The last sentence on this page tells how far the waste can travel and not exceed the MCL at a defined receptor location. How is this protective of the entire human health and ecological population? The objective of the CAO is to monitor and determine if further assessments are needed. This report seems to try and risk away established numbers such as MCLs.*

Response: **The nearest potential human receptors were identified and were used in developing the monitoring levels. The MCL was used as the acceptable concentration at the receptor. Since the acceptable concentrations would not be exceeded at the nearest receptors, they would also not be exceeded at receptors farther downgradient of the site.**

TABLES

CALCULATIONS OF POUNDS OF NITRATE PRESENT
DEVELOPMENT OF RISK-BASED TARGET MONITORING LEVELS
EL DORADO CHEMICAL COMPANY, EL DORADO, ARKANSAS

Conc. (ppm)	Area (FT^2)	Thickness (ft)	Porosity	Sat. Volume (ft3)	Sat. Volume (lb)	Conc. (ppm)	Mult.	Nitrate (lb)
1 - 10	6,960,000	13.83	0.3	28,877,040	1,801,927,296	5.5	0.0000055	9911
10 - 100	2,200,000	13.83	0.3	9,127,800	569,574,720	55	0.000055	31327
100 - 1000	1,000,000	13.83	0.3	4,149,000	258,897,600	150	0.00015	38835
>1000	40,000	13.83	0.3	165,960	10,355,904	1000	0.001	10356
	10,200,000			42,319,800	2,640,755,520			90428

SOLUTE TRANSPORT MODEL INPUT DATA
DEVELOPMENT OF RISK-BASED TARGET MONITORING LEVELS
EL DORADO CHEMICAL COMPANY, EL DORADO, ARKANSAS

Conc (ppm)	1/2 source dia. (inches)	Total Area (ft2)	Incr. Area (ft2)	Volume (ft3)	Wat Vol. (lbs)	Conc (ppm)	Mass - Nitrate (lbs)
0.2 - 5.2	0.38	27445582	9180205	38088670	2376733035	2.7	6417
5.0 - 10.2	0.31	18265377	5416891.1	22474681	1402420114	7.7	10799
10.2 - 15.2	0.26	12848486	3649274	15140838	944788287.2	12.7	11999
15.2 - 20.2	0.22	9199212	3041061.7	12617365	787323572.6	17.7	13936
20.2 - 25.2	0.18	6158150	1292451.2	5362380.1	334612518.4	22.7	7596
25.2 - 30.2	0.16	4865699	1653577.3	6860692.2	428107192.6	27.7	11859
30.2 - 35.2	0.13	3212121	912318.51	3785209.5	236197071.8	32.7	7724
>35.2	0.11	2299803	2299802.9	9541882.2	595413451.8	37.7	22447
							92775

TABLE 1
WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
AGC	El Dorado Water Utilities	MUN	S24	T17S-R16W	NA	NA
AGC	Great Lakes Chemical Co.	Other	S27	T17S-R16W	NA	NA
AGC	Robert Ramsey	DOM	S31	T17S-R16W	NA	NA
AGC	NA	Other	S31	T17S-R16W	NA	NA
AGC	El Dorado Poultry	Agri.	S32	T17S-R16W	NA	NA
AGC	Ricky Guitkie	DOM	S33	T17S-R16W	NA	NA
AGC	Great Lakes Chemical Co.	Other	S34	T17S-R16W	NA	NA
AGC	Great Lakes Chemical Co.	Oil and Gas	SENW-S28	T17S-R16W	NA	NA
AGC	O.D.McKnight	DOM	S08	T18S-R14W	NA	NA
AGC	Mrs. O.L. Morgan	DOM	S08	T18S-R14W	NA	NA
AGC	Hershel Bradshaw	DOM	S09	T18S-R14W	NA	NA
AGC	Chauncey Tate	DOM	S14	T18S-R14W	NA	NA
AGC	Floyd Zylles	DOM	S30	T18S-R14W	NA	NA
AGC	Joe Robertson	DOM	S33	T18S-R14W	NA	NA
AGC	Faircrest Water Association	MUN	S33	T18S-R14W	NA	NA
AGC	Coy Lowery	DOM	SWSE-S19	T18S-R14W	NA	NA
AGC	Johnson Township Water Association	PS	SWSW-S6	T18S-R14W	NA	NA
AGC	Georgia Pacific Corporation	MUN/Other	At mill 167-S, 6 mi. from ElDorado	T18S-R15W	NA	NA
AGC	Lovell & Mona Jones	DOM	NA	T18S-R15W	NA	NA
AGC	Great Lakes Chemical Company	COM	NWNE-S9	T18S-R15W	NA	NA
AGC	Kenneth Clark	DOM	S16	T18S-R15W	NA	NA
AGC	K.J.McKoy	DOM	S18	T18S-R15W	NA	NA

TABLE 1
WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
AGC	John Frisby	DOM	S19	T18S-R15W	NA	NA
AGC	Donald McGaugh	DOM	S19	T18S-R15W	NA	NA
AGC	McKinnon Lorence	DOM	S19	T18S-R15W	NA	NA
AGC	Little Bethel Church	DOM	S21	T18S-R15W	NA	NA
AGC	Jack Davis	DOM	S21	T18S-R15W	NA	NA
AGC	El Dorado Poultry Co.	DOM	S27	T18S-R15W	NA	NA
AGC	Steve Moss	DOM	S30	T18S-R15W	NA	NA
AGC	Stephen Day	DOM	S30	T18S-R15W	NA	NA
AGC	Jack Lee	DOM	S34	T18S-R15W	NA	NA
AGC	Gerald Brian	DOM	S34	T18S-R15W	NA	NA
AGC	Faircrest Water Association	MUN	S35	T18S-R15W	NA	NA
AGC	Mrs. Hart	DOM	S36	T18S-R15W	NA	NA
AGC	Mr. A.L. Twitchell	DOM	S36	T18S-R15W	NA	NA
AGC	Randy Wood	PS	SENW-S26	T18S-R15W	NA	NA
AGC	Parker's Chapel Water Association	PS	SESW-S9	T18S-R15W	NA	NA
AGC	Buddy & Bobbie Modine	DOM	NA (12 MI. SW of ElDorado)	T18S-R16W	NA	NA
AGC	Great Lakes Chem. Co.	COM	NWNENE-S05	T18S-R16W	33-11-36	92-46-51
AGC	Great Lakes Chemical Co.	COM	NWNENW-S05	T18S-R16W	33-11-36	92-46-51
AGC	Pastor Raymond Goodwin	DOM	S02	T18S-R16W	NA	NA
AGC	Icia Kirk	DOM	S03	T18S-R16W	NA	NA
AGC	M.A. Evans	DOM	S04	T18S-R16W	NA	NA
AGC	Marvin Bagley	DOM	S07	T18S-R16W	NA	NA
AGC	Tandy Homes	DOM	S09	T18S-R16W	NA	NA
AGC	Frank Jobe	DOM	S10	T18S-R16W	NA	NA

TABLE 1
WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
AGC	Jessica Boone	DOM	S10	T18S-R16W	NA	NA
AGC	Parker's Chapel Water Assoc.	MUN	S11	T18S-R16W	NA	NA
AGC	Jim Ellen	DOM	S12	T18S-R16W	NA	NA
AGC	H.K. Matthews	DOM	S12	T18S-R16W	NA	NA
AGC	Max Risinger	DOM	S14	T18S-R16W	NA	NA
AGC	Charles Ainsworth	DOM	S16	T18S-R16W	NA	NA
AGC	Philip Cortrell	DOM	S20	T18S-R16W	NA	NA
AGC	Cliff Wright, Sr.	DOM	S24	T18S-R16W	NA	NA
AGC	Mrs. Jeroline McGaugh	DOM	S24	T18S-R16W	NA	NA
AGC	Mrs. Jeroline McGaugh	DOM	S24	T18S-R16W	NA	NA
AGC	J.D. Armstrong	DOM	S25	T18S-R16W	NA	NA
AGC	Bethel Chapel Assembly of God	DOM	S26	T18S-R16W	NA	NA
AGC	Wesson-Newell Water Assoc.	MUN	S28	T18S-R16W	NA	NA
AGC	Garfield Goodwin	DOM	S30	T18S-R16W	NA	NA
AGC	Mrs. Butch Caldwell	DOM	S33	T18S-R16W	NA	NA
AGC	Cecil Lowery	DOM	S36	T18S-R16W	NA	NA
AGC	AR Chemical Corp.	COM	SENW-S8	T18S-R16W	NA	NA
AGC	Great Lakes Chemical Co.	COM	SWNW-S07	T18S-R16W	NA	NA
ASWCC	Calion Water Works	WS	NESW-S15	T16S-R14W	33-19-44	92-32-17
ASWCC	Crabapple Point Water Sys.	WS	SESW-S15	T16S-R14W	33-19-26	92-32-16
ASWCC	Crabapple Point Water Sys.	WS	SESW-S15	T16S-R14W	33-19-27	92-32-11
ASWCC	Calion Water Works	WS	SWNW-S15	T16S-R14W	33-19-48	92-32-32
ASWCC	Norphlet Waterworkds	WS	NESE-S20	T16S-R15W	33-19-00	92-39-56
ASWCC	Norphlet Waterworks	WS	SWSW-S21	T16S-R15W	33-18-42	92-39-50

TABLE 1
WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
ASWCC	Smackover Waterworks	WS	NA	T16S-R16W	33-21-71	92-42-83
ASWCC	Smackover Waterworks	WS	NWNE-S02	T16S-R16W	33--22-05	92-43-30
ASWCC	Smackover Waterworks	WS	NWSE-S01	T16S-R16W	33-21-31	92-42-30
ASWCC	Smackover Waterworks	WS	S01	T16S-R16W	33-21-16	92-42-05
ASWCC	Smackover Waterworks	WS	S01	T16S-R16W	33-21-33	92-42-34
ASWCC	Smackover Waterworks	WS	S02	T16S-R16W	33-22-11	92-43-37
ASWCC	Smackover Waterworks	WS	SESE-S01	T16S-R16W	33-21-15	92-42-13
ASWCC	Mount Holly Waterworks	WS	NWNE-S34	T16S-R18W	33-18-05	92-57-09
ASWCC	Mount Holly Waterworks	WS	NWNW-S35	T16S-R18W	33-18-08	92-56-38
ASWCC	New London Water Assn.	WS	NWNW-S32	T17S-R12W	33-12-03	92-22-18
ASWCC	New London Water Assn.	WS	NWNW-S32	T17S-R12W	33-12-04	92-22-21
ASWCC	Lawson-Urbana Water Assn.	WS	NENW-S31	T17S-R13W	33-12-05	92-29-16
ASWCC	Lawson-Urbana Water Assn.	WS	NENW-S31	T17S-R13W	33-12-05	92-29-26
ASWCC	Old Union Water Assn.	WS	NWSW-S16	T17S-R14W	33-14-21	92-33-32
ASWCC	El Dorado Waterworks	WS	NWNE-S33	T17S-R15W	33-12-23	92-39-23
ASWCC	El Dorado Chemical Co.	IN	S07	T17S-R15W	33-16-00	92-41-00
ASWCC	El Dorado Chemical Co.	IN	S07	T17S-R15W	33-15-54	92-41-58
ASWCC	El Dorado Chemical Co.	IN	S08	T17S-R15W	33-15-48	92-40-00
ASWCC	El Dorado Chemical Co.	IN	S09	T17S-R15W	33-15-40	92-39-55
ASWCC	El Dorado Waterworks	WS	SESE-S28	T17S-R15W	33-12-36	92-38-56
ASWCC	El Dorado Waterworks	WS	SESW-S28	T17S-R15W	33-12-27	92-39-37
ASWCC	El Dorado Waterworks	WS	SESW-S29	T17S-R15W	33-12-28	92-40-38
ASWCC	El Dorado Waterworks	WS	SWNE-S29	T17S-R15W	33-13-03	92-40-09
ASWCC	El Dorado Waterworks	WS	SWSE-S28	T17S-R15W	33-12-37	92-39-21
ASWCC	El Dorado Waterworks	WS	SWSE-S28	T17S-R15W	33-14-25	92-40-30

TABLE 1
WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
ASWCC	El Dorado Waterworks	WS	NESW-S24	T17S-R16W	33-13-49	92-42-44
ASWCC	El Dorado Waterworks	WS	NWNW-S24	T17S-R16W	33-14-07	92-42-56
ASWCC	Hwy 82 Water Assoc.	WS	NWNW-S33	T17S-R16W	33-12-26	92-46-01
ASWCC	El Dorado Waterworks	WS	NWSW-S24	T17S-R16W	33-13-58	92-42-50
ASWCC	El Dorado Chemical Co.	IN	S12	T17S-R16W	33-15-50	92-42-53
ASWCC	El Dorado Waterworks	WS	SENW-S24	T17S-R16W	33-13-58	92-42-48
ASWCC	Marysville Water Assn	WS	SWSE-S30	T17S-R17W	33-13-51	92-57-27
ASWCC	Johnson Township Water	WS	SWSW-S06	T18S-R14W	33-10-40	92-35-31
ASWCC	Faricrest Water Assn.	WS	NESE-S35	T18S-R15W	33-06-31	92-37-08
ASWCC	Faircrest Water Assn.	WS	SENE-S33	T18S-R15W	33-06-57	92-38-59
ASWCC	Wesson-Newell Water Assn.	WS	NENE-S19	T18S-R16W	33-08-07	92-46-13
ASWCC	Parkers Chapel Water Assn.	WS	NESE-S11	T18S-R16W	33-10-11	92-43-17
ASWCC	Parkers Chapel Water Assn.	WS	SWNE-S12	T18S-R16W	33-10-24	92-42-29
ASWCC	Parkers Chapel Water Assn.	WS	SWNE-S12	T18S-R16W	33-10-18	92-42-23
ASWCC	Felsenthal Water Assoc.	WS	NWSW-S16	T19S-R10W	33-03-27	92-09-05
ASWCC	Felsenthal Water Assoc.	WS	NWSW-S16	T19S-R10W	33-03-24	92-08-45
ASWCC	Batts Lapile Water Assoc.	WS	NWNW-S18	T19S-R11W	33-04-09	92-17-13
ASWCC	Batts Lapile Water Assoc.	WS	NENE-S13	T19S-R12W	33-04-10	92-17-16
ASWCC	New Hope Water Assn.	WS	NESE-S09	T19S-R17W	33-05-09	92-51-38
ASWCC	New Hope Water Assn.	WS	NWNE-S16	T19S-R17W	33-04-55	92-51-52

Note: Well depths shown on well logs or references attached to this well survey summary.
NA = Not Available.

TABLE 1
WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

REFERENCES (for well search):

ADH = Arkansas Department of Health Engineering Section, City of El Dorado Public Supply Well Locations.

AGC= Arkansas Geological Commision- Well Construction Logs

ASWCC = Arkansas Soil and Water Conservation Commission, Well Database Search by Hydrologic Unit

ADPCE = Arkansas Department of Pollution Control & Ecology. Report on the Third Sampling of the El Dorado, Pine Bluff, and Lonoke Prototypes, October, 1994.

WATER USE SYMBOLS:

AG = Agricultural well

COM = Commercial well

DOM = Domestic well

IN = Industrial well

IR = Irrigation well

MUN = Municipal well

PS = Public supply well

Oil and Gas = Oil and gas well

Other = Other well types

U = Unused or adandoned

WS = Water supply well.

ARKANSAS DEPARTMENT OF HEALTH
DIVISION OF ENGINEERING

CITY OF EL DORADO
PUBLIC WATER SUPPLY WELL SITES

Arkansas Department of Health

4815 West Markham Street · Little Rock, Arkansas · [illegible] · Telephone (501) 661-2000
Sandra B. Nichols, M.D., Director · Huckabee, Governor

Arkansas Department of Health
Division of Engineering
4815 West Markham Slot 37
Little Rock, Arkansas 72205

Fax Cover Sheet

DATE:	01/23/97	TIME:	8:40 am
TO:	MARY D BECK	PHONE:	223-2582
	WC - LITTLE ROCK	FAX:	223-2996
FROM:	DAVID FRANK	PHONE:	661-2623
	DIST. ENGR.	FAX:	661-2032
RE:	EL DORADO WELL SITES		
CC:			

Number of pages including cover sheet: 2

If additional information is need, feel welcome to call me.

DFrank

A. SOURCE: WELLS

PWS ID # 550

Well #/Name		Date Drilled	Total Depth	Casing Size	Casing Depth	Grout Depth	Protection Radius	Well Yield	Location Latitude	Location Longitude
well #	10	1945	Abandoned						/ /	/ /
	10A	1961	740	18	660	660	5'	550	33 / 12 / 30	92 / 39 / 45
Down town Plt	11	1947	unk	unk	unk	unk	5'	950	33 / 12 / 30	92 / 39 / 46
	12	1966	712	18	unk	unk	20	950	33 / 12 / 25	92 / 39 / 20
Not Connected	13	1955	680	14	527	527	none	none	33 / 12 / 28	92 / 40 / 3
Summer Standby	14	1955	715	14	600	600	5	800	33 / 13 / 00	92 / 40 / 0
Down town Plt	15	1960	755	18"	645	645	50	1300	33 / 12 / 40	92 / 38 / 56
Morning Star Mt	16	1960	(700)	18	620	620	50	700	33 / 14 / 15	92 / 40 / 25
	17	1965	611	18	495	495	250	980	33 / 14 / 10	92 / 42 / 50
Mt Holly Plt	18	1978	704	18	602	602	50	980	33 / 14 / 10	92 / 42 / 55
	19	1982	709	18	595	595	20	980	33 / 13 / 46	92 / 42 / 45
	20	1991	757	18	656	656	10	980	33 / 13 / 12	92 / 43 / 42
									/ /	/ /
									/ /	/ /
									/ /	/ /

13,204,800 gal/day

...TION FIGURES

	Max. Cap. (MGD)	Limiting Factor	(Code)	Max. Demand (MGD)/% Cap.	Avg. Demand (MGD)/% Cap.	Population Served	Mer.
Plant	13.2	Raw H2O	2	10.4 / 79	6.74 / 51		
Primary System El Dorado				9.64 /	5.98 /	23,146	
Consecutive System Meter Size							
1. Old Union pws 559 3"	.504			.15 /	.025 /	1540	440
2. Cum 561 2"	.216			.096 / *	.117 /	910	260
Oakwood 562 3"	.504			.1167 /	.137 /	1708	488
Salem 746 2"	.216			.064 /	.038 /	440	124
Oak Manor 558 3"	.504			.101 /	.039 /	378	126
6. Redan Grove 543 1"	.086			.010 /	.011 /	95	37
7. Harmony 402 2"	.216			.177 / *	.039 /	2200	621
8.				/	/		
9. Consecutive sys.	...ty	per meter size	1" = 60 gpm	2" = 180 gpm	3" = 350 gpm		
10.	demand	per El Dorado	Sales records	/			
Industrial Demand	Max demand	per last sanitary	Survey	Note ** errors		xxxxxxxxxxxx	

Note Old Union has well to supplement demand.

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

TABLE 1 EL DORADO PROTOTYPE -LOCATION AND DESCRIPTION OF WELLS - THIRD SAMPLING PERIOD FROM: REPORT ON THE THIRD SAMPLING OF EL DORADO, PINE BLUFF, AND LONOKE PROTOTYPES OCTOBER, 1994

REPORT ON THE THIRD SAMPLING OF THE ELDORADO, PINE BLUFF, AND LONOKE PROTOTYPES

ARKANSAS PROTOTYPE MONITORING PROGRAM

Arkansas Department of Pollution Control & Ecology
October, 1994

Table 1. EL DORADO PROTOTYPE - LOCATION AND DESCRIPTION OF WELLS - THIRD SAMPLING PERIOD

SAMPLE DATE	LOCAL NUMBER	SAMPLE LOCATION NO.	LATITUDE-LONGITUDE	DEPTH	AQFR	USE
5-16-94	17S15W09BBB1	#24	33 15 55.0 92 39 54.5	550'	El Dor	C
5-16-94	18S16W01DBC1	#15	33 11 02.0 92 42 25.5	770'	El Dor	C
5-16-94	17S15W32BDD1	#8	33 11 42.0 92 40 47.0	712'	El Dor	C
5-16-94	18S15W35DAC1	#25	33 06 35.0 92 37 05.0	770'	El Dor	P
5-16-94	18S15W22DCC1	#62	33 08 10.0 92 38 21.0	75'	Cckf	C
5-16-94	17S16W24BBC1	#11	33 14 02.5 92 42 58.5	704'	El Dor	P
5-16-94	18S14W07BBA1	#27	33 10 37.0 92 35 16.0	783'	El Dor	P
5-16-94	18S15W16ACB1	#10	33 09 37.0 92 39 22.5	295'	Grnsd	D
5-16-94	18S15W21DAC1	#61	33 08 23.0 92 39 08.0	40'	Cckf	D

Uses: C = Commercial; P = Public; D = Domestic
AQFR = Aquifer; Cckf = Cockfield; Grnsd = Greensand (Upper Sparta); El Dor = El Dorado (Lower Sparta)

- continued -

Table 1. EL DORADO PROTOTYPE - LOCATION AND DESCRIPTION OF WELLS - THIRD SAMPLING PERIOD

SAMPLE DATE	LOCAL NUMBER	SAMPLE LOCATION NO.	LATITUDE-LONGITUDE	DEPTH	AQFR	USE
5-16-94	18S16W02AAA1	#94	33 11 35.5 92 43 04.5	43'	Cckf	D
5-17-94	17S15W16BBA1	#21	33 15 01.5 92 39 44.5	37'	Cckf	C
5-17-94	17S14W14DBC1	#26	33 14 17.0 92 31 03.0	49'	Cckf	D
5-17-94	17S14W32CBB1	#28	33 11 53.0 92 34 28.5	120'	Cckf	D
5-17-94	18S15W18ABA1	#60	33 09 48.5 92 41 18.0	75'	Cckf	D
5-17-94	18S15W20BDC1	#63	33 08 37.0 92 40 44.5	320'	Grnsd	D
5-17-94	16S16W34BDD1	#23	33 17 21.5 92 44 38.0	56'	Cckf	D
5-17-94	16S16W34BDD2	#29	33 17 19.5 92 44 43.5	300'	Grnsd	D
5-17-94	18S15W07BDA1	#54	33 10 28.0 92 41 35.0	100'	Cckf	D

Uses: D = Domestic; C = Commercial;
AQFR = Aquifer; Cckf = Cockfield; Grnsd = Greensand (Upper Sparta); El Dor = El Dorado (Lower Sparta)

Table 2. EL DORADO PROTOTYPE - LOCATION AND DESCRIPTION OF WELLS NOT SAMPLED DURING THIRD SAMPLING PERIOD

LAST SAMPLED	LOCAL NUMBER	SAMPLE LOCATION NO.	LATITUDE-LONGITUDE	DEPTH	AQFR	USE
1st	18S15W06BDB2	#55	33 11 20.0 92 41 47.0	30'	Cckf	U
1st	18S15W06BDB3	#101	33 11 20.0 92 41 47.0	31'	Cckf	U
1st	18S15W06BDB1	#56	33 11 18.5 92 41 42.0	12'	Cckf	U
2nd	18S16W11CDD1	#99	33 09 53.5 92 43 36.5	70'	Cckf	D
1st	18S16W02ACA3	#103	33 11 20.0 92 43 16.0	27'	Cckf	U
1st	17S15W31DCB1	#115	33 11 47.0 92 41 28.0	300'	Grnsd	U
1st	18S15W05BBC1	#49	33 11 24.0 92 40 56.0	75'	Cckf	U

Uses: U = Unused or abandoned; D = Domestic
AQFR = Aquifer; Cckf = Cockfield; Grnsd = Greensand (Upper Sparta); El Dor = El Dorado (Lower Sparta)

ARKANSAS GEOLOGIC COMMISSION
WATER WELL CONSTRUCTION REPORTS

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 16 SOUTH RANGE 14 WEST

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well X Work-over Well ____ Replacement Well ____

Owner of Well Dr. Don R. Goodwin's Lands

Well Contractor Hamlin - Nolte W. W.

Driller Name and No. Cecil Nolte D2097

Date Well was Completed 1-6-81

1. Total Depth of Well 95 Ft.
2. Water Producing Formation: From 68 Ft. To 95 Ft.
3. Water Level Below Land Surface 62
4. Gallons per ~~Hour~~ M.N 50
5. Well Disinfected with H.T.H
6. Casing to 75 Ft.
7. Cased with 4 Diameter PVC Casing
8. Cemented from ____ Ft. to ____ Ft.
9. Use of Well: Domestic ____ Irrigation X Municipal ____ Other ____

County UNION (in which well is located)

Well is near 45167 Road

Section 20 Township 16S Range 14W

Directions for Reaching Well: 1 Mile South of Calion on left (use permanent landmark)

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths in feet from	to
Sand	0	23
Red Clay	23	28
Sand with Clay Stks	28	55
White Clay	55	68
Fine to Med Sand	68	95
Gray Shale	95	100

Remarks:

Signed: Cecil Nolte Date: 1-6-81

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 16 SOUTH RANGE 15 WEST

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

Contractor Name & Number: KENITH BURSON JR #170 C# 1339
Driller Name & Number: KENITH BURSON JR D# 2180
Pump Installer Name & Number: KENITH BURSON JR P# 4361
Date Well Completed: 3-13-96 New Well ☑ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW

5 COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
	NE ¼ of NW ¼ of	15	16 S	15 W

12 LONGITUDE	11 LATITUDE
92 ° 38 ' 04 "	33 ° 19 ' 15 "

DESCRIPTION OF FORMATION: DEPTHS IN FEET

DESCRIPTION OF FORMATION	FROM	TO
Soil Clay	0	25
Clay	25	165
Sand	65	69
Sand	69	225
Sand	225	245
Sand	245	325
Sand	325	345
Sand	345	445

(ADDITIONAL SHEETS IF NECESSARY)

TOTAL DEPTH OF WELL 600 ft
DEPTHS TO WATER PRODUCING FORMATIONS. 65 FT
STATIC WATER LEVEL 240 Ft below land surface
YIELD 15 gallons per ☑ min ☐ hr
DIAMETER OF BORE HOLE 8 IN

PUMP REPORT

TYPE PUMP: SUBMERSIBLE ☑ TURBINE ☐ JET ☐
SETTING DEPTH: 315 FEET
BRAND NAME AND SERIAL NUMBERS: F.W 10 GPM 3 HP
RATED CAPACITY 10 GPM gallons per minute
TYPE LUBRICATION WATER
DROP PIPE OR COLUMN PIPE SIZE 1¼ Galv.
WIRE SIZE 10-3 w/ Gnd.
PRESSURE TANK . . . SIZE, MAKE, MODEL WF 100 - WEL-FLO
DATE OF INSTALLATION OR REPAIR 3-13-96
Is there an abandoned water well on the property? NO

D1 LAND OWNER OR OTHER CONTACT PERSON:
NAME BESSIE TEMPLE
STREET ADDRESS 261 HAYSCITY
CITY EUDORA AR

2 CASING FROM 0 TO 520 W/ 4 "ID
FROM 580 TO 600 W/ 4 "ID
TYPE CASING: 4" SCH 40

3 SCREEN
TYPE: PVC DIA 4" SLOT/GA 10/10
SET FROM 520 FT TO 580 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK 60 FROM FT TO 500 FT
5 BACK FILLED WITH: BENTONITE CHIPS
FROM FT TO 500 FT 475
6 SEALED WITH: BENTONITE CHIPS
FROM 15' FT TO 0 FT
FROM FT TO FT
7 DISINFECTED WITH: CHLORINE
8 USE OF WELL:

DOMESTIC	☑	COMMERCIAL	☐
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	☐	RETURN	☐
CLOSED LOOP	☐		

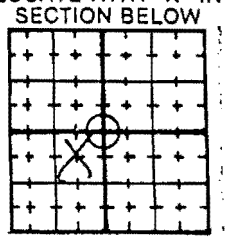
9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS
12 SIGNED [signature] DATE 3-17-96

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

Boundary

1 Contractor Name & Number: KENITH BURSON JR H20 C# 1339
2 Driller Name & Number: KENITH BURSON JR D# 2180
3 Pump Installer Name & Number: KENITH BURSON JR P# 4361
4 Date Well Completed: 3-13-96 New Well ☑ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW



COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
UNION	NE ¼ of SW ¼ of	15	16S	15W

LONGITUDE	LATITUDE
92° 38' 30"	11 33° 19' 43"

DESCRIPTION OF FORMATION:	DEPTHS IN FEET FROM	TO
TopSoil Clay	0	25
Shale	25	65
Fine Sand	65	69
Shale	69	225
Fine Sand	225	245
Shale	245	325
Fine Sand	325	345
Shale	345	445

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 620 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS. 65 FT
4 STATIC WATER LEVEL 240 Ft below land surface
5 YIELD 15 gallons per ☑ min ☐ hr
6 DIAMETER OF BORE HOLE 8 IN

PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☑ TURBINE ☐ JET ☐
2 SETTING DEPTH: 315 FEET
3 BRAND NAME AND SERIAL NUMBERS: F.W 10GPM 2HP
4 RATED CAPACITY 10 GPM gallons per minute
5 TYPE LUBRICATION water
6 DROP PIPE OR COLUMN PIPE SIZE 1¼ Gal.
7 WIRE SIZE 10-3 w/ Grd.
8 PRESSURE TANK . . . SIZE, MAKE, MODEL WF 100 - WEL-Flo
9 DATE OF INSTALLATION OR REPAIR 3-13-96
10 Is there an abandoned water well on the property? NO

D1 LAND OWNER OR OTHER CONTACT PERSON:
NAME BESSIE TEMPLE
STREET ADDRESS 269 HaysCityLoop
CITY EldoRado Ar

2 CASING FROM 0 TO 520 W/ 4 "ID
FROM 580 TO 620 W/ 4 "ID
TYPE CASING: 4" Sch 40

3 SCREEN
TYPE: PVC DIA 4" SLOT/GA 1016
SET FROM 520 FT TO 580 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK 620 FROM FT TO 500 FT
5 BACK FILLED WITH: BENTonite Pellets
FROM FT TO 500 FT 475
6 SEALED WITH: Bentonite & Cement
FROM 15' FT TO 0' FT
FROM FT TO FT
7 DISINFECTED WITH: BLEACH
8 USE OF WELL:

DOMESTIC	☑	COMMERCIAL	☐
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS
12 SIGNED Kenneth Burson DATE 3-17-96

7 JAN 89 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201
5945

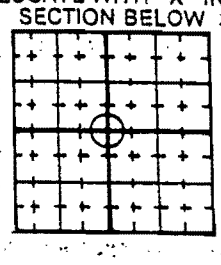
Landowner COPY

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

A
1 Contractor Name & Number: _____ C# _____
2 Driller Name & Number: _____ D# _____
3 Pump Installer Name & Number: _____ P# _____
4 Date Well Completed: _____ New Well ☐ Replace or Work-over ☐

COUNTY	6 FRACTION ¼ of ¼ of	7 SECTION	8 TOWNSHIP	9 RANGE

10 LOCATE WITH 'X' IN SECTION BELOW



LONGITUDE
1 _____ ° _____ ' _____ "

LATITUDE
11 _____ ° _____ ' _____ "

B
1 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
445 Shale		463
Cap Rock	463	464
Shale w/ sand stks	464	520
Fine Sand	520	580
Shale	580	620
ATTACH ADDITIONAL SHEETS IF NECESSARY		

2 TOTAL DEPTH OF WELL ft
3 DEPTHS TO WATER PRODUCING FORMATIONS.
4 STATIC WATER LEVEL Ft below land surface
5 YIELD _____ gallons per ☐ min ☐ hr
6 DIAMETER OF BORE HOLE IN

C PUMP REPORT
1 TYPE PUMP: SUBMERSIBLE ☐ TURBINE ☐ JET ☐
2 SETTING DEPTH: FEET
3 BRAND NAME AND SERIAL NUMBERS:
4 RATED CAPACITY gallons per minute
5 TYPE LUBRICATION
6 DROP PIPE OR COLUMN PIPE SIZE
7 WIRE SIZE
8 PRESSURE TANK . . . SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR
10 Is there an abandoned water well on the property?

D
1 LAND OWNER OR OTHER CONTACT PERSON:
NAME
STREET ADDRESS
CITY

2 CASING FROM TO W/ "ID
FROM TO W/ "ID
TYPE CASING:

3 SCREEN
TYPE: DIA SLOT/GA
SET FROM FT TO FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM FT TO FT

5 BACK FILLED WITH: _____
FROM FT TO FT

6 SEALED WITH: _____
FROM FT TO FT
FROM FT TO FT

7 DISINFECTED WITH:

8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☐
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	☐	RETURN	☐
CLOSED LOOP	☐		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS
12 SIGNED DATE

CONSTRUCTION COPY

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: UNION

(Please print or type)

OWNER OF WELL: Phillips Pet Co.
WELL CONTRACTOR: Hadlin-Nolte W.W.
CONTRACTOR LICENSE NO.: C1054
NAME OF DRILLER: Cecil Nolte
DRILLER REGISTRATION NO.: D 2097
DATE WELL WAS COMPLETED: MO. 7 DAY 11 YR. 77

Well is near: St 335 road, approximately
3 miles N (NE) E SE S SW W NW of Norphlet (TOWN, ETC.)
Section 15 Township 16S Range 15W
Directions for reaching well: (use permanent landmarks): BY Phillips DISCHARGE # CR 6

1. Total Depth of Well: 406
2. Water Producing Formation: From 309 ft. To 410 ft.
3. Method of Construction: Rotary X Cable ___ R.C. ___ Driven ___ Jetted ___ Bored ___
4. Water Level Below Land Surface: 182.45 G.L. ft.
5. Gallons per Hour ___ Gallons per Minute
6. Well disinfected with HTH
7. Cased to 386 ft. with 6" Diameter Steel Casing
8. Cemented from 0 ft. to 386 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: ___ from ___ ft. to ___ ft. (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 386 ft. to 408 ft.
12. Screen Diameter: 2 inches from 386 ft. to 406 ft.
13. Type Screen All Stainless Fitting Brics BPU Slot Size .018
14. Use of Well: Ind.

DOMESTIC IRRIGATION MUNICIPAL OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Sandy Red Clay	0	16
Gray Clay	16	188
Sand	188	213
Very Fine Sand w/ Clay	213	230
Gray Clay	230	309
Med Sand	309	410
Clay	410	411
Sand & Lignite	411	418
Clay	418	422

Remarks:

RECEIVED
AUG 10 1977
COMMITTEE ON WATER WELL CONSTRUCTION

This well is guaranteed against defective material or workmanship for a period of

Signed: Cecil Nolte
Date: 7 MONTH 19 DAY 77 YEAR

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: UNION

(Please print or type)

OWNER OF WELL DONAVAN D PARSONS JR.
WELL CONTRACTOR HAMLIN & SUITE
CONTRACTOR LICENSE NO.
NAME OF DRILLER CONRAD L. HAMLIN
DRILLER REGISTRATION NO.
DATE WELL WAS COMPLETED JUNE (MO.) 24 (DAY) 73 (YR.)

Well is near 167 road, approximately
miles N NE E SE S SW W NW of (TOWN, ETC.)
Section 29, Township 16S, Range 15W.
Directions for reaching well:
(use permanent landmarks)

1. Total Depth of Well 198
2. Water Producing Formation: From 174 ft. To 198 ft.
3. Method of Construction:
Rotary X Cable Driven Jetted Bored Dug
4. Water Level Below Land Surface 84 ft.
5. Gallons per Hour Gallons per Minute 13.3
6. Well disinfected with
7. Cased to 174 ft. with 4" Diameter PVC Casing
8. Cemented from 0 ft. to 96 ft.
9. Casing Perforated from ft. to ft.
10. Well Backfilled with:
CEMEN SAND GRAVEL from 0 ft. to 198 ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 165 ft. to 198 ft.
12. Screen Diameter: 4" inches from 192 ft. to 198 ft. and 176 ft. to 182 ft.
13. Type Screen PVC Fittings 3" PVC Slot Size .020
14. Use of Well: X DOMESTIC IRRIGATION MUNICIPAL OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
CLAY	0	27
MED. SAND	27	70
GRAY CLAY	70	155
FINE SAND	155	162
GRAY CLAY	162	174
GREEN SAND	174	182
LAYERS SAND, CLAY, ROCK	182	188
GREEN SAND	188	198
GRAY CLAY	198	212

Remarks: DUEL COMPLETION WITH 12" UNDERREAM

Signed: Conrad L. Hamlin
Date: JUNE (MONTH) 24 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 16 SOUTH RANGE 16 WEST

Report of Water Well Construction

County in which well is located: Union ✓

(Please print or type)

OWNER OF WELL Lois Oil Feeding
WELL CONTRACTOR Blacking Water Well
CONTRACTOR LICENSE NO. 1219
NAME OF DRILLER Dark V Browning
DRILLER REGISTRATION NO. D-2894
DATE WELL WAS COMPLETED March 27 (MO.) 27 (DAY) 72 (YR.)

Well is near Hwy 160 road, approximately 3 miles N NE E SE S SW (W) NW of Smackover (TOWN, ETC.)
Section 8, Township 16, Range 16.
Directions for reaching well (use permanent landmarks) Hwy 160 West 3 miles Chicken Houses North Side of Road

1. Total Depth of Well 60
2. Water Producing Formation: From 35 ft. To 60 ft.
3. Method of Construction:
Rotary ____ Cable ____ Driven ____ Jetted ____ Bored ✓ Dug ____
4. Water Level Below Land Surface 20 ft.
5. Gallons per Hour 200+
6. Well disinfected with ATH
7. Cased to 60 ft. with 6⅝ Diameter 30 Casing
8. Cemented from 0 ft. to 20 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Cement (SAND, CLAY, CEMENT, MUD) from 0 ft. to 20 ft.
11. Gravel Pack from 20 ft. to 60 ft.
12. Screen Diameter:
____ inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
____ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
SURFACE SOIL	0	2
RED CLAY	2	10
CLAY AND WATER SAND	10	15
WATER SAND	15	20
SHELL	20	35
BLUE SAND	35	60

Remarks: CEMENTED 20' DEEP

Signed: Dark V Browning
Date: April (MONTH) 4 (DAY) 72 (YEAR)

Mail to: Committee on Water Well Construction – Room 151, State Capitol – Little Rock, Arkansas 72203

GEOLOGY COPY

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: UNION

(Please print or type)

OWNER OF WELL Napoleon Boone
WELL CONTRACTOR Alford Drilling Co.
CONTRACTOR LICENSE NO. C1317
NAME OF DRILLER Philip Alford II
DRILLER REGISTRATION NO. D 2597
DATE WELL WAS COMPLETED 11 (MO.) 18 (DAY) 77 (YR.)

Well is near Hwy 172 3 miles N NE E SE S SW W NW of Smackover road, approximately (TOWN, ETC.)
Section 21, Township 16S, Range 16W
Directions for reaching well: (use permanent landmarks) Rt. 1 Box 97 Smackover, Ark.

1. Total Depth of Well 80'
2. Water Producing Formation: From 60 ft. To 80 ft.
3. Method of Construction: ✓
Rotary ____ Cable ____ R.C. ____ Driven 1 Jetted ____ Bored ____
4. Water Level Below Land Surface 31 ft.
5. Gallons per Hour 1400 Gallons per Minute 30
6. Well disinfected with HTH
7. Cased to 70 ft. with 4" Diameter Sch 40 PVC casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Sand & Clay 60' from 10 ft. to 60 ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from ____ ft. to 80 ft.
12. Screen Diameter: 4 inches from 70 ft. to 80 ft.
13. Type Screen Slot Fittings CXC Slot Size .015
14. Use of Well: ✓
DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER ____

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	32
Lignite & Sand	32	40
Clay	40	60
Sand	60	80

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 YR

Signed: [signature]

Date: 6 (MONTH) 20 (DAY) 78 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

REPORT OF WATER WELL CONSTRUCTION

New Well ✓ Work-over Well ____ Replacement Well ____

Owner of Well Terry Benton

Contractor Jack Bowen C 1106

Driller Name and No. John Bowen 02122

Date Well was Completed 5-26-84

Total Depth of Well 52 Ft.

Water Producing Formation: From 31 Ft. To 52 Ft.

Water Level Below Land Surface 31 ft.

Gallons per Hour 800

Well Disinfected with HTH

Casing to 52 Ft.

Cased with 30" Diameter cement Casing

Cemented from 0 Ft. to 10 Ft.

Use of Well: Domestic ✓ Irrigation ____ Municipal ____ Other ____

County Union (in which well is located)

Well is near Lisbon - Smackover Road

Section 21 Township 16S Range 16W

Directions for Reaching Well: Go west of Lisbon (use permanent landmark) towards Smackover turn right at 1st dirt rd. then 1st left

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Clay	0	16
dry sand	16	31
wet sand	31	52

Remarks:

Signed: John Bowen Date: 5-26-84

No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS
REPORT OF WATER WELL CONSTRUCTION

New Well ✓ Work-over Well ____ Replacement Well ____

Owner of Well Terry Benton

Well Contractor Jack Bowen

Driller Name and No. John Bowen 02122

Date Well was Completed 8-22-80

Total Depth of Well 54 Ft.

Water Producing Formation: From 35 Ft. To 54 Ft.

Water Level Below Land Surface 35 ft.

Gallons per Hour 750

Well Disinfected with HTH

Casing to 54 Ft.

Cased with 30" Diameter Cement Casing

Cemented from 0 Ft. to 10 Ft.

Use of Well: Domestic ✓ Irrigation ____ Municipal ____ Other ____

County Union (in which well is located)

Well is near Lisbon - Smackover Road

Section 21 Township 16S Range 16W

Directions for Reaching Well: Go west of Lisbon (use permanent landmark) towards Smackover turn right at 1st dirt rd. then 1st left.

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Clay	0	17
dry sand	17	35
wet sand	35	54

Remarks:

Signed: John Bowen Date: 8-22-80

Form No. AWD-3

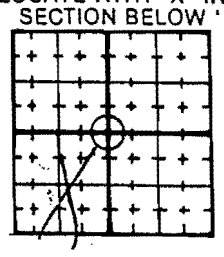
Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

1 Contractor Name & Number: John Bowling 11 C# 1106
2 Driller Name & Number: 11 D# 2122
3 Pump Installer Name & Number: 11 P# 4219
4 Date Well Completed: 4-3-89 New Well ☑ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW



5 COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
Union	¼ of ¼ of	22	16S	16W

LONGITUDE ° ' "
LATITUDE 11 ° ' "

DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
clay & sand	0	20
shale & wet sand	20	50
wet sand	50	58

ATTACH ADDITIONAL SHEETS IF NECESSARY

12 TOTAL DEPTH OF WELL 58 ft
13 DEPTHS TO WATER PRODUCING FORMATIONS. 20
14 STATIC WATER LEVEL 20 Ft below land surface
15 YIELD 600 gallons per ☐ min ☐ hr
16 DIAMETER OF BORE HOLE 36 IN

PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☑ TURBINE ☐ JET ☐
2 SETTING DEPTH: 56 FEET
3 BRAND NAME AND SERIAL NUMBERS: Meyers
4 RATED CAPACITY 10 gallons per minute
5 TYPE LUBRICATION water
6 DROP PIPE OR COLUMN PIPE SIZE 1"
7 WIRE SIZE 14 ga.
8 PRESSURE TANK SIZE, MAKE, MODEL 82 gal
9 DATE OF INSTALLATION OR REPAIR 4-3-89
10 Is there an abandoned water well on the property? NO

D1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Perry Burton
STREET ADDRESS 1108 Poplar
CITY El Dorado, AR.

2 CASING FROM 0 TO 58 W/ 30 "ID
FROM TO W/ "ID
TYPE CASING: concrete

3 SCREEN
TYPE: DIA SLOT/GA
SET FROM FT TO FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK 10 FROM 58 FT TO FT

5 BACK FILLED WITH:
FROM FT TO FT

6 SEALED WITH: Cement
FROM 0 FT TO 10 FT
FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL:

DOMESTIC	☑	COMMERCIAL	☐
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	☐	RETURN	☐
CLOSED LOOP	☐		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED John Bowling DATE 4-3-89

NEW WELL [x] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: William E. Thompson
WELL CONTRACTOR: Alford Drilling Co
CONTRACTOR LICENSE NO.: C1317
NAME OF DRILLER: Philip Alford
DRILLER REGISTRATION NO.: D2597
DATE WELL WAS COMPLETED: 4 (MO.) 21 (DAY) 78 (YR.)

Well is near: Dumas City
6 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 33, Township 16S, Range 16W
Directions for reaching well: (use permanent landmarks) Rt 6 Box 11B Louann, Ark.

1. Total Depth of Well: 88
2. Water Producing Formation: From ~~88~~ 31 ft. To 88 ft.
3. Method of Construction: Rotary ____ Cable ____ R.C. ____ Driven ____ Jetted ✓ Bored ____
4. Water Level Below Land Surface: 31 ft.
5. Gallons per Hour: 1800 Gallons per Minute: 30
6. Well disinfected with: HTH
7. Cased to 68 ft. with 4" Diameter Sch 40 PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Sand + Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 50 ft.
11. Gravel Pack from 50 ft. to 88 ft.
12. Screen Diameter: 4 inches, from 68 ft. to 88 ft.
13. Type Screen Slot Fittings CXC Slot Size .015
14. Use of Well: ✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	2
Clay	2	28
Sand	28	34
Clay	34	43
Sand w/ streaks of Clay	43	88

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr.

Signed: [signature]

Date: 4 (MONTH) 21 (DAY) 78 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Tindell Beene, Jr.
WELL CONTRACTOR: John Bowing
CONTRACTOR LICENSE NO.: C1022
NAME OF DRILLER: John Bowing
DRILLER REGISTRATION NO.: D0122
DATE WELL WAS COMPLETED: MO. 12 DAY 15 YR. 77

Well is near Hwy 335 road, approximately 10 miles (N) NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 34, Township 16S, Range 14W.

Directions for reaching well: (use permanent landmarks) 10 north of El Dorado on Hwy 7 Turn west on Hwy 335. Goapp 3 mi. Turn right on Morning Star Rd. Go 3 more mi. House on right.

1. Total Depth of Well: 56 ft.
2. Water Producing Formation: From 25 ft. To 56 ft.
3. Method of Construction: Rotary ___ Cable ___ R.C. ___ Driven ___ Jetted ___ Bored ✓
4. Water Level Below Land Surface: 25 ft.
5. Gallons per Hour: 250 Gallons per Minute
6. Well disinfected with: HTH
7. Cased to 56 ft. with 30" Diameter cement Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from 70 ft. to 56 ft.
10. Well Backfilled with: Cement (SAND, CLAY, CEMENT, MUD) from 0 ft. to 10 ft.
11. Gravel Pack from 10 ft. to 56 ft.
12. Screen Diameter ___ inches from ___ ft. to ___ ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well: ✓ DOMESTIC IRRIGATION MUNICIPAL OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	12
dirty sand	12	25
wet sand	25	35
shale & wet sand	35	56

RECEIVED
JAN 13 1978
COMMITTEE ON
WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material or workmanship for a period of ___

Signed: John Bowing

Date: MONTH 12 DAY 15 YEAR 77

Mail to: Committee on Water Well Construction – 3815 W. Roosevelt Road – Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well ✓ Work-over Well ..... Replacement Well .....

Owner of Well John Wilson

Well Contractor Alford Drilling Co.

Contractor License No. C1317

Driller Name and No. P. Alford D2597

Date Well was Completed 11-21-78

1. Total Depth of Well 90 Ft.
2. Water Producing Formation: From 70 Ft. To 90 Ft.
3. Water Level Below Land Surface 37
4. Gallons per Hour 3000
5. Well Disinfected with HTH
6. Casing to 70 Ft.
7. Cased with 4" Diameter PVC 40 Casing
8. Cemented from 0 Ft. to 10 Ft.
9. Use of Well: Domestic Irrigation Municipal Other

This well is guaranteed against defective material or workmanship for a period of 1 yr.

County Union (in which well is located)

Well is near Morningstar Road

Section 34 Township 16S Range 16W

Directions for Reaching Well: Rt 4 Box 479A (use permanent landmark)

El Dorado AR 71730

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths in feet from	to
Topsoil	0	4
Red Sand	4	10
Clay	10	40
Sand	40	50
Shale	50	70
Sand	70	90

Remarks:

Signed: [signature] Date: 1-10-79

Form No. AWD-2

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204.

Geology Copy

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well X Work-over Well ..... Replacement Well .....

Owner of Well John Wilson

Well Contractor Alford Drilling Co.

Contractor License No. C 1317

Driller Name and No. E. Alford LEE D 2597

Date Well was Completed 12-15-78

1. Total Depth of Well 90 Ft.
2. Water Producing Formation: From 70 Ft. To 90 Ft.
3. Water Level Below Land Surface 37
4. Gallons per Hour 3000
5. Well Disinfected with HTH
6. Casing to 70 Ft.
7. Cased with 4" Diameter PVC 40 Casing
8. Cemented from 0 Ft. to 10 Ft.
9. Use of Well: Domestic X Irrigation ..... Municipal ..... Other .....

This well is guaranteed against defective material or workmanship for a period of 1 year

County Union (in which well is located)

Well is near Morning Star Road

Section 34 Township 16 S Range 16 W

Directions for Reaching Well: Rt. 4, Box 479 A (use permanent landmark)

El Dorado, Arkansas

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Topsoil	0	4
Red ~~Clay~~ Sand	4	10
Clay	10	40
Sand	40	50
Shale	50	70
Sand	70	90

Remarks:

Signed: [signature] Date: 1-10-79

Form No AWD-2

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204.

Geology Copy

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

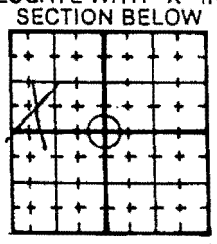
A

1 Contractor Name & Number: [illegible] C# 1106
2 Driller Name & Number: [illegible] D# 2122
3 Pump Installer Name & Number: [illegible] P# 4219
4 Date Well Completed: 2-9-96 New Well ☑ Replace or Work-over ☐

5 COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
Pulaski	¼ of ¼ of	35	1 6S	16W

LONGITUDE 11 92 ° 46 ' 01 "
LATITUDE 11 33 ° 17 ' 23 "

10 LOCATE WITH 'X' IN SECTION BELOW



B 1 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
Clay	0	14
sand	14	31

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 31 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS. 14-31 ft.
4 STATIC WATER LEVEL 14 Ft below land surface
5 YIELD 600 gallons per ☐ min ☑ hr
6 DIAMETER OF BORE HOLE 36 IN

C PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☑ TURBINE ☐ JET ☐
2 SETTING DEPTH: 30 FEET
3 BRAND NAME AND SERIAL NUMBERS: Alexander John
4 RATED CAPACITY 12 gallons per minute
5 TYPE LUBRICATION water
6 DROP PIPE OR COLUMN PIPE SIZE 1 sch
7 WIRE SIZE 12 ga
8 PRESSURE TANK SIZE, MAKE, MODEL wellmate wm 6
9 DATE OF INSTALLATION OR REPAIR 2-9-96
Is there an abandoned water well on the property? NO

D 1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Mountain Farms
STREET ADDRESS 300 N.W. 36th,
CITY Cabot AR 72023

2 CASING FROM 0 TO 31' W/ 30 "ID
FROM TO W/ "ID
TYPE CASING: concrete tile

3 SCREEN
TYPE: DIA SLOT/GA
SET FROM FT TO FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 10 FT TO 31 FT
5 BACK FILLED WITH:
FROM FT TO FT
6 SEALED WITH: Cement grout
FROM 0 FT TO 10 FT
FROM FT TO FT
7 DISINFECTED WITH: HTH
8 USE OF WELL:

DOMESTIC	☑	COMMERCIAL	☐
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☑	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	☐	RETURN	☐
CLOSED LOOP	☐		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS
12 SIGNED [signature] DATE 2-9-96

Arkansas Water Well Construction Commission, 101 East Capitol, Suite 350, Little Rock, AR 72201

GEOLOGY COPY

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 17 SOUTH RANGE 14 WEST

REPORT OF WATER WELL CONSTRUCTION

ew Well X Work-over Well ____ Replacement Well ____

County UNION (in which well is located)

wner of Well Tom Sheppard

ontractor Hamlin-Nolte C1054

iller Name and No. Cecil Nolte D2097

ate Well was Completed 6-5-86

Well is near US 82 Road

Section 32 Township 17S Range 14W

Directions for Reaching Well: Take UNION Co Rd 8 Appox 4 Mi From 82 By Pass East of El Dorado Take left Co Appox 3 mile on left (use permanent landmark)

Total Depth of Well 150 Ft.

Water Producing Formation: From 48 Ft. To 149 Ft.

Water Level Below Land Surface 16

Gallons per Hour 900

Well Disinfected with HTH

Casing to 110 Ft.

Cased with 4" Diameter PVC Casing

Cemented from 0 Ft. to 30' Ft.

Use of Well: X Domestic ____ Irrigation ____ Municipal ____ Other

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
White Sand & Clay	0	35
Gray Clay	35	38
Fine Sand	38	45
Gray Clay	45	48
Fine Sand	48	149
Gray Clay	149	155

Remarks:

Signed: Cecil Nolte Date: 6-7-86

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

RECEIVED
El Dorado East
AUG 01 1996

RECEIVED
96 JUL 22 PM 2

1 Contractor Name & Number: HAMLIN & NOLTE C# 1054
2 Driller Name & Number: TOMMY HAMLIN D# 2545
3 Pump Installer Name & Number: TOMMY HAMLIN P# 4226

ARKANSAS WATER WELL CONSTRUCTION COMMISSION

4 Date Well Completed: _____ New Well ☐ Replace or Work-over ☐

10 (mark location in grid)

COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
UNION	S½ of S½ of SW ¼ of	28	17S	14W

LONGITUDE 92 ° 33 ' 34 "
LATITUDE 11 33 ° 12 ' 20 "

DESCRIPTION OF FORMATION:	DEPTHS IN FEET FROM	TO
RED CLAY	0	13
SAND	13	18
CLAY	18	24
LIGNITE	24	26
GRAY CLAY	26	36
LIGNITE	36	38
CLAY	38	62
SAND	62	67
CLAY	67	95
SANDY CLAY	95	105
SAND	105	120
MED COARSE SAND	120	140
MED COARSE SAND W/LIGNITE	140	160

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 130 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS. 105
4 STATIC WATER LEVEL 105 Ft below land surface
5 YIELD 15 gallons per ☐ min ☒ hr
6 DIAMETER OF BORE HOLE 8 IN

PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☒ TURBINE ☐ JET ☐
2 SETTING DEPTH: 126 FEET
3 BRAND NAME AND SERIAL NUMBERS: GRUNDFOS 10S07-12,9626, 2A96
4 RATED CAPACITY 10 gallons per minute
5 TYPE LUBRICATION
6 DROP PIPE OR COLUMN PIPE SIZE 1" GALV
7 WIRE SIZE 12-2/G
8 PRESSURE TANK . . . SIZE, MAKE, MODEL WF 140
9 DATE OF INSTALLATION OR REPAIR
10 Is there an abandoned water well on the property?

D 1 LAND OWNER OR OTHER CONTACT PERSON:
NAME JIMMY WARD
STREET ADDRESS 350 LAWSON RD
CITY ELDORADO AR 71730

2 CASING FROM -1 TO 110 W/ 4 "ID
FROM TO W/ "ID
TYPE CASING: PVC

3 SCREEN
TYPE: PVC DIA 4" SLOT/GA .025
SET FROM 110 FT TO 130 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 130 FT TO 70 FT

5 BACK FILLED WITH: MUD
FROM 70 FT TO 25 FT

6 SEALED WITH: CEMENT-BENTONITE
FROM 25 FT TO 0 FT
FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL

DOMESTIC	☒	COMMERCIAL	☐
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED Tommy J Hamlin DATE 7-31-96

7 JAN 89 5945 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201
GEOLOGY COPY

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 17 SOUTH RANGE 15 WEST

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

Well ____ Work-over Well ____ Replacement Well X

r of Well Monsanto Chemical

Contractor Layne Arkansas Company

actor License No. C-1099

Name and No. Alven Brewer - D-2195

Well was Completed 11/27/79

otal Depth of Well 559' Ft.

Water Producing Formation: From 459 Ft.

To 559 Ft.

Water Level Below Land Surface 300'

allons per Hour 54000

Well Disinfected with HTH

asing to 444 Ft.

ased with 18" Diameter .375 Casing

emented from 0 Ft. to 444 Ft.

se of Well: Domestic ____ Irrigation ____ Municipal ____ Other X

well is guaranteed against defective material or workman-

or a period of 1 Year

County Union (in which well is located)

Well is near ____ Road

Section 8 Township 17S Range 15W

Directions for Reaching Well: By Monsanto Employee (use permanent landmark)

Picnic Area & by Old Well

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths in feet from	to
"See Attached Sheet"		

Remarks: ____

Signed: M C Barnes Date: 12/11/79

No. AWD-2

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

Geology Copy

TOTAL DEPTH	THICKNESS EACH STRATUM	FORMATION
1	1	Top Soil
10	9	White Sand
40	30	Blue Clay
55	15	Sandy Clay
155	100	Clay
170	15	Sandy Shale
221	51	Gumbo
235	14	Fine Sand
247	12	Sandy Shale
248	1	Rock
293	45	Sandy Shale
319	26	Hard Shale
320	1	Rock
326	6	Hard Shale
345	19	Fine Sand
385	40	Shale
400	15	Sand with Hard Spots
531	131	Medium to Coarse Sand
554	23	Medium Sand
559	5	Break
568	9	Medium Sand
577	9	Sand w/Stks. of Shale
588	11	Shale

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Bob Crawford
WELL CONTRACTOR Boeing & Kite Well Drc.
CONTRACTOR LICENSE NO. 1269
NAME OF DRILLER Doak V. Boeing
DRILLER REGISTRATION NO. 2044
DATE WELL WAS COMPLETED Sept. (MO.) 10 (DAY) 1973 (YR.)

Well is near Strong Hwy road, approximately ____ miles N NE E SE S SW W NW of ____ (TOWN, ETC.)
Section 26, Township 17, Range 15.
Directions for reaching well: (use permanent landmarks)

1. Total Depth of Well 40 ft.
2. Water Producing Formation: From 25 ft. To 40 ft.
3. Method of Construction:
Rotary ____ Cable ____ Driven ____ Jetted ____ Bored ✓ Dug ____
4. Water Level Below Land Surface 25 ft.
5. Gallons per Hour ____ Gallons per Minute
6. Well disinfected with HTH
7. Cased to 40 ft. with 30 Diameter Tile Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with:
cem (SAND, CLAY, CEMENT, MUD) from 0 ft. to 10 ft.
11. Gravel Pack from 10 ft. to 40 ft.
12. Screen Diameter: ____ inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
surface soil	0	2
clay	2	25
water sand	25	40

Remarks:

Signed:

Date: Sept. (MONTH) 10 (DAY) 1973 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

WATER WELL CONSTRUCTION

GEOLOGY COPY

FORM NO. WD-1

REPORT OF WATER WELL CONSTRUCTION

Well ___ Work-over Well ___ Replacement Well X

er of Well Tosco Corporation

Contractor Layne-Arkansas Company

er Name and No. Harvey Bullock - D-2204 NW¼

Well was Completed 1st November 12, 1980

Total Depth of Well 649' Ft.

Water Producing Formation: From 554 Ft.

To 649 Ft.

Water Level Below Land Surface 392'

Gallons per Hour 36000

Well Disinfected with HTH

Casing to 539' Ft.

Cased with 18" Diameter 3/8" Casing

Cemented from 0 Ft. to 539' Ft.

Use of Well: Domestic Irrigation Municipal Other

County Union (in which well is located)

Well is near ___ Road

Section 32 Township 17S Range 15W

Directions for Reaching Well: ___ (use permanent landmark)

Description and Color of Formation (sand, shale, sandstone, etc.) | Depths from | in feet to

"See Attached Sheet"

Remarks:

Signed: Mark Bennett Date: 11/25/80

No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

Well ✓ Work-over Well ___ Replacement Well ___

er of Well Jay Thompson

ractor Jack Bowing C 1406

er Name and No. John Bowing D2132

Well was Completed 6-29-84

Total Depth of Well 34 Ft.

Water Producing Formation: From 10 Ft.

To 27 Ft.

Water Level Below Land Surface 10 ft.

Gallons per Hour 500

Well Disinfected with HTH

Casing to 34 Ft.

Cased with 30" Diameter Open Casing

Cemented from 0 Ft. to 10 Ft.

Use of Well: ✓ Domestic Irrigation Municipal Other

County Union (in which well is located)

Well is near Hwy 82 Road

Section 36 Township 17S Range 15W

Directions for Reaching Well: East of Eldorado

(use permanent landmark)

Turn at Jay Thompson sign go South

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Clay	0	10
wet Sand	10	27
Clay	27	34

Remarks:

Signed: John Bowing Date: 6-29-84

No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

93-5676

A
1 Contractor Name & Number: Layne-Arkansas Company C#1290
2 Driller Name & Number: Jimmy Crouch D#2239
3 Pump Installer Name & Number: Jerry Dawes P#4168
4 Date Well Completed: 4/17/96 New Well ☒ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW

COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
Union	NE ¼ of SW ¼ of	9	17S	15W

LONGITUDE 92 ° 39 ' 36 "
LATITUDE 11 33 ° 15 ' 18 "

B 1 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
See attached sheet		

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 549 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS. 466
4 STATIC WATER LEVEL 318 Ft below land surface
5 YIELD 543 gallons per ☒ min ☐ hr
6 DIAMETER OF BORE HOLE 22 IN

C PUMP REPORT
1 TYPE PUMP: SUBMERSIBLE ☒ TURBINE ☐ JET ☐
2 SETTING DEPTH: 424 FEET
3 BRAND NAME AND SERIAL NUMBERS: Byron Jakcson
4 RATED CAPACITY 500 gallons per minute
5 TYPE LUBRICATION Submersible
6 DROP PIPE OR COLUMN PIPE SIZE 8"
7 WIRE SIZE #2/0
8 PRESSURE TANK . . . SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR 4/17/96
10 Is there an abandoned water well on the property? yes

D 1 LAND OWNER OR OTHER CONTACT PERSON:
NAME El Dorado Chemical Company
STREET ADDRESS P. O. Box 231
CITY El Dorado, AR 71730

2 CASING FROM 0 TO 456 W/ 18 "ID
FROM TO W/ "ID
TYPE CASING: Steel

3 SCREEN
TYPE: SST DIA 12" SLOT/GA .020
SET FROM 466 FT TO 546 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 404 FT TO 549 FT
5 BACK FILLED WITH:
FROM FT TO FT
6 SEALED WITH: Cement Grout
FROM 0 FT TO 459 FT
FROM FT TO FT
7 DISINFECTED WITH: HTH
8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☒
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS
12 SIGNED Jeff Jones DATE 4/18/96

WD-7 JAN 89 Arkansas Water Well Construction Commission, 101 East Capitol, Suite 350, Little Rock, AR 72201
CI-5945

GEOLOGY COPY

El Dorado Water

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

RECEIVED
AUG 0 1 1996
ARKANSAS WATER WELL CONSTRUCTION COMMISSION

Contractor Name & Number: HAMLIN & NOLTE
Driller Name & Number: TOMMY HAMLIN
Pump Installer Name & Number: TOMMY HAMLIN
Date Well Completed: _____ New Well ☐ Replace or Work over ☐

C# 2545
D# 422
P#

10 LOCATE WITH 'X' IN SECTION BELOW

COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
UNION	SW ¼ of SW ¼ of	22	17S	15W

LONGITUDE 92 ° 38 . 40 "
LATITUDE 11 33 ° 13 . 25 "

DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
SEE ATTACHED		

ATTACH ADDITIONAL SHEETS IF NECESSARY

1 TOTAL DEPTH OF WELL 346 ft
2 DEPTHS TO WATER PRODUCING FORMATIONS. 295
4 STATIC WATER LEVEL 174 Ft below land surface
5 YIELD 25 gallons per ☐ min ☐ hr
6 DIAMETER OF BORE HOLE 8 IN

PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☑ TURBINE ☐ JET ☐
2 SETTING DEPTH: 236 FEET
3 BRAND NAME AND SERIAL NUMBERS: GRUNDFOS 16S20-18
4 RATED CAPACITY 16 gallons per minute
5 TYPE LUBRICATION
6 DROP PIPE OR COLUMN PIPE SIZE 1"
7 WIRE SIZE 10-3/G
8 PRESSURE TANK . . . SIZE, MAKE, MODEL WR 140
9 DATE OF INSTALLATION OR REPAIR 7/10/96
10 Is there an abandoned water well on the property? NO

D1 LAND OWNER OR OTHER CONTACT PERSON:
NAME DAVID McVAY
STREET ADDRESS 1003 OLIVE
CITY ELDORADO AR 71730

2 CASING FROM -1 TO 326 W/ 4 "ID
FROM TO W/ "ID
TYPE CASING: PVC

3 SCREEN
TYPE: PVC DIA 4" SLOT/GA .025
SET FROM 326 FT TO 346 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 346 FT TO 250 FT

5 BACK FILLED WITH: MUD
FROM 250 FT TO 25 FT

6 SEALED WITH: CEMENT-BENTONITE
FROM 25 FT TO 0 FT
FROM FT TO FT

7 DISINFECTED WITH: H'TH

8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☐
IRRIGATION	☑	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	☐	RETURN	☐
CLOSED LOOP	☐		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED Tommy Hamlin DATE 7/10/96

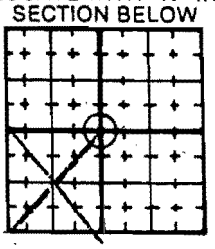
STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

Columbian Chemicals Company
El Dorado, AR

935969

A 1 Contractor Name & Number: Layne-Arkansas Company C# 1290
2 Driller Name & Number: Jimmy Crouch D# 2239
3 Pump Installer Name & Number: Grady Teel P# 4173
4 Date Well Completed: 8/7/96 New Well ☒ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW



COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
nion	SW ¼ of SW ¼ of	25	17S	15W

LONGITUDE 92 ° 36 . 39 "
LATITUDE 11 33 ° 12 . 26 "

B 1 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
See attached.		

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 630 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS: 670
4 STATIC WATER LEVEL 432 Ft below land surface
5 YIELD 300 gallons per ☒ min ☐ hr
6 DIAMETER OF BORE HOLE 16 IN

C PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☒ TURBINE ☐ JET ☐
2 SETTING DEPTH: 530 FEET
3 BRAND NAME AND SERIAL NUMBERS: Crown
4 RATED CAPACITY 300 gallons per minute
5 TYPE LUBRICATION submersible
6 DROP PIPE OR COLUMN PIPE SIZE 6"
7 WIRE SIZE #2
8 PRESSURE TANK SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR 8/7/96
10 Is there an abandoned water well on the property? no

D 1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Columbian Chemical Company
STREET ADDRESS 713 INdustrial Road
CITY El Dorado, AR 71730

2 CASING FROM 0 TO 564 W/ 12 "ID
FROM TO W/ "ID
TYPE CASING: Steel

3 SCREEN
TYPE: SST wire DIA 8" SLOT/GA .030
SET FROM 570 FT TO 630 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK 8-12 FROM 515 FT TO 630 FT

5 BACK FILLED WITH:
FROM FT TO FT

6 SEALED WITH: cement grout
FROM 0 FT TO 564 FT
FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☒
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED Jeff W. Jones DATE 8/12/96

7 JAN 89 -5945 Arkansas Water Well Construction Commission, 101 East Capitol, Suite 350, Little Rock, AR 72201

GEOLOGY COPY

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 17 SOUTH RANGE 16 WEST

STATE OF ARKANSAS
REPORT OF WATER WELL CONSTRUCTION

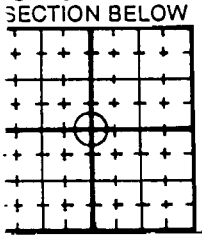
CONTRACTOR Name and number: Dixon Well Drilling — C. 1082

DRILLER Name and number: DENNIS DIXON — D. 2482

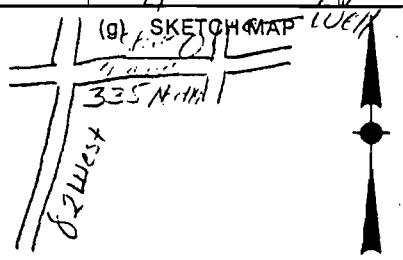
LOCATION / IDENTIFICATION — DATE WELL COMPLETED 4-24-87 — NEW WELL [X] — WORK-OVER [ ]

COUNTY	(b) FRACTION	(c) SECTION	(d) TOWNSHIP	(e) RANGE
Union	NE ¼ of NW ¼ of	15	17S	11W

LOCATE WITH 'X' IN SECTION BELOW



(g) SKETCH MAP



(h) OWNER OF WELL:
NAME Joe Dumas
STREET ADDRESS 1315 N. Washington
CITY El Dorado, Ar. 71730

(i) OPERATOR:
NAME SAME
STREET ADDRESS
CITY

DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
Red Clay	0	8
Dry Gray Sand	8	20
Medium Blue Sand	20	40
Blue Shale	40	289
Medium Green Sand	289	310
Blue Shale	310	318

ATTACH ADDITIONAL SHEETS IF NECESSARY

TOTAL DEPTH OF WELL 318 ft

WATER PRODUCING FORMATION? Green Sand 289-310

STATIC WATER LEVEL 268 Ft below land surface

WATER PRODUCTION RATE / WELL PRODUCTS 12 gallons per [X] min [ ] hr

DIAMETER OF BORE HOLE 8½ IN

9 CASING FROM 0 TO 290 WI 4 "ID
FROM TO WI "ID
TYPE CASING P.V.C.

10 SCREEN: Houston Stainless Steel
TYPE 4" DIA SLOT/GA 10/1000
SET BETWEEN 290 ft and 310 ft
TYPE DIA SLOT/GA
SET BETWEEN ft and ft

11 GRAVEL PACK Yes FROM 200 ft and 318 ft

12 BACK FILLED WITH Cement Grout
FROM 189 ft to 22 ft

13 SEALED WITH Cement Grout
FROM 189 ft to 22 ft
FROM 22 ft to 0 ft Concrete

14 DISINFECTED WITH: 3 cups H.T.H

15 USE OF WELL:
SOURCE WELL [X] RETURN WELL [ ]
A/C CLOSED LOOP [ ] A/C OPEN LOOP [ ]

16 PURPOSE:
DOMESTIC [X] MUNICIPAL [ ]
COMMERCIAL [ ] TEST WELL [ ]
OIL AND GAS [ ] MONITOR [ ]
AGRI/IRRIGATION [ ] PUBLIC SUPPLY [ ]
OTHER [ ]

17 (For A/C only) WILL SYSTEM ALSO BE USED FOR PURPOSES OTHER THAN A/C? YES [ ] NO [ ]
(IF YES NAME USE)

18 (For A/C only) INTO WHAT MEDIUM IS WATER RETURNED?

19 REMARKS:

20 SIGNED [signature] DATE 5-22-87

AWD-4 JAN 1986 Committee on Waterwell Construction, 2915 South Pine, Little Rock, AR 72204

GEOLOGY COPY

ado Water Utilities
ado, AR
93-3848

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

93-3848

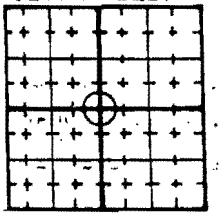
Contractor Name & Number: Layne-Arkansas Company C# 1290

Driller Name & Number: A. Brewer D# 2195

Pump Installer Name & Number: G. Teel P# 4173

Date Well Completed: 06-27-91 New Well ☒ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW



UNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
1	NE ¼ of XXX SW ¼ of 23 XXX		XXX 17S	XXXX 16W

ITUDE	LATITUDE
° ' "	11 ° ' "

DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
29		
attached sheets.		

CH ADDITIONAL SHEETS IF NECESSARY

TOTAL DEPTH OF WELL 757 ft

DEPTHS TO WATER PRODUCING FORMATIONS 667

STATIC WATER LEVEL 465 Ft below land surface

YIELD 1000 gallons per ☒ min ☐ hr

DIAMETER OF BORE HOLE 36 IN

PUMP REPORT

TYPE PUMP: SUBMERSIBLE ☐ TURBINE ☒ JET ☐

SETTING DEPTH: 550 FEET

BRAND NAME AND SERIAL NUMBERS: Layne

RATED CAPACITY 1000 gallons per minute

TYPE LUBRICATION oil

DROP PIPE OR COLUMN PIPE SIZE 8"

WIRE SIZE

PRESSURE TANK SIZE, MAKE, MODEL

DATE OF INSTALLATION OR REPAIR 07-15-91

Is there an abandoned water well on the property?

D1 LAND OWNER OR OTHER CONTACT PERSON:

NAME El Dorado Water Utilities Com.

STREET ADDRESS P. O. Box 1587

CITY El Dorado, AR 71730

2 CASING FROM 0 TO 656 W/ 18 "ID
FROM 603 TO 667 W/ 12 "ID

TYPE CASING: Steel & SST

3 SCREEN
TYPE: SST 12" DIA .022 SLOT/GA
SET FROM 667 FT TO 757 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 605 FT TO 757 FT

5 BACK FILLED WITH: Sement
FROM 15 FT TO 656 FT

6 SEALED WITH: Cement
FROM 0 FT TO 15 FT
FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☐
IRRIGATION	☒	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning? If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED Jeff W. Jones DATE 05-21-92

JAN 89 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201
)46

GEOLOGY COPY

REPORT OF WATER WELL CONSTRUCTION

New Well X Work-over Well ____ Replacement Well ____

Owner of Well McBeAD Oil Company

Well Contractor THOMAS F. WELSH D-2133

Driller Name and No. THOMAS F. WELSH C-1072

Date Well was Completed MARCH 17, 1982

1. Total Depth of Well 122 Ft.
2. Water Producing Formation: From 32 Ft. To 122 Ft.
3. Water Level Below Land Surface 58 ft.
4. Gallons per XXXX Minute 60 air lift
5. Well Disinfected with HTH in gravel
6. Casing to 92 Ft.
7. Cased with 4" SCH 40 Diameter PVC Casing
8. Cemented from ____ Ft. to ____ Ft.
9. Use of Well: Domestic Irrigation Municipal Other
Oil rig supply

County UNION (in which well is located)

Well is near Ark Hwy #172 Road

Section 8 Township 17S Range 16W

Directions for Reaching Well: 172 north to Lisbon old hwy 1.9 miles toward El Dorado (use permanent landmark) location on south side of highway

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Topsoil	0	1
Red clay	1	14
Yellow sandy clay	14	24
Grey soft clay	24 32	32
White fine sand	32	122
lignite streak at 109-111		
clay streaks between 116-119		

Remarks:

Signed: Thomas F Welsh Date: 3/18/82

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well X Work-over Well ____ Replacement Well ____

Owner of Well Great Lakes Chemical Co.

Well Contractor Alford Drilling Co.

Contractor License No. C 1317

Driller Name and No. P. Alford D 2597

Date Well was Completed 11-25-78

1. Total Depth of Well 797 Ft.
2. Water Producing Formation: From 716 Ft. To 800 Ft.
3. Water Level Below Land Surface 370
4. Gallons per Hour 1800
5. Well Disinfected with HTH
6. Casing to 777 Ft.
7. Cased with 4 Diameter Galv. Casing
8. Cemented from 0 Ft. to 10 Ft.
9. Use of Well: Domestic Irrigation Municipal Other X

This well is guaranteed against defective material or workmanship for a period of 1 yr.

County Union (in which well is located)

Well is near Hwy. 82 West Road

Section 27 BDDI Township 17S Range 16W

Directions for Reaching Well: Great Lakes Chemical Co.—BSW 11 (use permanent landmark)

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Topsoil	0	2
Clay	2	16
Sand	16	23
Clay	23	35
Sand	35	43
Clay & Shale	43	400
Fine Sand	400	515
Shale	515	716
Sand	716	800

Remarks:

Signed: [signature] Date: 1-1179

Form No. AWD-2

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204.

Geology Copy

NEW WELL [✓] REPLACEMENT WELL [ ]

Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Elmer Jones

WELL CONTRACTOR Todd Boring

CONTRACTOR LICENSE NO. C1028

NAME OF DRILLER Jimmy M. Bailey

DRILLER REGISTRATION NO. D2006

DATE WELL WAS COMPLETED 8 (MO.) 14 (DAY) 73 (YR.)

Well is near Mt Holly Rd. road, approximately miles N NE E SE S SW W NW of Lisbon (TOWN, ETC.)

Section 9, Township 17S, Range 16W.

Directions for reaching well: (use permanent landmarks) Hwy 82 at Lisbon - Hwy east at Lisbon Go 4 miles on right off road (Mail Box)

1. Total Depth of Well 25'
2. Water Producing Formation: From 9 ft. To 25 ft.
3. Method of Construction:
   Rotary ____ Cable ____ Driven ____ Jetted ____ Bored V Dug ____
4. Water Level Below Land Surface 9 ft.
5. Gallons per Hour 450 Gallons per Minute 7.5
6. Well disinfected with HTH
7. Cased to 25' ft. with 30" Diameter Concrete Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from 10 ft. to 25 ft.
10. Well Backfilled with: Cement from 0 ft. to 10 ft.
    (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 10 ft. to 25 ft.
12. Screen: Diameter 4 inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well: V(SE) 1 (3?) DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	9
White Sand	9	25'

Remarks:

Signed: C B Boring

Date: 8 (MONTH) 31 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well ✓ Work-over Well ____ Replacement Well ____

County Union (in which well is located)

Owner of Well Doug Green

Contractor Jack Boring C 1106

Well is near Mt. Holly Road

Driller Name and No. Jack Boring 02122

Section 9 Township 17S Range 16W

Date Well was Completed 3-15-84

Directions for Reaching Well: Out Mt. Holly Rd. (use permanent landmark)

Juan Eduardo Santos

1. Total Depth of Well 36 Ft.
2. Water Producing Formation: From 21 Ft. To 36 Ft.
3. Water Level Below Land Surface 21 ft.
4. Gallons per Hour 450
5. Well Disinfected with HTH
6. Casing to 36 Ft.
7. Cased with 30" Diameter Cement Casing
8. Cemented from 0 Ft. to 10 Ft.
9. Use of Well: ✓ Domestic ____ Irrigation ____ Municipal ____ Other

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Clay	0	16
dry sand	16	21
wet sand	21	36
clay	36	

Remarks:

Signed: Jack Boring Date: 3-15-84

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

REPORT OF WATER WELL CONSTRUCTION

New Well ✓ Work-over Well ____ Replacement Well ____

Owner of Well Ricky Hall

Contractor Jack Bowling C 1106

Driller Name and No. Jack Bowling 01102

Date Well was Completed 3-14-84

County Union (in which well is located)

Well is near Mt. Holly Road

Section 5 Township 17S Range 16W

Directions for Reaching Well: From town (use permanent landmark)
Felsa Hamilton on right

1. Total Depth of Well 24 Ft.
2. Water Producing Formation: From 9 Ft. To 24 Ft.
3. Water Level Below Land Surface 9 ft.
4. Gallons per Hour 900
5. Well Disinfected with HTH
6. Casing to 24 Ft.
7. Cased with 30" Diameter Cement Casing
8. Cemented from 0 Ft. to 10 Ft.
9. Use of Well: ✓ Domestic ____ Irrigation ____ Municipal ____ Other

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
sand	0	9
wet sand	9	24

9- 3 ft. Tile & 1-2 ft. tile

Remarks: ____

Signed: Jack Bowling Date: 3-14-84

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS
REPORT OF WATER WELL CONSTRUCTION

New Well ✓ Work-over Well ____ Replacement Well ____

Owner of Well Ricky Hall

Contractor Jack Bowling C 1106

Driller Name and No. Jack Bowling 01102

Date Well was Completed 3-2-84

County Union (in which well is located)

Well is near ~~Junction Hwy 82~~ Road

Section 33 Township 17S Range 16W

Directions for Reaching Well: From ~~Junction Hwy 82~~ Hwy 79 (use permanent landmark)
just past airport on Mitchell

1. Total Depth of Well 57 Ft.
2. Water Producing Formation: From 42 Ft. To 57 Ft.
3. Water Level Below Land Surface 42 ft.
4. Gallons per Hour 1200
5. Well Disinfected with HTH
6. Casing to 57 Ft.
7. Cased with 30" Diameter Cement Casing
8. Cemented from 0 Ft. to 10 Ft.
9. Use of Well: ✓ Domestic ____ Irrigation ____ Municipal ____ Other

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
clay	0	16
clay & sand	16	42
sand & gravel	42	57

Remarks: ____

Signed: Jack Bowling Date: 3-2-84

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Wayne Mullen
WELL CONTRACTOR: Boring Water Well
CONTRACTOR LICENSE NO. C1028
NAME OF DRILLER: James McBride
DRILLER REGISTRATION NO. D2046
DATE WELL WAS COMPLETED: 6 (MO.) 18 (DAY) 73 (YR.)

Well is near Hwy 82 road, approximately ___ miles N NE E SE S SW (W) NW of Eldorado (TOWN, ETC.)
Section 14C CAB, Township 17S, Range 16W.
Directions for reaching well: (use permanent landmarks) Go 3 mi. West on 82 out Eldorado - turn right on black top road - 3 miles - right side road - 100 yds. past Crossroads Next Palms' Grocery

1. Total Depth of Well: 52
2. Water Producing Formation: From 34 ft. To 52 ft.
3. Method of Construction: Rotary ___ Cable ___ Driven ___ Jetted ___ Bored ✓ Dug ___
4. Water Level Below Land Surface: 34 ft.
5. Gallons per Hour: 400 Gallons per Minute: 6.6
6. Well disinfected with: HTH
7. Cased to 52 ft. with 30" Diameter Concrete Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from 10 ft. to 52 ft.
10. Well Backfilled with: Cement from 0 ft. to 10 ft. (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 10 ft. to 52 ft.
12. Screen Diameter: ___ inches from ___ ft. to ___ ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Top Soil	0	5
Clay	5	19
Dry Sand	19	33
Water Sand	33	52

Remarks:

Signed: C.D. Boring

Date: 6 (MONTH) / 30 (DAY) / 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

1 County in which well is located: UNION

(Please print or type)

OWNER OF WELL George Parks
WELL CONTRACTOR Hamlin-Nolte Water Wells
CONTRACTOR LICENSE NO. C-1054
NAME OF DRILLER Cecil Nolte
DRILLER REGISTRATION NO. D 2097
DATE WELL WAS COMPLETED 2 (MO.) 5 (DAY) 73 (YR.)

Well is near 4582 road, approximately
3 miles N NE E SE S SW W (NW) of El Dorado (TOWN, ETC.)
Section 14 DBBJ, Township 17S, Range 16W.
Directions for reaching well:
(use permanent landmarks)

1. Total Depth of Well 133
2. Water Producing Formation: From 118 ft. To 133 ft.
3. Method of Construction:
Rotary X Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface 46 ft.
5. Gallons per Hour ____ Gallons per Minute 25
6. Well disinfected with H.T.H.
7. Cased to 123 ft. with 4" Diameter PVC Casing
8. Cemented from ____ ft. to ____ ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with:
Sand & Cement (SAND, CLAY, CEMENT, MUD) from 0 ft. to 120 ft.
11. Gravel Pack from 120 ft. to 134 ft.
12. Screen Diameter:
4" inches from 123 ft. to 133 ft.
13. Type Screen PVC Fitting Bike BPV Slot Size .020
14. Use of Well:
X DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Red Sandy Clay	0	10
Coarse Sand	10	25
White Clay	25	27
Sand w/ clay Stk.	27	118
Sand	118	133
Gray Shale	133	140

Remarks:

Signed: Cecil Nolte
Date: 2 (MONTH) 5 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [✓] REPLACEMENT WELL [ ]

Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Dayrell Keyhendall

WELL CONTRACTOR Boeing Water Well, Inc

CONTRACTOR LICENSE NO. 1269

NAME OF DRILLER Doak

DRILLER REGISTRATION NO. 2044

DATE WELL WAS COMPLETED May (MO.) 4 (DAY) 74 (YR.)

Well is near Old Hwy 82 road, approximately 3 miles N NE E SE S SW W NW of Ecd (TOWN, ETC.)

Section 14 BDC, Township 17, Range 16.

Directions for reaching well: (use permanent landmarks) 3 miles west of Old Ecd on front of church turn north go to Crownwood Continue north first house on right.

1. Total Depth of Well 49
2. Water Producing Formation: From 36 ft. To 49 ft.
3. Method of Construction:

Rotary ____ Cable ____ Driven ____ Jetted ____ Bored [✓] Dug ____

4. Water Level Below Land Surface 36 ft.
5. Gallons per Hour 1000+ Gallons per Minute
6. Well disinfected with HTH
7. Cased to 51 ft. with Tile Diameter 30 Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Cement from 0 ft. to 10 ft. (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from NA ft. to ____ ft.
12. Screen Diameter: NA inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well: [✓] DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Surface Soil	0	3
Clay	3	18
sand Dry	18	36
water front	36	51
Sum loe	51	

Remarks: ____

Signed: Doak V. Rj

Date: May (MONTH) 4 (DAY) 74 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Tennyson Oil Co.
WELL CONTRACTOR: Rock Boring
CONTRACTOR LICENSE NO: C1028
NAME OF DRILLER: Rock Boring
DRILLER REGISTRATION NO.: D2046
DATE WELL WAS COMPLETED: 4 (MO.) 4 (DAY) 77 (YR.)

Well is near: Hwy 82 W
7 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.) road, approximately
Section 18, Township 17S, Range 16W.
Directions for reaching well: (use permanent landmarks) Go to ~~Fisher~~ Cairo from Magnolia on 82 Hwy. Turn north at Cairo on Hwy 129 go east app. 3 mi on County Rd. turn right on private rd and go app. 3 mi.

1. Total Depth of Well: 50 ft.
2. Water Producing Formation: From 38 ft. To 50 ft.
3. Method of Construction: Rotary ___ Cable ___ R.C. ___ Driven ___ Jetted ___ Bored ✓
4. Water Level Below Land Surface: 38 ft.
5. Gallons per Hour: 600 Gallons per Minute
6. Well disinfected with: HTH
7. Cased to 50 ft. with 20" Diameter cement Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from 10 ft. to 50 ft.
10. Well Backfilled with: cement (SAND, CLAY, CEMENT, MUD) from 0 ft. to 10 ft.
11. Gravel Pack from 10 ft. to 50 ft.
12. ~~Screen Diameter:~~ ___ inches from ___ ft. to ___ ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
clay	0	11
dry sand	11	36
water sand	36	50

RECEIVED
MAY 4 - 1977
COMMITTEE ON WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material or ~~workmanship~~ for a period of

Signed: C D Boring

Date: 4 (MONTH) 29 (DAY) 77 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Willetts Poultry Farm
WELL CONTRACTOR: Alford Drilling Co.
CONTRACTOR LICENSE NO.: C1317
NAME OF DRILLER: Philip Alford III
DRILLER REGISTRATION NO.: D2577
DATE WELL WAS COMPLETED: 5 (MO.) 20 (DAY) 76 (YR.)

Well is near: Lisbon
10 miles N NE E SE S SW W NW of El Dorado (road) approximately
Section 21, Township 17S, Range 16W
Directions for reaching well: (use permanent landmarks) Rt 6 Box 236 El Dorado Ark.

1. Total Depth of Well: 115
2. Water Producing Formation: From 97 ft. To 115 ft.
3. Method of Construction: Rotary ✓ Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface: 38 ft.
5. Gallons per Hour: 6900 Gallons per Minute: 15
6. Well disinfected with: HTH
7. Cased to 115 ft. with 4" Diameter 5th 40 RWC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: Sand & Clay from ___ ft. to ___ ft. (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 87 ft. to 115 ft.
12. Screen Diameter: 4 inches from 105 ft. to 115 ft.
13. Type Screen Johnson Fittings FIPT Slot Size 12
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Top Soil	0	2
Yellow Clay	2	15
Sand	15	17
Clay	17	21
Sand	21	24
Clay	24	28
Sand	28	33
Clay	33	53
Sand	53	95
Clay	95	97
Lignite Sand	97	115

Remarks:

Signed: [signature]
Date: 6 (MONTH) 12 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: UNION

(Please print or type)

OWNER OF WELL LAWRENCE ELECTRIC
WELL CONTRACTOR HAMLIN & NOLTE
CONTRACTOR LICENSE NO. C 1054
NAME OF DRILLER CONRAD L. HAMLIN
DRILLER REGISTRATION NO. D 2096
DATE WELL WAS COMPLETED 8 (MO.) 4 (DAY) 23 (YR.)

Well is near HWY 82. road, approximately
6 miles N NE (E) SE S SW W NW of ELDORADO AR. (TOWN, ETC.)
Section 23 BBA Township 17S Range 16W.
Directions for reaching well: (use permanent landmarks) BY LAWRANCE ELECT SHOP

1. Total Depth of Well 280
2. Water Producing Formation: From 267 ft. To 280 ft.
3. Method of Construction:
Rotary [X] Cable [ ] Driven [ ] Jetted [ ] Bored [ ] Dug [ ]
4. Water Level Below Land Surface 157 ft.
5. Gallons per Hour 400 Gallons per Minute 6.6
6. Well disinfected with HTH
7. Cased to 267 ft. with 4" Diameter PVC Casing
8. Cemented from 0 ft. to 41 ft.
9. Casing Perforated from ft. to ft.
10. Well Backfilled with:
CEMENT SAND GRAVEL from 0 ft. to 280 ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 251 ft. to 280 ft.
12. Screen Diameter:
4" inches from 267 ft. to 280 ft.
13. Type Screen 4" PVC Fittings Slot Size 1020
14. Use of Well:
DOMESTIC [X] IRRIGATION [ ] MUNICIPAL [ ] OTHER [ ]

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
RED CLAY	0	16
GRAY CLAY	16	87
SANDY SHALE	87	94
GRAY CLAY	94	237
SANDY SHALE	237	267
GREEN SAND	267	280
BROWN CLAY	280	

Remarks:

Signed: Conrad L. Hamlin
Date: 8 (MONTH) 4 (DAY) 23 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: City of El Dorado
WELL CONTRACTOR: Layne Arkansas Company
CONTRACTOR LICENSE NO.: C-1099
NAME OF DRILLER: Alven Brewer
DRILLER. REGISTRATION NO.: D-2195
DATE WELL WAS COMPLETED: March (MO.) 27 (DAY) 1978 (YR.)

Well is near _____ road, approximately _____ miles N NE E SE S SW W NW of _____ (TOWN, ETC.)
Section 24 BBCl, Township 17S, Range 16W. SWNE
Directions for reaching well: (use permanent landmarks) Mt. Holly Drive, El Dorado, Ar.

1. Total Depth of Well: 704'
2. Water Producing Formation: From 624 ft. To 704 ft.
3. Method of Construction:
Rotary X Cable ____ R.C. ____ Driven ____ Jetted ____ Bored ____
4. Water Level Below Land Surface: 378' ft.
5. Gallons per Hour ____ Gallons per Minute 1000
6. Well disinfected with: HTH
7. Cased to 602 ft. with 18" Diameter .375 Casing
8. Cemented from 0 ft. to 602 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: ____ (SAND, CLAY, CEMENT, MUD) from ____ ft. to ____ ft.
11. Gravel Pack from 624 ft. to 704 ft.
12. Screen Diameter: 12 inches from 624 ft. to 704 ft.
13. Type Screen: Layne Shutter Fittings: Armco Slot Size: #8
14. Use of Well:
DOMESTIC ____ IRRIGATION ____ MUNICIPAL X OTHER ____

Description and Color of Formation: (Sand, Shale, Sandstone, etc.) — Depths in Feet: From / To

"See Attached Sheet"

RECEIVED
APR 19 1978
COMMITTEE ON
WATER WELL CONSTRUCTION

Remarks: ____

This well is guaranteed against defective material or workmanship for a period of ____

Signed: L. D. Shupe

Date: April (MONTH) 4 (DAY) 1978 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

ST-1855

STATE OF ARKANSAS
REPORT OF WATER WELL CONSTRUCTION

New Well X Work-over Well ____ Replacement Well ____

County Union (in which well is locate

Owner of Well El Dorado Water Utilities

Well Contractor Layne-Arkansas Company

Well is near ____ Road

Driller Name and No. Alven Brewer - D-2195 NWSENW Section 24 (AB) Township 17S Range 16W

Date Well was Completed June 16, 1982

Directions for Reaching Well: (use permanent landmark)

1. Total Depth of Well 709' 6" Ft.
2. Water Producing Formation: From 609 Ft. To 709 Ft.
3. Water Level Below Land Surface 372'
4. Gallons per Hour 60000
5. Well Disinfected with HTH
6. Casing to 595 Ft.
7. Cased with 18" Diameter .312 Casing
8. Cemented from 0 Ft. to 595 Ft.
9. Use of Well: Domestic ____ Irrigation ____ Municipal X Other ____

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths in feet from	to
"See Attached Sheet"		

Remarks:

Signed: L. L. Hope Date: 6/22/82

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

New Well ✓ Work-over Well ____ Replacement Well ____

Owner of Well Robert Raney

Contractor John Brooks C1106

Driller Name and No. John Brooks 02182

Date Well was Completed 7-18-83

County Union (in which well is located)

Well is near Hy 82 Travis Ed Road

Section 31 Township 17S Range 16W

Directions for Reaching Well: First gravel rd. to right past dirt (use permanent landmark)

1. Total Depth of Well 58 Ft.
2. Water Producing Formation: From 36 Ft. To 58 Ft.
3. Water Level Below Land Surface 26 ft.
4. Gallons per Hour 700
5. Well Disinfected with HTH
6. Casing to 58 Ft.
7. Cased with 30" Diameter Cement Casing
8. Cemented from 0 Ft. to 10 Ft.
9. Use of Well: ____ Domestic ____ Irrigation ____ Municipal ____ Other

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
clay	0	26
wet sand	26	28
shale	28	36
wet sand	36	58

Remarks:

Signed: John Brooks Date: 7-18-83

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

over Well ____ Replacement Well ____

OLA R. DRLG. CO.

[illegible] DRLG. CO

[illegible] 3270

BOAR BORE MIG D-2044

eted 9-10-79

ell 125 Ft.

Formation: From 40 Ft.

To 125 Ft.

w Land Surface 30

5200

with Hole A

25 Ft.

Diameter PVC Casing

0 Ft. to 10 Ft.

omestic Irrigation Municipal Other

ed against defective material or workman-

) VR

County [illegible] (in which well is located)

Well is near HWY 82 Road

Section 31 Township 17 Range 16

Directions for Reaching Well: HWY 82W OUT OF EL DORADO TURN LEFT 1.2 mi. EAST OF AIRPORT GO 1/4 mi. ON LEFT (use permanent landmark)

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
CLAY	0	40
COARSE BROWN SAND	40	125

Remarks: Pool Well

Signed: 10-20-79 Date:

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

Geology Copy

NEW WELL ☐ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: El Dorado Poultry Co.
WELL CONTRACTOR: Alford Drilling Co.
CONTRACTOR LICENSE NO. C 1317
NAME OF DRILLER: Philip Alford III
DRILLER REGISTRATION NO. D. 2597
DATE WELL WAS COMPLETED: 7 (MO.) 27 (DAY) 76 (YR.)

Well is near: Hwy 82 West
3 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 32, Township 17 S, Range 16 W
Directions for reaching well: (use permanent landmarks) Go to El Dorado Poultry office in El Dorado for Directions & Permission

1. Total Depth of Well: 285'
2. Water Producing Formation: From 250 ft. To 285 ft.
3. Method of Construction: Rotary ✓ Cable ____ R.C. ____ Driven ____ Jetted ____ Bored ____
4. Water Level Below Land Surface: 165 ft.
5. Gallons per Hour 480 Gallons per Minute 8
6. Well disinfected with: HTH
7. Cased to 250 ft. with 4" Diameter Sch 40 PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 220 ft.
11. Gravel Pack from 220 ft. to 285 ft.
12. Screen Diameter: 4 inches from 250 ft. to 280 ft.
13. Type Screen Slot Fittings Slip Slot Size 18
14. Use of Well: ____ DOMESTIC ____ IRRIGATION ____ MUNICIPAL Agri. OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Top Soil	0	4
White Clay	4	15
Red Clay	15	18
White Clay	18	23
Red Clay	23	25
Sand	25	28
Light Brown Shale	28	30
Shale	30	34
Sand	34	250
Shale	250	285

RECEIVED
OCT 13 1976
COMMITTEE ON WATER WELL CONSTRUCTION

Remarks: ____

This well is guaranteed against defective material and workmanship for a period of 10 years

Signed: [signature]

Date: July (MONTH) 27 (DAY) 1976 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Great Lakes Chemical Co.

WELL CONTRACTOR: Alford Drilling Co.

CONTRACTOR LICENSE NO.: C 1317

NAME OF DRILLER: H. Tip Alford III

DRILLER REGISTRATION NO.: D 2597

DATE WELL WAS COMPLETED: 12 (MO.) 14 (DAY) 77 (YR.)

Well is near: Pleasure Chapel road, approximately 5 miles N NE E SE S SW (W) NW of El Dorado (TOWN, ETC.)

Section 34 DCAI, Township 17S, Range 16W

Directions for reaching well: (use permanent landmarks) Go S. on P.C. Road at Wyatt Bapt. Ch. on thru 82 Turn Right Wher Rd. Makes Left Turn, Walk on Right

1. Total Depth of Well: 255
2. Water Producing Formation: From 195 ft. To 255 ft.
3. Method of Construction: Rotary [✓] Cable [ ] R.C. [ ] Driven [ ] Jetted [ ] Bored [ ]
4. Water Level Below Land Surface: 60 ft.
5. Gallons per Hour: 2400 Gallons per Minute: 40
6. Well disinfected with: HTH
7. Cased to 195 ft. with 4" Diameter Sch 40 RC Casing
8. Cemented from 6 ft. to 10 ft.
9. Casing Perforated from ft. to ft.
10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 180 ft.
11. Gravel Pack from 180 ft. to 255 ft.
12. Screen Diameter: 4" Inches from 195 ft. to 255 ft.
13. Type Screen: Slot Fittings: C x C Slot Size: 016
14. Use of Well: DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER [✓]

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	3
Clay	3	22
Sand	22	28
Clay	28	32
Sand	32	70
Shale	70	140
Sand	140	145
Shale	145	195
Sand w/ Streaks of Shale	195	255

Remarks:

RECEIVED
OCT 27 1977

This well is guaranteed against defective material or workmanship for a period of 1 YR.

Signed: [signature]

COMMITTEE ON WATER WELL CONSTRUCTION

Date: 10 (MONTH) 25 (DAY) 77 (YEAR)

Mail to: Committee on Water Well Construction – 3815 W. Roosevelt Road – Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

STATE OF ARKANSAS
REPORT OF WATER WELL CONSTRUCTION

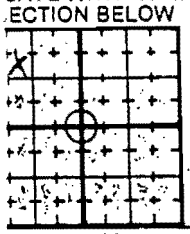
NTRACTOR Name and number: Hamlin & Nolte Water Wells — C. 1054

ILLER Name and number: Cecil NOlte — D. 2097

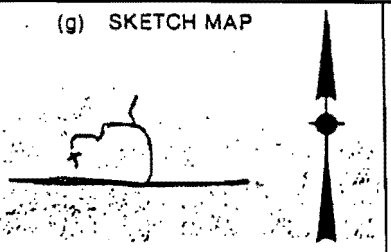
CATION / IDENTIFICATION — DATE WELL COMPLETED: 2-5-88 — NEW WELL: XX — WORK-OVER: ☐

UNTY	(b) FRACTION	(c) SECTION	(d) TOWNSHIP	(e) RANGE
lion	SE ¼ of NW ¼ of	28	17S	16W

CATE WITH 'X' IN ECTION BELOW



(g) SKETCH MAP



(h) OWNER OF WELL:
NAME: Great Lakes Chem. Co.
STREET ADDRESS: P.O. Box 1878
CITY: El Dorado, AR 71730

(i) OPERATOR:
NAME:
STREET ADDRESS:
CITY:

ESCRIPTION OF FORMATION: — DEPTHS IN FEET

	FROM	TO
Clay	0	10
Sand	10	21
Clay	21	65
Sand w/Shale Stks	65	110
Sand	110	121
Shale	121	123
Sand	123	135
Clay	135	140

TTACH ADDITIONAL SHEETS IF NECESSARY

OTAL DEPTH OF WELL: 135 ft

/ATER PRODUCING FORMATION?

TATIC WATER LEVEL: Ft below land surface

/ATER PRODUCTION RATE /ELL PRODUCTS: gallons per ☒ min ☐ hr

IAMETER OF BORE HOLE: 7 7/8 IN

9 CASING: FROM 0 TO 115 W/ 4 ID
FROM TO W/ ID
TYPE CASING: PVC

10 SCREEN:
TYPE PVC DIA 4" SLOT/GA .025
SET BETWEEN 115 ft and 135 ft
TYPE DIA SLOT/GA
SET BETWEEN ft and ft

11 GRAVEL PACK: FROM 40 ft and 35 ft

12 BACK FILLED WITH:
FROM ft to ft

13 SEALED WITH Cement
FROM 0 ft to 40 ft
FROM ft to ft

14 DISINFECTED WITH: HTH

15 USE OF WELL:
SOURCE WELL ☒ RETURN WELL ☐
A/C CLOSED LOOP ☐ A/C OPEN LOOP ☐

16 PURPOSE:
DOMESTIC ☐ MUNICIPAL ☐
COMMERCIAL ☐ TEST WELL ☐
OIL AND GAS ☒ MONITOR ☐
AGRI/IRRIGATION ☐ PUBLIC SUPPLY ☐
OTHER ☐

17 (For A/C only) WILL SYSTEM ALSO BE USED FOR PURPOSES OTHER THAN A/C?
(IF YES NAME USE) YES ☐ NO ☐

18 (For A/C only) INTO WHAT MEDIUM IS WATER RETURNED?

19 REMARKS: Well # BSW12

20 SIGNED Cecil Nolte DATE 2-5-88

AWD-1 JAN 1988 Committee on Waterwell Construction, 2915 South Pine, Little Rock, AR 72204

GEOLOGY COPY

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 18 SOUTH RANGE 14 WEST

STATE OF ARKANSAS
Report of Water Well Construction

NEW WELL ☑ REPLACEMENT WELL ☐

County in which well is located: Union

(Please print or type)

OWNER OF WELL O. D. McKNIGHT
WELL CONTRACTOR BORING WATER WELL INC
CONTRACTOR LICENSE NO. 1269
NAME OF DRILLER DOAK
DRILLER REGISTRATION NO. 2044
DATE WELL WAS COMPLETED OCT. (MO.) 8 (DAY) 73 (YR.)

Well is near STRONG Hwy road, approximately 5 miles N NE E SE S SW W NW of EL D (TOWN, ETC.)
Section 8, Township 18, Range 14.
Directions for reaching well: (use permanent landmarks)

1. Total Depth of Well 49
2. Water Producing Formation: From 30 ft. To 49 ft.
3. Method of Construction:
Rotary ___ Cable ___ Driven ___ Jetted ___ Bored ___ Dug ✓
4. Water Level Below Land Surface 30 ft.
5. Gallons per Hour 1500 + Gallons per Minute 25
6. Well disinfected with HTH
7. Cased to 49 ft. with TILE Diameter 30 Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with:
CEMENT (SAND, CLAY, CEMENT, MUD) from 0 ft. to 10 ft.
11. Gravel Pack from 10 ft. to 30 ft.
12. Screen Diameter: ✓ inches, from ___ ft. to ___ ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well:
DOMESTIC ✓ IRRIGATION ___ MUNICIPAL ___ OTHER ___

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
surface soil	0	2
clay	2	18
sand	18	30
water sand	30	49

Remarks:

Signed: Doak Boring
Date: Oct. 8 73 (MONTH, DAY, YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

WATER WELL CONSTRUCTION COMMITTEE

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

Well X Work-over Well ..... Replacement Well .....

ner of Well Hershel Bradshaw

Contractor Alford Drilling Co.

tractor License No. C 1317

er Name and No. P. Alford D 2597

e Well was Completed 7-29-79

Total Depth of Well 290 Ft.

Water Producing Formation: From 260 Ft.

To 290 Ft.

Water Level Below Land Surface 130

Gallons per Hour 900

Well Disinfected with HTH

Casing to 260 Ft.

Cased with 4" Diameter Pvc 40 Casing

Cemented from 0 Ft. to 10 Ft.

Use of Well: X Domestic ..... Irrigation ..... Municipal ..... Other

s well is guaranteed against defective material or workman-

p for a period of 1 yr.

County Union (in which well is located)

Well is near Hwy 82 East Road

Section 9 Township 18s Range 14w

Directions for Reaching Well: Rt 5 Box 244 (use permanent landmark)

El Dorado, Ark.

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Topsoil	0	3
Clay	3	5
Sand	5	115
Shale	115	142
Sand Stone	142	167
Sha le	167	255
Green Sand	255	290

Remarks:

Signed: [signature] Date: 1-11-79

n No. AWD-2

Mail to: Committee on Water Well Construction, 2915 So. Pine Street
Little Rock, Arkansas 72204

Geology Copy

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

w Well X Work-over Well ..... Replacement Well .....

ner of Well Mrs. O. L. Morgan

ll Contractor Alford Drilling Co.

ntractor License No. C 1317

ller Name and No. P. Alford D 2597

te Well was Completed 8-22-78

Total Depth of Well 70 Ft.

Water Producing Formation: From 22 Ft.

To 80 Ft.

Water Level Below Land Surface 30

Gallons per Hour 1200

Well Disinfected with HTH

Casing to 50 Ft.

Cased with 4" Diameter Pvc 40 Casing

Cemented from 0 Ft. to 10 Ft.

Use of Well: X Domestic ..... Irrigation ..... Municipal ..... Other

is well is guaranteed against defective material or workman-

p for a period of 1 yr.

County Union (in which well is located)

Well is near Hwy 82 East Road

Section 8 Township 18s Range 14w

Directions for Reaching Well: Rt5 Box 246 (use permanent landmark)

El Dorado, Arkansas

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Topsoil	0	2
Yellow Clay	2	8
Sand	8	9
Red Clay	9	15
Shale	15	22
Sand	22	80

Remarks:

Signed: [signature] Date: 1-11-79

n No. AWD-2

Mail to: Committee on Water Well Construction, 2915 So. Pine Street
Little Rock, Arkansas 72204

Geology Copy

NEW WELL ☐ REPLACEMENT WELL ☑

Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Chauncey Tate

WELL CONTRACTOR: Alford Drilling Co.

CONTRACTOR LICENSE NO.: C1317

NAME OF DRILLER: Philip Alford III

DRILLER REGISTRATION NO.: D2597

DATE WELL WAS COMPLETED: 9 (MO.) 21 (DAY) 76 (YR.)

Well is near: Hwy 82 East road, approximately 8 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)

Section 14, Township 18S, Range 14W

Directions for reaching well: (use permanent landmarks) Rt. 5 Box 224 El Dorado

1. Total Depth of Well: 145'
2. Water Producing Formation: From 95 ft. To 145 ft.
3. Method of Construction: Rotary ✓ Cable ____ R.C. ____ Driven ____ Jetted ____ Bored ____
4. Water Level Below Land Surface: 30 ft.
5. Gallons per Hour 3000 Gallons per Minute 50
6. Well disinfected with: HTH
7. Cased to 115 ft. with 4" Diameter Sch 40 PVC casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 95 ft.
11. Gravel Pack from 95 ft. to 145 ft.
12. Screen Diameter: 4" inches, from 115 ft. to 145 ft.
13. Type Screen Slot Fittings Slip Slot Size 15
14. Use of Well: ✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)

Depths in Feet From	To
0	2
2	95
95	145
145	

Top Soil
Clay
Sand
Shale

RECEIVED
OCT 13 1976
COMMITTEE ON
WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr.

Signed: [signature]

Date: 10 (MONTH) 8 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [4] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Floyd Zylks

WELL CONTRACTOR: Alford Drilling Co -

CONTRACTOR LICENSE NO. C137

NAME OF DRILLER: Philip Alford

DRILLER REGISTRATION NO. D2597

DATE WELL WAS COMPLETED: 9 (MO.) 27 (DAY) 76 (YR.)

Well is near: Hwy 82 E road, approximately 8 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)

Section 30, Township 18S, Range 14W

Directions for reaching well: (use permanent landmarks) Rt 2 Box 98 El Dorado Ark

1. Total Depth of Well: 193
2. Water Producing Formation: From 135 ft. To 193 ft.
3. Method of Construction: Rotary ✓ Cable ____ R.C. ____ Driven ____ Jetted ____ Bored ____
4. Water Level Below Land Surface: 43 ft.
5. Gallons per Hour: 2100 Gallons per Minute: 35
6. Well disinfected with: HTH
7. Cased to 163 ft. with 4" Diameter Sdr 40 PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Mud (SAND, CLAY, CEMENT, MUD) from 10 ft. to 135 ft.
11. Gravel Pack from 135 ft. to 193 ft.
12. Screen Diameter: 4" inches from 163 ft. to 193 ft.
13. Type Screen Slot Fittings Slip Slot Size 15
14. Use of Well: DOMESTIC ✓ IRRIGATION ____ MUNICIPAL ____ OTHER ____

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Top Soil	0	2
Clay	2	25
Sand	25	70
Shale	70	120
Sand	120	132
Rock	132	135
Brown Sand	135	195

RECEIVED
OCT 13 1976
COMMITTEE ON
WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr

Signed: Philip Alford

Date: 10 (MONTH) 8 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Joe Robertson

WELL CONTRACTOR: ~~Crisp~~ Alford Drilling Co

CONTRACTOR LICENSE NO. C1317

NAME OF DRILLER: Philip Alford

DRILLER REGISTRATION NO. D2597

DATE WELL WAS COMPLETED: 6 (MO) 14 (DAY) 78 (YR)

Well is near: Hubank road, approximately 8 miles N. NE. E. SE. S. SW. W. NW. of El Dorado (TOWN, ETC.)

Section 33 Township 18S Range 14W

Directions for reaching well: (use permanent landmarks) Rt 2 Box 105 D El Dorado, Ark

1. Total Depth of Well: 90

2. Water Producing Formation: From 50 ft. To 90 ft.

3. Method of Construction: Rotary [X] Cable [ ] R.C. [ ] Driven [ ] Jetted [ ] Bored [ ]

4. Water Level Below Land Surface: 40 ft.

5. Gallons per Hour: 3600 Gallons per Minute: 60

6. Well disinfected with: HTH

7. Cased to: 70 ft. with: 4" Diameter Sch 40 PVC Casing

8. Cemented from: 0 ft. to: 10 ft.

9. Casing Perforated from: ft. to: ft.

10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from: 10 ft. to: 60 ft.

11. Gravel Pack from: 60 ft. to: 90 ft.

12. Screen Diameter: 4" inches, from: 70 ft. to: 90 ft.

13. Type Screen: Slot Fittings: PVC Slot Size: .015

14. Use of Well: [X] DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	2
Sandy Clay	2	18
Sand	18	44
Clay	44	50
Sand	50	90

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr.

Signed: [signature]

Date: 10 (MONTH) 29 (DAY) 78 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Faircrest Water Assn., Inc.

WELL CONTRACTOR Layne Arkansas Company

CONTRACTOR LICENSE NO. C-1099

NAME OF DRILLER Sydney S. Sanderson

DRILLER REGISTRATION NO. D-2203

DATE WELL WAS COMPLETED 3 (MO.) 29 (DAY) 76 (YR.)

Well is near _____ road, approximately _____ miles N NE E SE S SW W NW of _____ (TOWN, ETC.)

Section 33, Township 18 S, Range 14 W.

Directions for reaching well: (use permanent landmarks) 1½ Miles south of G. P. Sawmill on Hwy. US 167, west side of Hwy.

1. Total Depth of Well 752'
2. Water Producing Formation: From 678 ft. To 752 ft.
3. Method of Construction:
   Rotary X Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface 262 ft.
5. Gallons per Hour 160 Gallons per Minute
6. Well disinfected with HTH
7. Cased to 706' ft. with 8-5/8" Diameter .277 Casing
8. Cemented from 0 ft. to 706 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: ____ from ____ ft. to ____ ft.
    (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 711 ft. to 752 ft.
12. Screen Diameter: 4 Inches from 711 ft. to 752 ft.
13. Type Screen Johnson Fittings s. steel Slot Size .010
14. Use of Well: DOMESTIC ____ IRRIGATION ____ MUNICIPAL X OTHER ____

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)				Depths in Feet From	To
Top soil	0	2	Sandy shale, strks. sand	524	549
Clay	2	26	Rock	549	551
Sandy clay, stk. sand	26	119	Shale, strks, sand	551	603
Sand	119	138	Rock	603	604
Shale, strk. s. shale	138	202	Sandy shale	604	678
Rock	202	203	Sand, fine	678	756
Shale	203	222	Shale	756	762
Rock	222	223			
Shale	223	251			
Rock	251	252			
Shale, stk. sand	252	293			
Sandy shale	293	347			
Shale	347	351			
Sandy shale	351	374			
Boulders	374	385			
Shale, strks. s. shale	385	524			

Remarks:

Signed: L. D. Stupe

Date: 4 (MONTH) 26 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

1 Contractor Name & Number: Hamlin and Nolte C# 1054
2 Driller Name & Number: Cecil Nolte D# 2097
3 Pump Installer Name & Number: Cecil Nolte P# 4225
4 Date Well Completed: 10-17-89 New Well ☒ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW

5 COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
nion	SW ¼ of SE ¼ of	19	18S	14W

LONGITUDE ° ' "
LATITUDE 11 ° ' "

C 1 DESCRIPTION OF FORMATION:

	DEPTHS IN FEET FROM	TO
eddish White Clay	0	21
ray Clay	21	152
ine Sand	152	168
ray Clay	168	172
ine Sand	172	200
ray Clay	200	210

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 200 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS 152-168 172-200
4 STATIC WATER LEVEL 37.5 Ft below land surface
5 YIELD 20 gallons per ☒ min ☐ hr
6 DIAMETER OF BORE HOLE 7 7/8 IN

C PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☒ TURBINE ☐ JET ☐
2 SETTING DEPTH: 105 FEET
3 BRAND NAME AND SERIAL NUMBERS: Grundfos 16S10-10, Ser.#89142912
4 RATED CAPACITY 20 gallons per minute
5 TYPE LUBRICATION
6 DROP PIPE OR COLUMN PIPE SIZE 1"
7 WIRE SIZE 12-2
8 PRESSURE TANK - SIZE, MAKE, MODEL Con-Aire CA120
9 DATE OF INSTALLATION OR REPAIR 10-17-89
10 Is there an abandoned water well on the property? No

D 1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Coy Lowery
STREET ADDRESS Rt. 2, Box 596J
CITY ElDorado, Ar 71730

2 CASING FROM 0 TO 180 W/ 4 "ID
FROM TO W/ "ID
TYPE CASING: PVC

3 SCREEN
TYPE: OPVC DIA 4" SLOT/GA .025
SET FROM 180 FT TO 200 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 105 FT TO 200 FT
5 BACK FILLED WITH:
FROM FT TO FT
6 SEALED WITH: Cement
FROM 0 FT TO 105 FT
FROM FT TO FT
7 DISINFECTED WITH: HTH

8 USE OF WELL:

DOMESTIC	☒	COMMERCIAL	☐
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes; name use: yes ☐ no ☐
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS:
12 SIGNED Cecil Nolte DATE 10-19-89

WD-7 JAN 89 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201
ACI-5945

GEOLOGY COPY

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

93 3250

1 Contractor Name & Number: Layne-Arkansas Company C# 1290
2 Driller Name & Number: Alven Brewer D# 2195
3 Pump Installer Name & Number: Grady Teel P# 4173
4 Date Well Completed: 8/22/89 New Well [X] Replace or Work-over [ ]

10 LOCATE WITH 'X' IN SECTION BELOW

COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
Union	SW ¼ of SW ¼ of	6	18S	14W

LONGITUDE ° ' "
11 LATITUDE ° ' "

1 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
"See attached sheet"		

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 783 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS. 723
4 STATIC WATER LEVEL 361 Ft below land surface
5 YIELD 100 gallons per [X] min [ ] hr
6 DIAMETER OF BORE HOLE 26 IN

PUMP REPORT Sand

1 TYPE PUMP: SUBMERSIBLE [ ] TURBINE [X] JET [ ]
2 SETTING DEPTH: 400 FEET
3 BRAND NAME AND SERIAL NUMBERS: Layne
4 RATED CAPACITY 100 gallons per minute
5 TYPE LUBRICATION Oil
6 DROP PIPE OR COLUMN PIPE SIZE 4"
7 WIRE SIZE
8 PRESSURE TANK SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR 9-15-89
10 Is there an abandoned water well on the property? No

D 1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Johnson Township Water Assn.
STREET ADDRESS
CITY El Dorado, AR

2 CASING FROM 0 TO 714 W/ 10 "ID
FROM 660 TO 720 W/ 6 "ID
TYPE CASING: Steel & SST

3 SCREEN
TYPE: SST DIA 6" .016 SLOT/GA
SET FROM 720 FT TO 783 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 665 FT TO 783 FT

5 BACK FILLED WITH: Cement
FROM 5 FT TO 714 FT

6 SEALED WITH: Cement
FROM 0 FT TO 5 FT
FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL:

DOMESTIC	[ ]	COMMERCIAL	[ ]
IRRIGATION	[ ]	MONITOR	[ ]
LIVESTOCK/POULTRY	[ ]	TEST WELL	[ ]
OIL/GAS SUPPLY	[ ]	SEMI-PUBLIC	[ ]
PUBLIC SUPPLY	[X]	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE [ ] RETURN [ ]
CLOSED LOOP [ ]

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes [ ] no [ ]

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED Jeff W. Jones DATE 10/5/89

GEOLOGY COPY

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 18 SOUTH RANGE 15 WEST

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Georgia-Pacific Corp -
WELL CONTRACTOR J W Kelly
CONTRACTOR LICENSE NO. C-1179
NAME OF DRILLER J W Kelly
DRILLER REGISTRATION NO. 536
DATE WELL WAS COMPLETED 11-28 (MO.) — (DAY) — (YR.)

Well is near at Georgia Pacific Mill road, approximately
_____ miles N NE E SE S SW W NW of _____ (TOWN, ETC.)
Section _____, Township _____, Range _____.
Directions for reaching well: (use permanent landmarks) 167 Hi-way South 6 miles from Eldorado

1. Total Depth of Well 70 Ft
2. Water Producing Formation: From 40 ft. To 70 ft.
3. Method of Construction:
Rotary ✓ Cable _____ Driven _____ Jetted _____ Bored _____ Dug _____
4. Water Level Below Land Surface 20 ft.
5. Gallons per Hour _____ Gallons per Minute 110
6. Well disinfected with -N-T-H-
7. Cased to 50 ft. with Black P.P. Diameter 6 Casing
8. Cemented from 15 ft. to Ground Level ft.
9. Casing Perforated from _____ ft. to _____ ft.
10. Well Backfilled with: Cement from _____ ft. to _____ ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 70 ft. to 15 ft.
12. Screen Diameter: 6" inches from 50 ft. to 70 ft.
13. Type Screen Factory Fittings _____ Slot Size .020
14. Use of Well:
DOMESTIC _____ IRRIGATION _____ MUNICIPAL ✓ OTHER _____

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To

Remarks: _____

Signed: J W Kelly

Date: 12 (MONTH) — 2 (DAY) — 72 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☐ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union 7

(Please print or type)

OWNER OF WELL Jowell & Mona Jones
WELL CONTRACTOR J.W. CAMMACK
CONTRACTOR LICENSE NO. C 1163
NAME OF DRILLER J.W. CAMMACK
DRILLER REGISTRATION NO. D 2328
DATE WELL WAS COMPLETED Dec (MO.) 1 (DAY) 79 (YR.)

Well is near Highway 82 East road, approximately ___ miles N NE E SE S SW W NW of El Dorado. (TOWN, ETC.)
Section ___, Township 18, Range 15.
Directions for reaching well: (use permanent landmarks) off Hiway 82 east 7 miles

1. Total Depth of Well 80 ft.
2. Water Producing Formation: From 61 ft. To 80 ft.
3. Method of Construction:
Rotary V Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface 50 ft.
5. Gallons per Hour 300 Gallons per Minute 5
6. Well disinfected with Chlorine.
7. Cased to 80 ft. with 3" Diameter PVC Casing
8. Cemented from 45 ft. to 0 ft.
9. Casing Perforated from 77 ft. to 80 ft.
10. Well Backfilled with:
___ from ___ ft. to ___ ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 80 ft. to 45 ft.
12. Screen Diameter:
___ inches from ___ ft. to ___ ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well:
V DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Top soil + Sand	0	10
Red sandy clay	10	20
Sandy Pipe clay	20	50
White Pipe Clay	50	61
White lime Rock	61	80

Remarks:

Signed: J.W. Cammack
Date: Dec (MONTH) 5 (DAY) 79 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

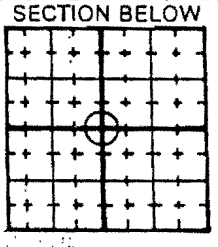
FORM NO. WD-1

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

93-3944

1 Contractor Name & Number: Layne-Arkansas Company C# 1290
2 Driller Name & Number: ALven Brewer D# 2195
3 Pump Installer Name & Number: P#
4 Date Well Completed: 3/19/91 New Well ☒ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW



COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
Union	NW ¼ of NE ¼ of ~~X~~ 1		XXX 18S	15W

LONGITUDE ° ' "
11 LATITUDE ° ' "

B 1 DESCRIPTION OF FORMATION:

	DEPTHS IN FEET FROM	TO
See attached sheet		

ATTACH ADDITIONAL SHEETS IF NECESSARY

12 TOTAL DEPTH OF WELL 758 ft
13 DEPTHS TO WATER PRODUCING FORMATIONS. 658
14 STATIC WATER LEVEL Ft below land surface
15 YIELD 500 gallons per ☒ min ☐ hr
16 DIAMETER OF BORE HOLE IN

C PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☐ TURBINE ☐ JET ☐
2 SETTING DEPTH: FEET
3 BRAND NAME AND SERIAL NUMBERS:
4 RATED CAPACITY gallons per minute
5 TYPE LUBRICATION
6 DROP PIPE OR COLUMN PIPE SIZE
7 WIRE SIZE
8 PRESSURE TANK . . . SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR
10 Is there an abandoned water well on the property?

D 1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Great Lakes Chemical
STREET ADDRESS P. O. Box 1878
CITY El Dorado, AR

2 CASING 0 FROM TO 647 W/ 12 "ID
598 FROM TO 658 W/ 8 "ID
TYPE CASING: Steel & SST

3 SCREEN
TYPE: SST DIA 8" SLOT/GA .020
SET FROM 658 FT TO 758 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 600 FT TO 758 FT

5 BACK FILLED WITH: Cement
FROM 15 FT TO 647 FT

6 SEALED WITH: Cement
FROM 0 FT TO 15 FT
FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☒
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED DATE
Jeff Jones 10/22/91

AWD-7 JAN 89 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201
ACI-5946

STATE OF ARKANSAS
Report of Water Well Construction

NEW WELL ☐ REPLACEMENT WELL ☐

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Kenneth Clark

WELL CONTRACTOR: J.W. Kelly

CONTRACTOR LICENSE NO.: C. 1179

NAME OF DRILLER: J.W. Kelly

DRILLER REGISTRATION NO.: D. 2356

DATE WELL WAS COMPLETED: 10 (MO.) 19. (DAY) 76 (YR.)

Well is near: Smackover Ark on Mt Holly road, approximately 3 miles N NE E SE S (SW) W NW of Smackover Ark (TOWN, ETC.)

Section 16, Township 18, Range 15W.

Directions for reaching well: (use permanent landmarks) Mt Holly Road and Hwy 7. South Section

1. Total Depth of Well: 95
2. Water Producing Formation: From 80 ft. To 95 ft.
3. Method of Construction: Rotary ____ Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface: 51. ft.
5. Gallons per Hour: 45 Gallons per Minute
6. Well disinfected with: H-T-H-
7. Cased to 85 ft. with PVC Diameter 4" Casing
8. Cemented from 20 ft. to 15 ft.
9. Casing Perforated from 85 ft. to 95 ft.
10. Well Backfilled with: 20 (SAND, CLAY, CEMENT, MUD) from 15 ft. to 0 ft.
11. Gravel Pack from 20 ft. to 95 ft.
12. Screen Diameter: 4" inches from 85 ft. to 95 ft.
13. Type Screen PVC Fittings Tex Slot Size 0020
14. Use of Well: ✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Red Sand for 20 Ft		
Blue Shale from 20 Ft to 80 Ft		
From 8 Ft to 95 Ft Sand		

Remarks:

NOV 08 1976

COMMITTEE ON WATER WELL CONSTRUCTION

Signed: J.W. Kelly

Date: 10. (MONTH) 26 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐ **Report of Water Well Construction** County in which well is located: Union

(Please print or type)

OWNER OF WELL: K. J. McKoy
WELL CONTRACTOR: Alford Drilling Co
CONTRACTOR LICENSE NO.: C1317
NAME OF DRILLER: Phil Alford III
DRILLER REGISTRATION NO.: D 2597
DATE WELL WAS COMPLETED: 9 (MO.) 20 (DAY) 77 (YR.)

Well is near: South Field road, approximately 4 miles N NE E SE (S) SW W NW of El Dorado (TOWN, ETC.)
Section 18 COG, Township 18S, Range 15W.
Directions for reaching well: (use permanent landmarks) Rt. 6 Box 45A El Dorado, Ark.

1. Total Depth of Well: 104'
2. Water Producing Formation: From 85 ft. To 104 ft.
3. Method of Construction: Rotary ✓ Cable ___ R.C. ___ Driven ___ Jetted ___ Bored ___
4. Water Level Below Land Surface: 18' ft.
5. Gallons per Hour 2400 Gallons per Minute 40
6. Well disinfected with: HTH
7. Cased to 94 ft. with 4 Diameter Sch 40 RC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 80 ft.
11. Gravel Pack from 80 ft. to 104 ft.
12. Screen Diameter: 4 inches from 94 ft. to 104 ft.
13. Type Screen: Slot Fittings: CXC Slot Size: 016
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	2
Clay	2	20
Silty Sand	20	35
Clay	35	40
Silty Sand	40	55
Clay	55	80
Sand	80	104

RECEIVED
OCT 27 1977
COMMITTEE ON WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr.

Signed: [signature]

Date: 10 (MONTH) 25 (DAY) 77 (YEAR)

Mail to: Committee on Water Well Construction – 3815 W. Roosevelt Road – Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

STATE OF ARKANSAS
Report of Water Well Construction

NEW WELL [✓] REPLACEMENT WELL [ ]

County in which well is located: Union

(Please print or type)

OWNER OF WELL John Friesby

WELL CONTRACTOR J W Kelly

CONTRACTOR LICENSE NO. C 1179

NAME OF DRILLER J W Kelly

DRILLER REGISTRATION NO. D-2256

DATE WELL WAS COMPLETED 3 (MO.) 23 (DAY) 74 (YR.)

Well is near Wing Field Lake. road, approximately

miles N NE E SE S SW W NW of (TOWN, ETC.)

Section 19, Township 18, Range 15 W.

Directions for reaching well: (use permanent landmarks) Wing Field Lake Road

1. Total Depth of Well 270

2. Water Producing Formation: From 232 ft. To 270 ft.

3. Method of Construction:

Rotary [✓] Cable [ ] Driven [ ] Jetted [ ] Bored [ ] Dug [ ]

4. Water Level Below Land Surface 90 ft.

5. Gallons per Hour ____ Gallons per Minute 15

6. Well disinfected with H-TH

7. Cased to 231 ft. with Value Diameter 2½" Casing

8. Cemented from 25 ft. to Ground Level ft.

9. Casing Perforated from 231 ft. to 273 ft.

10. Well Backfilled with:

— from 25 ft. to 0 ft.

(SAND, CLAY, CEMENT, MUD)

11. Gravel Pack from NO ft. to ____ ft.

12. Screen Diameter:

2½" inches from 231 ft. to 273 ft.

13. Type Screen Rock Jawed Fittings Pipe 2½" Slot Size ____

14. Use of Well:

[✓] DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Dry Sand To 20 Ft		
Blue Shell From 20 Ft To Top of Brown Sand 232 Ft		

Remarks:

Signed: J W Kelly

Date: 4 (MONTH) 29 (DAY) 74 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☐ REPLACEMENT WELL ☑

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Donald McGaugh
WELL CONTRACTOR: Alford Drilling
CONTRACTOR LICENSE NO.: C1317
NAME OF DRILLER: Philip Alford
DRILLER REGISTRATION NO.: D2597
DATE WELL WAS COMPLETED: 9 (MO.) 15 (DAY) 77 (YR.)

Well is near South Field road, approximately 5 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 19 BDD, Township 18S, Range 15W

Directions for reaching well: (use permanent landmarks) Rt 6, Box 47A El Dorado, Ark.

1. Total Depth of Well: 85'
2. Water Producing Formation: From 55 ft. To 85 ft.
3. Method of Construction: Rotary ✓ Cable ___ R.C. ___ Driven ___ Jetted ___ Bored ___
4. Water Level Below Land Surface: 55 ft.
5. Gallons per Hour: 1200 Gallons per Minute: 20
6. Well disinfected with: HTH
7. Cased to 75 ft. with 4" Diameter Sch 40 PVC casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 60 ft.
11. Gravel Pack from 60 ft. to 85 ft.
12. Screen Diameter: 4 inches from 75 ft. to 85 ft.
13. Type Screen: Slot Fittings: CXC Slot Size: 016
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Sand	0	3
Clay	3	13
Sand	13	18
Clay	18	45
Sand	45	85

RECEIVED
OCT 27 1977
COMMITTEE ON WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr

Signed: [signature]

Date: 10 (MONTH) 25 (DAY) 77 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

NEW WELL [X] REPLACEMENT WELL [ ]

Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: McKinnon Lonnie
WELL CONTRACTOR: Gerald A. Well
CONTRACTOR LICENSE NO.: C1144
NAME OF DRILLER: Gerald A. Well
DRILLER REGISTRATION NO.: D2304
DATE WELL WAS COMPLETED: Dec (MO.) 27 (DAY) 75 (YR.)

Well is near Hwy 167 road, approximately 4 miles N NE E SE (S) SW W NW of El Dorado (TOWN, ETC.)
Section 29, Township 11S, Range 11 W. 190BC
Directions for reaching well:
(use permanent landmarks)

1. Total Depth of Well 305
2. Water Producing Formation: From 290 ft. To 305 ft.
3. Method of Construction:
Rotary X Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface 153 ft.
5. Gallons per Hour ___ Gallons per Minute 20
6. Well disinfected with chlorine
7. Cased to 290 ft. with 4" Diameter PVC Casing
8. Cemented from 0 ft. to 15 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: mud from 15 ft. to 110 ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from ___ ft. to ___ ft.
12. Screen Diameter: 2" inches from 290 ft. to 305 ft.
13. Type Screen [illegible] Fittings [illegible] Slot Size .008
14. Use of Well: X DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
[illegible]	0	3
[illegible]	3	27
[illegible]	27	290
[illegible]	290	305

Remarks:

Signed: Gerald A. Well

Date: Jan (MONTH) 5 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

REPORT OF WATER WELL CONSTRUCTION

Well ✓ Work-over Well ____ Replacement Well ____

er of Well [illegible] Bethel Church

ractor [illegible] C/106

er Name and No. [illegible] D2102

Well was Completed 5-11-84

Total Depth of Well 40 Ft.

Water Producing Formation: From 15 Ft.

To 40 Ft.

Water Level Below Land Surface 15 ft.

Gallons per Hour 15

Well Disinfected with H7H

Casing to 40 Ft.

Cased with 30" Diameter Cement Casing

Cemented from 0 Ft. to 10 Ft.

Use of Well: ✓ Domestic ____ Irrigation ____ Municipal ____ Other

County Union (in which well is located)

Well is near South Jackson Road

Section 21 DAC Township 18S Range 15W

Directions for Reaching Well: Go south on Hwy 6 (use permanent landmark)

Go South Jackson about 4 miles

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
clay	0	15
wet clay	15	23
shale	23	34
wet sand	34	38
shale	38	40

Remarks: ____

Signed: [signature] Date: 5-11-84

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well ____ Work-over Well ____ Replacement Well X

Owner of Well Jack Davis

Contractor Hamlin-Nolte C/054

Driller Name and No. Cecil Nolte D2097

Date Well was Completed 11-29-85

Total Depth of Well 310 Ft.

Water Producing Formation: From 284 Ft.

To 310 Ft.

Water Level Below Land Surface 111

Gallons per Hour 900

Well Disinfected with H+H

Casing to 280 Ft.

Cased with 4" Diameter PVC Casing

Cemented from 0 Ft. to 100 Ft.

Use of Well: X Domestic ____ Irrigation ____ Municipal ____ Other

County UNION (in which well is located)

Well is near US 167 Road

Section 21 Township 18S Range 15W

Directions for Reaching Well: Take Right on First Road about ONE Mile South of Interstate 20 (use permanent landmark)
Then go 1.5 Mile Cross Railroad Firsthouse on Right Next To little Bethel Baptist Church

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Red Clay	0	12
Gray Clay	12 -	50
Fine Sand w/clay stks	50 -	96
Fine Sand	96 -	119
Gray Clay w/Sand & Rock	119 -	284
Fine Sand w/Rock & Shale	284 -	310
Gray Clay	310 -	320

Remarks: ____

Signed: Cecil Nolte Date: 11-29-85

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

REPORT OF WATER WELL CONSTRUCTION

Well ✓ Work-over Well ____ Replacement Well ____

ner of Well Little Bethel Church

tractor [illegible] C1106

ler Name and No. Jack Davis D2102

e Well was Completed 5-11-84

Total Depth of Well 40 Ft.

Water Producing Formation: From 15 Ft.

To 40 Ft.

Water Level Below Land Surface 15 ft.

Gallons per Hour 15

Well Disinfected with H2H

Casing to 40 Ft.

Cased with 30" Diameter Cement Casing

Cemented from 0 Ft. to 10 Ft.

Use of Well: ✓ Domestic ____ Irrigation ____ Municipal ____ Other

County Clarion (in which well is located)

Well is near South Jackson Road

Section 21 DAC Township 18S Range 15W

Directions for Reaching Well: Go South on Clarksville to (use permanent landmark)

Go South Jackson about 4 miles

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
clay	0	15
wet clay	15	23
shale	23	34
wet sand	34	38
shale	38	40

Remarks: ____

Signed: Jack Davis Date: 5-11-84

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well ____ Work-over Well ____ Replacement Well X

Owner of Well Jack Davis

Contractor Hamlin-Nolte C1054

Driller Name and No. Cecil Nolte D2097

Date Well was Completed 11-29-85

1. Total Depth of Well 310 Ft.
2. Water Producing Formation: From 284 Ft.

To 310 Ft.

3. Water Level Below Land Surface 111
4. Gallons per Hour 900
5. Well Disinfected with H+H
6. Casing to 280 Ft.
7. Cased with 4" Diameter PVC Casing
8. Cemented from 0 Ft. to 100 Ft.
9. Use of Well: X Domestic ____ Irrigation ____ Municipal ____ Other

County UNION (in which well is located)

Well is near US167 Road

Section 21 Township 18S Range 15W

Directions for Reaching Well: Take Right on First Road about ONE Mile South of Intersection of US 167 Then go 1.5 Mile Cross Railroad First house on Right Next To little Bethel Baptist Church (use permanent landmark)

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Red Clay	0	12
Gray Clay	12 -	50
Fine Sand w/clay stks	50 -	96
Fine Sand	96 -	119
Gray Clay w/sand & Rock	119 -	284
Fine Sand w/ Rock & shale	284 -	310
Gray Clay	310 -	320

Remarks: ____

Signed: Cecil Nolte Date: 11-29-85

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: El Dorado Poultry Co.
WELL CONTRACTOR: Alford Drilling Co.
CONTRACTOR LICENSE NO.: C1317
NAME OF DRILLER: Phillip Alford III
DRILLER REGISTRATION NO.: D2597
DATE WELL WAS COMPLETED: 10 (MO.) 6 (DAY) 76 (YR.)

Well is near: Hwy 167 S. 4 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.) (or) approximately
Section 27 BA, Township 18S, Range 15W
Directions for reaching well: (use permanent landmarks) Go to mill on Osc. And get permission & direction

1. Total Depth of Well: 225
2. Water Producing Formation: From 195 ft. To 225 ft.
3. Method of Construction: Rotary ✓ Cable ____ R.C. ____ Driven ____ Jetted ____ Bored ____
4. Water Level Below Land Surface: 70 ft.
5. Gallons per Hour: 600 Gallons per Minute: 10
6. Well disinfected with: HTH
7. Cased to 185 ft. with 4" Diameter Sch 40 PVC Casing
8. Cemented from: 0 ft. to 10 ft.
9. Casing Perforated from: ____ ft. to ____ ft.
10. Well Backfilled with: Mud (SAND, CLAY, CEMENT, MUD) from 10 ft. to 180 ft.
11. Gravel Pack from: 180 ft. to 225 ft.
12. Screen Diameter: 4" inches from 185 ft. to 225 ft.
13. Type Screen: Slot Fittings: Slip Slot Size: 15
14. Use of Well: ____ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet, From	To
Topsoil	0	3
Sandy Clay	3	6
Red Clay	6	35
Sand	35	78
Lignite	78	82
Clay	82	84
Sand	84	105
Shale	105	180
Sand	180	190
Shale	190	195
Sand	195	225

RECEIVED
OCT 13 1976
COMMITTEE ON WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material or workmanship for a period of: 1 yr.

Signed: [signature]

Date: 10 (MONTH) - 8 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Steve Moss
WELL CONTRACTOR: Alford Drilling Co.
CONTRACTOR LICENSE NO.: C1217
NAME OF DRILLER: Phil Alford III
DRILLER REGISTRATION NO.: D2597
DATE WELL WAS COMPLETED: 2 (MO.) 28 (DAY) 76 (YR.)

Well is near: South Side
6 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 30, Township 18S, Range 13W.
Directions for reaching well: (use permanent landmarks) Rt 1, Box 358

1. Total Depth of Well: 53 ft.
2. Water Producing Formation: From 30 ft. To 53 ft.
3. Method of Construction:
Rotary ✓ Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface: 28 ft.
5. Gallons per Hour: 1200 Gallons per Minute: 20
6. Well disinfected with: HTH
7. Cased to 53 ft. with 8 4" Diameter Sch 40 PVC Casing
8. Cemented from ____ ft. to ____ ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Sand & Mud from ~~20~~ ~~35~~ ft. to ~~35~~ ~~53~~ ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 25 ft. to 53 ft.
12. Screen, Diameter: 4 inches from 45 ft. to 53 ft.
13. Type Screen Louvered Pittings 6 x 6 Slot Size 12
14. Use of Well: ✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	3
Yellow Clay	3	25
Blue Clay	25	30
Sand (Lignitic)	30	53

Remarks:

Signed: [signature]
Date: 2 (MONTH) 28 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Stephen Day
WELL CONTRACTOR: Alford Drilling Co.
CONTRACTOR LICENSE NO.: C1317
NAME OF DRILLER: Phil Alford III
DRILLER REGISTRATION NO.: D2397
DATE WELL WAS COMPLETED: 3 (MO.) 27 (DAY) 78 (YR.)

Well is near Southfield road, approximately 6 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 30, Township 18 S, Range 15W
Directions for reaching well: (use permanent landmarks) Rt. 1, Box 357K El Dorado, Ark.

1. Total Depth of Well: 94'
2. Water Producing Formation: From 72 ft. To 97 ft.
3. Method of Construction: Rotary ✓ Cable ___ R.C. ___ Driven ___ Jetted ___ Bored ___
4. Water Level Below Land Surface: 30 ft.
5. Gallons per Hour: 1800 Gallons per Minute: 30
6. Well disinfected with: ATH
7. Cased to 74 ft. with 4" Diameter SCH 40 RG Casing
8. Cemented from 0 ft. to 60 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: Sand & Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 60 ft.
11. Gravel Pack from 60 ft. to 94 ft.
12. Screen Diameter: 4 inches from 74 ft. to 94 ft.
13. Type Screen: Stel Fittings: CXC Slot Size: 015
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	3
Clay	3	25
Shale	25	72
~~Clay~~ Sand	72	97

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr

Signed: [signature]

Date: 6 (MONTH) 20 (DAY) 78 (YEAR)

Mail to: Committee on Water Well Construction – 3815 W. Roosevelt Road – Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Jack Lee
WELL CONTRACTOR J.W. Cammack
CONTRACTOR LICENSE NO. C1163
NAME OF DRILLER J.W. Cammack.
DRILLER REGISTRATION NO. D 2328
DATE WELL WAS COMPLETED March (MO.) 2 (DAY) 73 (YR.)

Well is near Mt Union Church road, approximately 7 1/2 miles N NE E SE S SW W NW of El Dorado Ark (TOWN, ETC.)
Section 34, Township 18N, Range 15W.
Directions for reaching well: (use permanent landmarks) 1/4 Mile off Hiway 7 South of Eldora on Mt union rabbl. C

1. Total Depth of Well 70
2. Water Producing Formation: From 46 ft. To 70 ft.
3. Method of Construction:
Rotary V Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface 46 ft.
5. Gallons per Hour 300 Gallons per Minute 5
6. Well disinfected with Chlorine
7. Cased to 70 ft. with 4" Diameter P.V.C. Casing
8. Cemented from 20 ft. to 0 ft.
9. Casing Perforated from 67 ft. to 70 ft.
10. Well Backfilled with:
Cement & Clay (SAND, CLAY, CEMENT, MUD) from 30 ft. to 20 ft.
11. Gravel Pack from 70 ft. to 30 ft.
12. Screen Diameter:
4" inches from ____ ft. to ____ ft.
13. Type Screen Perf. Fittings ____ Slot Size ____
14. Use of Well:
[✓] DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Tok, soil Sandy	0	2
Red Clay	2	15
White & red like clay	15	46
White coarse sand	46	70

Remarks:

Signed: J.W. Cammack
Date: March (MONTH) 13 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Gerald Brian
WELL CONTRACTOR J-W Kelly
CONTRACTOR LICENSE NO. C 1179
NAME OF DRILLER J-W Kelly
DRILLER REGISTRATION NO. D 2356
DATE WELL WAS COMPLETED 12 MO. 20 DAY 73 YR.

Well is near Mt. Union Church road, approximately 8 miles N NE E SE (S) SW (W) NW of Eldorado (TOWN, ETC.)
Section 18, Township 17 S, Range 15 W
Directions for reaching well: (use permanent landmarks) Mt Union Church
167 South, El Dorado

1. Total Depth of Well 90
2. Water Producing Formation From 70 ft. To 90 ft.
3. Method of Construction:
Rotary ✓ Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface ___ ft.
5. Gallons per Hour 700 Gallons per Minute 11.6
6. Well disinfected with T-N-
7. Cased to 90 ft. with PVC Diameter 4" Casing
8. Cemented from 30 ft. to Ground Surface ft.
9. Casing Perforated from 70 ft. to 90 ft.
10. Well Backfilled with: ✓ from 30 ft. to 0 ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 90 ft. to 30 ft.
12. Screen Diameter: 4" inches from 80 ft. to 90 ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well:
DOMESTIC ✓ IRRIGATION ___ MUNICIPAL ___ OTHER ___

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Sand	0	25 Ft
Red Clay Formation	25 Ft	70 Ft

Remarks:

Signed: J-W Kelly
Date: 6 MONTH 20 DAY 73 YEAR

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

COMMITTEE ON WATER WELL CONSTRUCTION

ST-2095

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well X Work-over Well ____ Replacement Well ____

County Union (in which well is located)

Owner of Well Faircrest Water Association

Contractor Layne-Arkansas Company C-1290

Well is near ____ Road

Driller Name and No. Alven Brewer – D-2195

Section 35 DACJ Township 18S Range 15W

Date Well was Completed November 18, 1983

Directions for Reaching Well: ____ (use permanent landmark)

1. Total Depth of Well 689' 7" Ft.
2. Water Producing Formation: From 609 Ft. To 689 Ft.
3. Water Level Below Land Surface 281'
4. Gallons per Hour 15000
5. Well Disinfected with HTH
6. Casing to 596 Ft.
7. Cased with 10" Diameter .279 Casing
8. Cemented from 0 Ft. to 596 Ft.
9. Use of Well: Domestic ____ Irrigation ____ Municipal X Other ____

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths in feet from	to
"See Attached Sheet"		

Remarks: ____

Signed: Mark Bennett Date: 12/05/83

Form No. AWD-3

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

GEOLOGY COPY

NEW WELL ☐ REPLACEMENT WELL ☑

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Carroll

(Please print or type)

OWNER OF WELL Mrs. Hart
WELL CONTRACTOR Bowing Water Wells Inc.
CONTRACTOR LICENSE NO. 1219
NAME OF DRILLER Doak D. Bowing
DRILLER REGISTRATION NO. 2044
DATE WELL WAS COMPLETED March 7 (MO.) (DAY) 73 (YR.)

Well is near Hwy 7 South road, approximately ____ miles N NE (E) SE S SW W NW of Hwy 167 (TOWN, ETC.)
Section 36, Township 18, Range 15.
Directions for reaching well: (use permanent landmarks)

1. Total Depth of Well 40
2. Water Producing Formation: From 20 ft. To 40 ft.
3. Method of Construction:
Rotary ____ Cable ____ Driven ____ Jetted ____ Bored ✓ Dug ____
4. Water Level Below Land Surface 20 ft.
5. Gallons per Hour 2000 + Gallons per Minute
6. Well disinfected with HTH
7. Cased to 45 ft. with 30 Diameter 5" Casing
8. Cemented from 0 ft. to 12 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Cement (SAND, CLAY, CEMENT, MUD) from 0 ft. to 12 ft.
11. Gravel Pack from 12 ft. to 40 ft.
12. Screen Diameter: ____ inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Surface Soil	0	2
Clay	2	6
Dry Shale	6	20
Water Sand	20	40

Remarks:

Signed: Paul K. Bowing
Date: March 7 (MONTH) (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☐ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: UNION

(Please print or type)

OWNER OF WELL Mr. A. L. TWITCHELL
WELL CONTRACTOR BOXING WATER WELL, INC
CONTRACTOR LICENSE NO. 1269
NAME OF DRILLER DOAK
DRILLER REGISTRATION NO. 2044
DATE WELL WAS COMPLETED APRIL (MO.) 24 (DAY) 77 (YR.)

Well is near _____ road, approximately _____ miles N NE E SE S SW W NW of _____ (TOWN, ETC.)
Section 36, Township 18, Range 15.
Directions for reaching well:
(use permanent landmarks) _____

1. Total Depth of Well 22
2. Water Producing Formation: From 16 ft. To 22 ft.
3. Method of Construction:
Rotary ____ Cable ____ Driven ____ Jetted ____ Bored ✓ Dug ____
4. Water Level Below Land Surface 10 ft.
5. Gallons per Hour 1000+ Gallons per Minute 16.6
6. Well disinfected with HTH
7. Cased to 30 ft. with TILE Diameter 30 Casing
8. Cemented from 0 ft. to 16 ft.
9. Casing Perforated from [illegible] ft. to ____ ft.
10. Well Backfilled with:
CEMENT GROUT (SAND, CLAY, CEMENT, MUD) from 0 ft. to 16 ft.
11. Gravel Pack from 16 ft. to 30 ft.
12. Screen Diameter: [illegible]
____ inches from [illegible] ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
SURF SOIL	0	2
CLAY	2	16
WATER SAND	16	30

Remarks: _____

Signed: Doak V. Boxing
Date: _____ MONTH _____ DAY _____ YEAR

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

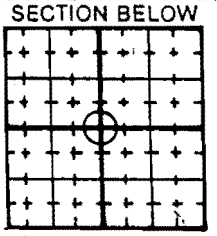
GEOLOGY COPY

FORM NO. WD-1

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

1 Contractor Name & Number: Diversified Drilling Services C# 1140
2 Driller Name & Number: Ed Noble D# 2109
3 Pump Installer Name & Number: _____ P# _____
4 Date Well Completed: January 21, 1994 New Well [X] Replace or Work-over [ ]

10 LOCATE WITH 'X' IN SECTION BELOW



COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
Union	SE ¼ of NW ¼ of	26	T18S	R15W

LONGITUDE _____ ° _____ ' _____ "
LATITUDE 11 _____ ° _____ ' _____ "

1 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
Sand	0	50
Clay	50	170
Sand	170	200

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 200 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS.
4 STATIC WATER LEVEL Ft below land surface
5 YIELD _____ gallons per [ ] min [ ] hr
6 DIAMETER OF BORE HOLE 4½ IN

PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE [ ] TURBINE [ ] JET [ ]
2 SETTING DEPTH: FEET
3 BRAND NAME AND SERIAL NUMBERS:
4 RATED CAPACITY gallons per minute
5 TYPE LUBRICATION
6 DROP PIPE OR COLUMN PIPE SIZE
7 WIRE SIZE
8 PRESSURE TANK . . . SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR
10 Is there an abandoned water well on the property?

D1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Randy Wood
STREET ADDRESS 266 Wood Acres Dr.
CITY El Dorado, Ar. 71730

2 CASING FROM TO W/ "ID
FROM TO W/ "ID
TYPE CASING:

3 SCREEN
TYPE: DIA SLOT/GA
SET FROM FT TO FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK: FROM FT TO FT

5 BACK FILLED WITH: sand
FROM 12 FT TO 200 FT

6 SEALED WITH: grout
FROM 0 FT TO 12 FT
FROM FT TO FT

7 DISINFECTED WITH:

8 USE OF WELL:

DOMESTIC	[ ]	COMMERCIAL	[ ]
IRRIGATION	[ ]	MONITOR	[ ]
LIVESTOCK/POULTRY	[ ]	TEST WELL	[ ]
OIL/GAS SUPPLY	[ ]	SEMI-PUBLIC	[ ]
PUBLIC SUPPLY	[X]	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	[ ]	RETURN	[ ]
CLOSED LOOP	[X]		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes [ ] no [X]

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS 3 holes 200' deep

12 SIGNED _____ DATE 2/1/94

7 JAN 89 5945 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201

GEOLOGY COPY

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

93-3887

1 Contractor Name & Number: Layne-Arkansas Company C# 1290
2 Driller Name & Number: Alven Brewer D# 2195
3 Pump Installer Name & Number: Grady Teel P# 4173
4 Date Well Completed: 2/26/91 New Well [X] Replace or Work-over [ ]

10 LOCATE WITH 'X' IN SECTION BELOW

COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
ıion	SE ¼ of SW ¼ of	9	18S	15W

NGITUDE	LATITUDE
° ' "	11 ° ' "

1 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
ee Attached		

TTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 803 ft
3 DEPTHS TO WATER PRODUCING FORMATIONS. 733
4 STATIC WATER LEVEL 450 Ft below land surface
5 YIELD 300 gallons per [X] min [ ] hr
6 DIAMETER OF BORE HOLE 26" IN

PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE [ ] TURBINE [X] JET [ ]
2 SETTING DEPTH: 550 FEET
3 BRAND NAME AND SERIAL NUMBERS: Layne
4 RATED CAPACITY 300 gallons per minute
5 TYPE LUBRICATION Oil
6 DROP PIPE OR COLUMN PIPE SIZE 6"
7 WIRE SIZE
8 PRESSURE TANK . . . SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR 4-16-91
10 Is there an abandoned water well on the property?

D1 LAND OWNER OR OTHER CONTACT PERSON:
NAME Parkers Chapel Water Assn.
STREET ADDRESS
CITY El Dorado, AR

2 CASING FROM 0 TO 720 W/ 10 "ID
FROM 667 TO 733 W/ 6 "ID
TYPE CASING: Steel & SST

3 SCREEN
TYPE: SST DIA 6" .030 SLOT/GA
SET FROM 733 FT TO 803 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 668 FT TO 803 FT
5 BACK FILLED WITH: Cement
FROM 15 FT TO 720 FT
6 SEALED WITH: Cement
FROM 0 FT TO 15 FT
FROM FT TO FT
7 DISINFECTED WITH: HTH
8 USE OF WELL:

DOMESTIC	[ ]	COMMERCIAL	[ ]
IRRIGATION	[ ]	MONITOR	[ ]
LIVESTOCK/POULTRY	[ ]	TEST WELL	[ ]
OIL/GAS SUPPLY	[ ]	SEMI-PUBLIC	[ ]
PUBLIC SUPPLY	[X]	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	[ ]	RETURN	[ ]
CLOSED LOOP	[ ]		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning? If yes, name use: yes [ ] no [ ]
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS
12 SIGNED Jeff W. Jones DATE 8/22/91

D-7 JAN 89 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201
1-5945

GEOLOGY COPY

ARKANSAS GEOLOGICAL COMMISSION

WATER WELL CONSTRUCTION REPORTS
TOWNSHIP 18 SOUTH RANGE 16 WEST

NEW WELL [V] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Buddy & Bobbie Modini
WELL CONTRACTOR: J.W. Cammack
CONTRACTOR LICENSE NO.: C 1163
NAME OF DRILLER: J.W. Cammack
DRILLER REGISTRATION NO.: D 2328
DATE WELL WAS COMPLETED: March (MO.) 9 (DAY) 73 (YR.)

Well is near Wesson ark. road, approximately 12 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section ____, Township 18, Range 16.
Directions for reaching well: (use permanent landmarks) Old hiway 15 South of El Dorado. 3 miles to wtrd Wesson.

1. Total Depth of Well: 78
2. Water Producing Formation: From 60 ft. To 78 ft.
3. Method of Construction:
Rotary [V] Cable [ ] Driven [ ] Jetted [ ] Bored [ ] Dug [ ]
4. Water Level Below Land Surface: 38 ½ ft.
5. Gallons per Hour: 600 Gallons per Minute: 10
6. Well disinfected with: Chlorine
7. Cased to 78 ft. with 4" Diameter P.V.C. Casing
8. Cemented from 20 ft. to 0 ft.
9. Casing Perforated from 75 ft. to 78 ft.
10. Well Backfilled with:
Cement + clay (SAND, CLAY, CEMENT, MUD) from 40 ft. to 20 ft.
11. Gravel Pack from 78 ft. to 40 ft.
12. Screen Diameter:
____ inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
[V] DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Sandy tan soil	0	2
Yellow Clay	2	6
Red Clay	6	12
White fine clay	12	25
Yellow White Clay	25	40
Pink & white fine clay	40	60
White coarse Sand	60	78

Remarks:

Signed: J.W. Cammack
Date: March (MONTH) 9 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

ABANDONED WELL

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

A

1 Contractor Name & Number: HAMLIN & NOLTE C# 1054

2 Driller Name & Number: TOMMY HAMLIN D# 2545

3 Pump Installer Name & Number: TOMMY HAMLIN P# 4226

4 Date Well Completed: 3-6-96 New Well ☐ Replace or Work-over ☐

COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
UNION	NW CORNER OF NE ¼ of NW ¼ of	5	18S	16W

10 LOCATE WITH 'X' IN SECTION BELOW

TRIANGLE #1

LONGITUDE 1 92 ° 46 ' 51 "

LATITUDE 11 33 ° 11 ' 36 "

B

1 DESCRIPTION OF FORMATION: — DEPTHS IN FEET

	FROM	TO
Clay	0	4
Sand w/ Clay & Lignite	4	172
Clay	172	246
Green Sand	246	256
Green Sand & Clay Layers	256	300
Clay w/ small aand Layers	300	330

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 300 ft

3 DEPTHS TO WATER PRODUCING FORMATIONS. 246

4 STATIC WATER LEVEL 44.5 Ft below land surface

5 YIELD 50 gallons per ☐ min ☐ hr

6 DIAMETER OF BORE HOLE 8 IN

C PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☐ TURBINE ☐ JET ☐

2 SETTING DEPTH: 105 FEET

3 BRAND NAME AND SERIAL NUMBERS: Grundfos 5SQE-18

4 RATED CAPACITY 5 gallons per minute

5 TYPE LUBRICATION

6 DROP PIPE OR COLUMN PIPE SIZE 1"

7 WIRE SIZE 10-2G

8 PRESSURE TANK . . . SIZE, MAKE, MODEL

9 DATE OF INSTALLATION OR REPAIR 3-6-96

10 Is there an abandoned water well on the property? YES

D

1 LAND OWNER OR OTHER CONTACT PERSON:

NAME GREAT LAKES CHEMICAL CO

STREET ADDRESS p o box 1878

CITY ELDORADO, AR 71230-1878

2 CASING FROM 0 TO 246 W/ 4 "ID
FROM 256 TO 266 W/ 4 "ID

TYPE CASING:

3 SCREEN

TYPE: PVC	DIA 4"	SLOT/GA .025
SET FROM 300	FT TO 280	FT
TYPE: PVC	DIA 4	SLOT/GA .025
SET FROM 276	FT TO 266	FT 246-256

4 GRAVEL PACK FROM 220 FT TO 300 FT

5 BACK FILLED WITH: Mud
FROM 220 FT TO 50 FT

6 SEALED WITH: Cement-Bentonite
FROM 50 FT TO 0 FT
FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☒
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	☐	RETURN	☐
CLOSED LOOP	☐		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS

12 SIGNED [signature] DATE 3-6-96

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

A

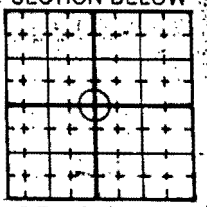
1 Contractor Name & Number: HAMLIN & NOLTE C# 1054

2 Driller Name & Number: TOMMY HAMLIN D# 2545

3 Pump Installer Name & Number: TOMMY HAMLIN P# 4226

4 Date Well Completed: 3-6-96 New Well ☐ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW



TRIANGLE #1

5 COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
UNION	NW CORNER OF NE ¼ of NW ¼ of	5	18S	16W

11 LONGITUDE				LATITUDE			
92	° 46	' 51	"	33	° 11	' 36	"

B 1 DESCRIPTION OF FORMATION — DEPTHS IN FEET

	FROM	TO
Clay	0	4
Sand w/ Clay & Lignite	4	172
Clay	172	246
Green Sand	246	256
Green Sand & Clay Layers	256	300
Clay w/ small aand Layers	300	330

ATTACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 300 ft

3 DEPTHS TO WATER PRODUCING FORMATIONS 246

4 STATIC WATER LEVEL 44.5 Ft below land surface

5 YIELD 50 gallons per ☒ min ☐ hr

6 DIAMETER OF BORE HOLE 8 IN

C PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☒ TURBINE ☐ JET ☐

2 SETTING DEPTH: 105 FEET

3 BRAND NAME AND SERIAL NUMBERS: Grundfos 5S07-18

4 RATED CAPACITY 5 gallons per minute

5 TYPE LUBRICATION

6 DROP PIPE OR COLUMN PIPE SIZE 1"

7 WIRE SIZE 10-2G

8 PRESSURE TANK ... SIZE, MAKE, MODEL

9 DATE OF INSTALLATION OR REPAIR 3-6-96

10 Is there an abandoned water well on the property? YES

D 1 LAND OWNER OR OTHER CONTACT PERSON

NAME GREAT LAKES CHEMICAL CO

STREET ADDRESS p o box 1878

CITY ELDORADO, AR 71230-1878

2 CASING FROM 0 TO 246 W/ 4 "ID

FROM 256 TO 266 W/ 4 "ID

TYPE CASING:

3 SCREEN

TYPE: PVC DIA 4" SLOT/GA .025

SET FROM 300 FT TO 280 FT

TYPE: PVC DIA 4 SLOT/GA .025

SET FROM 276 FT TO 266 FT 246-256

4 GRAVEL PACK FROM 220 FT TO 300 FT

5 BACK FILLED WITH: Mud

FROM 220 FT TO 50 FT

6 SEALED WITH: Cement-Bentonite

FROM 50 FT TO 0 FT

FROM FT TO FT

7 DISINFECTED WITH: HTH

8 USE OF WELL

DOMESTIC	☐	COMMERCIAL	☒
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE ☐ RETURN ☐

CLOSED LOOP ☐

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?

If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS: RECEIVED

12 SIGNED Tommy J Hamlin DATE 3-6-96

AWD-7 JAN 89 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201

ACI-5945

GEOLOGY COPY

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union ✓

(Please print or type)

OWNER OF WELL Pastor Raymond Goodwin
WELL CONTRACTOR Bowing Water Well, Inc
CONTRACTOR LICENSE NO. 1269
NAME OF DRILLER Dock Bowing
DRILLER REGISTRATION NO. 2044
DATE WELL WAS COMPLETED Sept. (MO.) 14 (DAY) 72 (YR.)

Well is near Pound Rd road, approximately 4 miles N NE E SE S SW (W) NW of Ft. (TOWN, ETC.)
Section 9, Township 18, Range 16.
Directions for reaching well: (use permanent landmarks)

1. Total Depth of Well 42
2. Water Producing Formation: From 20 ft. To 42 ft.
3. Method of Construction:
Rotary ____ Cable ____ Driven ____ Jetted ____ Bored ✓ Dug ____
4. Water Level Below Land Surface 18 ft.
5. Gallons per Hour 1,500 Gallons per Minute
6. Well disinfected with HTH
7. Cased to 42 ft. with Tile Diameter 30 Casing
8. Cemented from 0 ft. to 14 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with:
CEMENT (SAND, CLAY, CEMENT, MUD) from 0 ft. to 14 ft.
11. Gravel Pack from 14 ft. to 42 ft.
12. Screen Diameter:
____ inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Surface Soil	0	2
Clay	2	16
Sand	16	20
White water Sand	20	40
Gray water Sand	40	42

Remarks:

Signed: Dock K Bowing
Date: Sept 14 1972 (MONTH, DAY, YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Ica Kirk
WELL CONTRACTOR: Alford Drilling Co.
CONTRACTOR LICENSE NO. C1317
NAME OF DRILLER: Phillip Alford III
DRILLER REGISTRATION NO. D2597
DATE WELL WAS COMPLETED: 1 (MO.) 12 (DAY) 76 (YR.)

Well is near: Norwood
3 miles N NE E SE S SW W NW of: El Dorado (TOWN, ETC.)
Section 3, Township 18S, Range 16W
Directions for reaching well: (use permanent landmarks) Turn S. at Wyatt Bapt. Church off Hwy 82 Well on Right appox 2 3/4 mi.

1. Total Depth of Well: 60 ST
2. Water Producing Formation: From 18 ft. To 60 ft.
3. Method of Construction: Rotary ✓ Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface: 25 ft.
5. Gallons per Hour: 1200 Gallons per Minute: 20
6. Well disinfected with: HTH
7. Cased to: 60 ft. with: 4" Diameter: Sch 40 PVC Casing
8. Cemented from: 0 ft. to: 10 ft.
9. Casing Perforated from: ____ ft. to: ____ ft.
10. Well Backfilled with: Sand Clay from: 10 ft. to: 40 ft. (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from: 40 ft. to: 60 ft.
12. Screen Diameter: 4 inches from: 52 ft. to: 60 ft.
13. Type Screen: Gravel Pack Fittings: Cement Slot Size: 10
14. Use of Well: ✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Top Soil	0	4
Clay	4	18
Sand	18	60

Remarks:

Signed: [signature]
Date: 1 (MONTH) 25 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☐ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union ✓

(Please print or type)

OWNER OF WELL M. A. Evans
WELL CONTRACTOR J. W. Cammack.
CONTRACTOR LICENSE NO. C1163
NAME OF DRILLER J. W. Cammack
DRILLER REGISTRATION NO. D 2328
DATE WELL WAS COMPLETED Feb. (MO.) 26 (DAY) 73 (YR.)

Well is near Mt Union Church. road, approximately 7 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 4, Township 18, Range 16.
Directions for reaching well: 18N 15W 34
(use permanent landmarks) 1/2 Mile off 167 South, El Dorado on Mt Union Road.

1. Total Depth of Well 63 ft.
2. Water Producing Formation: From 50 ft. To 63 ft.
3. Method of Construction:
Rotary ✓ Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface 43 ft.
5. Gallons per Hour ~~300~~ 300 Gallons per Minute 5
6. Well disinfected with Chlorine
7. Cased to 63 ft. with 3" Diameter Plastic P.V.C. Casing
8. Cemented from 20 ft. to 0 ft.
9. Casing Perforated from 60 ft. to 63 ft.
10. Well Backfilled with:
Clay & Cement (SAND, CLAY, CEMENT, MUD) from 30 ft. to 20 ft.
11. Gravel Pack from 63 ft. to 30 ft.
12. Screen Diameter:
3" Asbestos inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
top soil & sand.	0	2
Red clay.	2	12
Red & white fine clay	12	20
White & yellow pink clay	20	50
Sand - Brownish & white	50	63

Remarks:

Signed: J. W. Cammack.
Date: March (MONTH) 13 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Marvin Bagley
WELL CONTRACTOR Gravel A. Hewett
CONTRACTOR LICENSE NO. C114 4C
NAME OF DRILLER Gravel A. Hewett
DRILLER REGISTRATION NO. D2304
DATE WELL WAS COMPLETED 9 (MO.) 25 (DAY) 75 (YR.)

Well is near _____ road, approximately _____ miles N NE E SE S SW W NW of _____ (TOWN, ETC.)
Section 9, Township 16S, Range 16W.
Directions for reaching well: (use permanent landmarks)

1. Total Depth of Well 210
2. Water Producing Formation: From 200 ft. To 210 ft.
3. Method of Construction:
Rotary X Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface ____ ft.
5. Gallons per Hour ____ Gallons per Minute 10
6. Well disinfected with Chlorine
7. Cased to 210 ft. with 3" Diameter galv. steel Casing
8. Cemented from 0 ft. to 15 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with:
____ from ____ ft. to ____ ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from ____ ft. to ____ ft.
12. Screen Diameter:
2" inches from 200 ft. to 210 ft.
13. Type Screen Bell & SS Fittings galv Slot Size .010
14. Use of Well:
DOMESTIC [V] IRRIGATION [ ] MUNICIPAL [ ] OTHER [ ]

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	3
Sandstone	3	25
Shale	25	200
Sand	200	210

Remarks:

Signed: Gravel A. Hewett

Date: 10 (MONTH) 20 (DAY) 75 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

V

NEW WELL [V] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Dandy Homes
WELL CONTRACTOR Boreing Well Inc.
CONTRACTOR LICENSE NO. 1269
NAME OF DRILLER DOAK V. Boreing
DRILLER REGISTRATION NO. 2044
DATE WELL WAS COMPLETED September (MO.) 1 (DAY) 1975 (YR.)

Well is near _____ road, approximately _____ miles N NE E SE S SW W NW of _____ (TOWN, ETC.)
Section 9, Township 18, Range 16.
Directions for reaching well:
(use permanent landmarks) _____

1. Total Depth of Well 42 feet
2. Water Producing Formation: From 20 ft. To 42 ft.
3. Method of Construction:
Rotary ____ Cable ____ Driven ____ Jetted ____ Bored [V] Dug ____
4. Water Level Below Land Surface 20 ft.
5. Gallons per Hour 1000 Gallons per Minute 16.6
6. Well disinfected with HTH
7. Cased to 42 ft. with TIC Diameter 30 Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with:
CEM (SAND, CLAY, CEMENT, MUD) from 0 ft. to 10 ft.
11. Gravel Pack from [illegible] ft. to 42 ft.
12. Screen Diameter: ____ inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well:
[V] DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
surface soil	0	2
clay	2	15
sand	15	20
water sand	20	42

Remarks: _____

Signed: Doak V Boreing
Date: September 1 77 (MONTH DAY YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

V

(Please print or type)

OWNER OF WELL Frank Lobe

WELL CONTRACTOR Zell & Stevens Drlg Co.

CONTRACTOR LICENSE NO. C-1005

NAME OF DRILLER C. M. Zell

DRILLER REGISTRATION NO. D-2570

DATE WELL WAS COMPLETED 9-4-73 (MO. DAY YR.)

Well is near Newell road, approximately ___ miles N NE E SE S SW W NW of (TOWN, ETC.)

Section 9 & 10, Township T-18-S, Range R-16-W

Directions for reaching well: (use permanent landmarks) 6 miles west of El Dorado on Highway #5, across road from Ark. Chemical Plant.

1. Total Depth of Well 156'
2. Water Producing Formation: From 140 ft. To 156 ft.
3. Method of Construction:
   Rotary ☑ Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface 78 ft.
5. Gallons per Hour 360 Gallons per Minute 6
6. Well disinfected with Clorox
7. Cased to 146 ft. with 2" Diameter Galv. Casing
8. Cemented from Surface ft. to 20' ft.
9. Casing Perforated from 140 ft. to 146 ft.
10. Well Backfilled with: ___ from ___ ft. to ___ ft. (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 146 ft. to 156 ft.
12. Screen Diameter: ___ inches from ___ ft. to ___ ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well: ☑ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	90
Sand (fine white)	90	94
Shale	94	140
Green Sand	140	156

Remarks: ___

Signed: C. M. Bell

Date: 9-4-73 (MONTH DAY YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☐ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: ~~Conway~~ Yell

(Please print or type)

OWNER OF WELL Jessica Boone
WELL CONTRACTOR Boring Water Well
CONTRACTOR LICENSE NO. 20 1269
NAME OF DRILLER Dork
DRILLER REGISTRATION NO. 2044
DATE WELL WAS COMPLETED DEC (MO.) ___ (DAY) 76 (YR.)

Well is near Hwy 15 6 miles N NE E SE S SW W NW of Ellis (TOWN, ETC.) road, approximately
Section 1000, Township 18, Range 16.
Directions for reaching well: (use permanent landmarks) Go out Hwy 15 .6 miles on right side

1. Total Depth of Well 40
2. Water Producing Formation: From 25 ft. To 40 ft.
3. Method of Construction:
Rotary ___ Cable ___ Driven ___ Jetted 25 Bored ___ Dug V
4. Water Level Below Land Surface ___ ft.
5. Gallons per Hour 10004 Gallons per Minute
6. Well disinfected with HTH
7. Cased to 40 ft. with 30 Diameter Tile Casing
8. Cemented from ___ ft. to ___ ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: CEMENT (SAND, CLAY, CEMENT, MUD) from 0 ft. to 10 ft.
11. Gravel Pack from 10 ft. to 40 ft.
12. Screen Diameter: NA inches from ___ ft. to ___ ft.
13. Type Screen ___ Fittings ___ Slot Size ___
14. Use of Well: ___ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
surface soil	0	3
clay	3	14
shale	14	25
water sand	25	40

Remarks: ~~APPROVED~~

JAN 4 1977

COMMITTEE ON WATER WELL CONSTRUCTION

Signed: [signature]

Date: ___ MONTH ___ DAY ___ YEAR

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Parkers Chapel Water Association
WELL CONTRACTOR Layne Arkansas Company
CONTRACTOR LICENSE NO. C-1099 NESE
NAME OF DRILLER Harvey Bullock
DRILLER REGISTRATION NO. D-2204
DATE WELL WAS COMPLETED November (MO.) 5 (DAY) 1976 (YR.)

Well is near _____ road, approximately _____ miles N NE E SE S SW W NW of _____ (TOWN, ETC.)
Section 11 DABJ, Township 18S, Range 16W.
Directions for reaching well: (use permanent landmarks) About 2 blocks south of Parkers Chapel Church

1. Total Depth of Well 767'
2. Water Producing Formation: From 717 ft. To 767 ft.
3. Method of Construction: Rotary X Cable ____ R.C. ____ Driven ____ Jetted ____ Bored ____
4. Water Level Below Land Surface 400 ft.
5. Gallons per Hour ____ Gallons per Minute 110
6. Well disinfected with HTH
7. Cased to 704 ft. with 8" Diameter .277 Casing
8. Cemented from 0 ft. to 704 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: ____ (SAND, CLAY, CEMENT, MUD) from ____ ft. to ____ ft.
11. Gravel Pack from 717 ft. to 767 ft.
12. Screen Diameter: 4 inches from 717 ft. to 767 ft.
13. Type Screen Keystone Fittings S.S. Slot Size .016"
14. Use of Well: ____ DOMESTIC ____ IRRIGATION XX MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Sand	0	4
Sandy Clay	4	46
Brown Sand	46	60
Sandy Clay	60	69
Blue Gumbo	69	130
Sandy Clay	130	171
Shale	171	260
Sandy Shale	260	367
Clay & Boulders	367	370
Sandy Shale	370	550
Hard Shale	550	570
Sandy Shale	570	584
Medium Sand	584	661
Sandy Shale	661	677
Medium Sand	677	764
Sandy Shale	764	789
Hard Shale	789	795

Remarks: _____

This well is guaranteed against defective material or workmanship for a period of _____

Signed: L. D. Shupe

Date: February (MONTH) 6 (DAY) 1978 (YEAR)

RECEIVED
FEB 7 1978
COMMITTEE ON
WATER WELL CONSTRUCTION

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Jim Ellen
WELL CONTRACTOR J.W. Cammack.
CONTRACTOR LICENSE NO. C 1163
NAME OF DRILLER J.W. Cammack
DRILLER REGISTRATION NO. D 2328
DATE WELL WAS COMPLETED March (MO.) 6 (DAY) 73 (YR.)

Well is near Old Parker Chapel Cemetery, road, approximately 7 miles N NE E SE S SW W NW of El Dorado. (TOWN, ETC.)
Section 12, Township 18, Range 16.
Directions for reaching well: (use permanent landmarks) 1/2 Mile south of Cemetary on Lt. up private road.

1. Total Depth of Well 63
2. Water Producing Formation: From 45 ft. To 63 ft.
3. Method of Construction:
Rotary ✓ Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface 26 ft.
5. Gallons per Hour 600 Gallons per Minute 10
6. Well disinfected with Chlorine
7. Cased to 63 ft. with 3" Diameter PVC. Casing
8. Cemented from 20 ft. to 0 ft.
9. Casing Perforated from 60 ft. to 63 ft.
10. Well Backfilled with:
Cement & Clay (SAND, CLAY, CEMENT, MUD) from 25 ft. to 20 ft.
11. Gravel Pack from 63 ft. to ~~45~~ 25 ft.
12. Screen Diameter:
____ inches. from ____ ft. to ____ ft.
13. Type Screen Steel Fittings ____ Slot Size ____
14. Use of Well:
✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Sandy loam soil	0	2
red clay	2	12
dark red clay	12	22
sand rock	22	23
blue clay	23	45
grey soft & softer sand, coarse	45	63

Remarks:

Signed: J.W. Cammack.
Date: March (MONTH) 6 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL H. K. Matthews
WELL CONTRACTOR Bell & Stevens Drlg Co.
CONTRACTOR LICENSE NO. C-1305
NAME OF DRILLER C. M. Bell
DRILLER REGISTRATION NO. D-2570
DATE WELL WAS COMPLETED 8-23-73 (MO. DAY YR.)

Well is near 7 miles S/E of Strong road, approximately ~~miles N NE E SE S SW W NW of~~ (TOWN, ETC.)
~~Section~~ 12 ~~Township~~ T-18-S, Range R-16-W

Directions for reaching well: (use permanent landmarks) 7 miles S/E of Strong to- Ward Huttig, Dollar Junction, 1st Dosar on Right after turning East.

1. Total Depth of Well 215'
2. Water Producing Formation: From 198 ft. To 215 ft.
3. Method of Construction:
Rotary ✓ Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface 20' ft.
5. Gallons per Hour 1200 Gallons per Minute 80
6. Well disinfected with Clorox
7. Cased to 208' ft. with 4" Diameter Galv. Casing
8. Cemented from Surf ft. to 84' ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: ___ from ___ ft. to ___ ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from ___ ft. to ___ ft.
12. Screen Diameter: 2" inches from 208 ft. to 215 ft.
13. Type Screen SS (SCH) Fittings ___ Slot Size .008
14. Use of Well ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	40
Sand & Gravel	40	76
Shale & Rock	76	198
Green Sand	198	215

Remarks:

Signed: C. M. Bell
Date: 8 (MONTH) 23 (DAY) 73 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

STATE OF ARKANSAS
Report of Water Well Construction

NEW WELL [X] REPLACEMENT WELL [ ]

County in which well is located: UNION

(Please print or type)

OWNER OF WELL: Max Risinger
WELL CONTRACTOR: B&S Drilling Co.
CONTRACTOR LICENSE NO.: C1100
NAME OF DRILLER: John S. Miller
DRILLER REGISTRATION NO.: 2153
DATE WELL WAS COMPLETED: July (MO.) 30 (DAY) 77 (YR.)

Well is near: Hwy 15
3 miles N NE E SE S SW W NW of El Dorado, Ark (TOWN, ETC.)
Section 14, Township 18 South, Range 16 West
Directions for reaching well: (use permanent landmarks) Turn left off Hwy 15 at Parkers Church. Go 2½ miles, well by Green House.

1. Total Depth of Well: 80 Feet
2. Water Producing Formation: From 60 ft. To 80 ft.
3. Method of Construction:
Rotary X Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface: 30 Feet ft.
5. Gallons per Hour: 600 Gallons per Minute: 10
6. Well disinfected with: HTH
7. Cased to: 80 ft. with: Plastic Diameter: 4" Casing
8. Cemented from: 0 ft. to: 10 ft.
9. Casing Perforated from: 60 ft. to: 80 ft.
10. Well Backfilled with: Gravel (SAND, CLAY, CEMENT, MUD) from: 10 ft. to: 80 ft.
11. Gravel Pack from: 10 ft. to: 80 ft.
12. Screen Diameter: 4 inches from: ____ ft. to: ____ ft.
13. Type Screen: ____ Fittings: ____ Slot Size: 18
14. Use of Well: X (DOMESTIC) ____ (IRRIGATION) ____ (MUNICIPAL) ____ (OTHER)

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Surface Soil	0	3
Clay	4	28
Sand & Clay	29	59
Sand	60	80

RECEIVED
AUG 4 1977
COMMITTEE ON WATER WELL CONSTRUCTION

Remarks:

Signed: John S. Miller
Date: July (MONTH) 30 (DAY) 77 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

STATE OF ARKANSAS
Report of Water Well Construction

NEW WELL ☐ [illegible] WELL ☐

County in which well is located: Union ✓

(Please print or type)

OWNER OF WELL: Ainsworth

WELL CONTRACTOR: Stevens Drlg Co.

CONTRACTOR'S NO.: 1305

NAME OF DRILLER: Bell

DRILLER REGISTRATION NO.: 2570

DATE WELL WAS COMPLETED: 23 MO. - 74 DAY / YR.

Well is near Highway 15 West road, approximately 8 miles N NE E SE S SW (W) NW of El Dorado (TOWN, ETC.)

Section 16, Township T-18-S, Range R-16W

Directions for reaching well: (use permanent landmarks) On Highway 15 - 1½ mile West of Newell, Behind Lucy's Store.

1. Total Depth of Well: 277'
2. Water Producing Formation: From 235 ft. To 250 ft.
3. Method of Construction: Rotary ✓ Jetted ___ Bored ___ Dug ___
4. Water Level Below Surface: 130 ft.
5. Gallons per Hour: Gallons per Minute 6
6. Well disinfected: EX
7. Cased to: 6 Diameter 2" Casing
8. Cemented from: ___ ft. to 20' ft.
9. Casing Perforated: ___ ft. to 244 ft.
10. Well Backfilled: ___ ft. to ___ ft. (SAND, CLAY, CEMENT)
11. Gravel Pack from: ___ ft. to ___ ft.
12. Screen Diameter: ___ ft. to ___ ft.
13. Type Screen: ___ Slot Size ___
14. Use of Well: ✓ DOMESTIC ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	25
Blue Shale	25	193
Fine Gr. Sand	193	237
Rock	237	238
Green Sand	238	250
Shale	250	277

Remarks:

Signed: C. M. T. Bell

Date: July 23 MONTH DAY 74 YEAR

Mail to: Committee on [illegible] — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

STATE OF ARKANSAS

REPORT OF WATER WELL CONSTRUCTION

New Well X Work-over Well ____ Replacement Well ____

Owner of Well Philip Cottrell

Well Contractor Hamlin-Nolte W.W.

Contractor License No. C 1054

Driller Name and No. Cecil Nolte D2097

Date Well was Completed 6-12-81

County UNION (in which well is located)

Well is near 5th St Road

Section 20 Township 18S Range 16W

Directions for Reaching Well: 2 mi. EAST OF THREE CREEKS BRIDGES (use permanent landmark)

1. Total Depth of Well 220 Ft.
2. Water Producing Formation: From 190 Ft. To 230 Ft.
3. Water Level Below Land Surface 140
4. Gallons per ~~Hour~~ MIN 17
5. Well Disinfected with HTH
6. Casing to 190 Ft.
7. Cased with 4" Diameter PVC Casing
8. Cemented from 0 Ft. to 60 Ft.
9. Use of Well: X Domestic ____ Irrigation ____ Municipal ____ Other ____

This well is guaranteed against defective material or workmanship for a period of 1 yr

Description and Color of Formation (sand, shale, sandstone, etc.)	Depths from	in feet to
Red Clay	0	15
Sand	15	22
Red Clay	22	31
Fine Sand with Clay	31	46
Gray Shale	46	189
Fine Sand with Rocks and Shale Streaks	189	221

Remarks: ____

Signed: Cecil Nolte Date: 6-12-81

Form No. AWD-2

Mail to: Committee on Water Well Construction, 2915 So. Pine Street, Little Rock, Arkansas 72204

Geology Copy

NEW WELL ☐ REPLACEMENT WELL ☑

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Cliff Wright SR.
WELL CONTRACTOR Alford Drilling Co
CONTRACTOR LICENSE NO. C317
NAME OF DRILLER Phillip Alford
DRILLER REGISTRATION NO. D2097
DATE WELL WAS COMPLETED 3 (MO.) 25 (DAY) 76 (YR.)

Well is near Pickering road, approximately 4 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)
Section 24 ABC, Township 18S, Range 16W.
Directions for reaching well: (use permanent landmarks) Take Hwy 15 South from El Dorado Turn Left Past Prison Farm Well approx 3 Mi on Right Just before House on Left by Lake.

1. Total Depth of Well 110 ft.
2. Water Producing Formation: From 90 ft. To 110 ft.
3. Method of Construction: Rotary ✓ Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface 20 ft.
5. Gallons per Hour 1500 Gallons per Minute 25
6. Well disinfected with H 7H
7. Cased to 100 ft. with 4" 3440 Diameter PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: Sand + Mud (SAND, CLAY, CEMENT, MUD) from 10 ft. to 90 ft.
11. Gravel Pack from 90 ft. to 110 ft.
12. Screen Diameter: 4 inches from 100 ft. to 110 ft.
13. Type Screen Johnson PVC Fittings 4" Female Slot Size 12
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Top Soil	0	1
Red Sandy Clay	1	20
Pipe Clay	20	29
Yellow Clay	29	35
Sand w/ Streaks of Clay	35	80
Lignite + Clay	80	90
Sand	90	115

Remarks:

Signed: [signature]
Date: 3 (MONTH) 25 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [X] REPLACEMENT WELL [✓]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: MRS. Geroline McGaugh
WELL CONTRACTOR: Alford Drilling Co.
CONTRACTOR LICENSE NO.: 0137
NAME OF DRILLER: Phillip Alford III
DRILLER REGISTRATION NO.:
DATE WELL WAS COMPLETED: MO. DAY YR.

Well is near: Parkers Chapel road, approximately
5 miles N NE E SE S (SW) W NW of El Dorado (TOWN, ETC.)
Section 24, Township 18S, Range 16W
Directions for reaching well: (use permanent landmarks) Rt. 6 Box 61-B El Dorado, AR 6

1. Total Depth of Well: 76'
2. Water Producing Formation: From 66 ft. To 76 ft.
3. Method of Construction: Rotary ✓ Cable R.C. Driven Jetted Bored
4. Water Level Below Land Surface: 30 ft.
5. Gallons per Hour: 1200 Gallons per Minute: 20
6. Well disinfected with: HTH
7. Cased to 66 ft. with 4" Diameter Sch 40 PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ft. to ft.
10. Well Backfilled with: Clay & Sand (SAND, CLAY, CEMENT, MUD) from 10 ft. to 50 ft.
11. Gravel Pack from 50 ft. to 76 ft.
12. Screen Diameter: 4" inches from 66 ft. to 76 ft.
13. Type Screen Slot Fittings CXC Slot Size .015
14. Use of Well: ✓ DOMESTIC IRRIGATION MUNICIPAL OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)

Depths in Feet From	To
Topsoil 0	3
Sand 3	76
Clay 76	

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 yr

Signed: [signature]

Date: 6 MONTH 20 DAY 78 YEAR

Mail to: Committee on Water Well Construction – 3815 W. Roosevelt Road – Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

NEW WELL ☐ REPLACEMENT WELL ☑

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Mrs. Jeroline McGaugh
WELL CONTRACTOR Alford Drilling Co.
CONTRACTOR LICENSE NO. C1317
NAME OF DRILLER Philip Alford III
DRILLER REGISTRATION NO. D 2597
DATE WELL WAS COMPLETED 7 (MO.) 14 (DAY) 77 (YR.)

Well is near Parkers Chapel road, approximately 3 miles N NE E SE S SW W NW of Parkers Chapel (TOWN, ETC.)
Section 24, Township 18S, Range 16W.
Directions for reaching well: (use permanent landmarks) Rt. 6, Box 61-B El Dorado Ark

1. Total Depth of Well 76'
2. Water Producing Formation: From 66 ft. To 76 ft.
3. Method of Construction:
Rotary ✓ Cable ____ R.C. ____ Driven ____ Jetted ____ Bored ____
4. Water Level Below Land Surface 30 ft.
5. Gallons per Hour 1200 Gallons per Minute 20
6. Well disinfected with H-T-H
7. Cased to 66 ft. with 4" Diameter Sch 40 PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ____ ft. to ____ ft.
10. Well Backfilled with: Clay from 10 ft. to 50 ft.
(SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from 50 ft. to 76 ft.
12. Screen Diameter: 4 inches from 66 ft. to 76 ft.
13. Type Screen Slot Fittings CXC Slot Size .016
14. Use of Well: ✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	3
Sand	3	56
Clay	56	

RECEIVED
OCT 27 1977
COMMITTEE ON WATER WELL CONSTRUCTION

Remarks:

This well is guaranteed against defective material and workmanship for a period of 1 YR.

Signed: Philip Alford III

Date: 10 (MONTH) 19 (DAY) 77 (YEAR)

Mail to: Committee on Water Well Construction – 3815 W. Roosevelt Road – Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

NEW WELL [✓] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL J. D. Armstrong

WELL CONTRACTOR Boyd & Stevens Drlg Co

CONTRACTOR LICENSE NO. 1305

NAME OF DRILLER C. M. Boyd

DRILLER REGISTRATION NO. D-2570

DATE WELL WAS COMPLETED 9-17-73 (MO. DAY YR.)

Well is near Highway #15 West of El Dorado road, approximately ___ miles N NE E SE S SW W NW of (TOWN, ETC.)

Section 25, Township T-18-S, Range R-16-W

Directions for reaching well: (use permanent landmarks) 6 miles west of El Dorado, on Highway #15, Right side of Road

1. Total Depth of Well 260'
2. Water Producing Formation: From 225 ft. To 226 ft.
3. Method of Construction: Rotary ✓ Cable ___ Driven ___ Jetted ___ Bored ___ Dug ___
4. Water Level Below Land Surface 118' ft.
5. Gallons per Hour 420 Gallons per Minute 7
6. Well disinfected with Clorox
7. Cased to 225 ft. with 2" Diameter Galv. Casing
8. Cemented from 0 ft. to 15' ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: ___ from ___ ft. to ___ ft. (SAND, CLAY, CEMENT, MUD)
11. Gravel Pack from ___ ft. to ___ ft.
12. Screen Diameter: 2" inches from 225 ft. to 235 ft.
13. Type Screen S.S. Fittings Galv. Slot Size .008
14. Use of Well: ✓ DOMESTIC IRRIGATION MUNICIPAL OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Clay	0	56
Sand	56	66
Shale	66	225
Green Sand	225	226

Remarks:

Signed: C. M. Boyd

Date: 9-17-73 (MONTH DAY YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Bethel Chapel Assembly of God

WELL CONTRACTOR Alford Drilling Co

CONTRACTOR LICENSE NO. C 1317

NAME OF DRILLER Philip Alford III

DRILLER REGISTRATION NO. D 2597

DATE WELL WAS COMPLETED 12 (MO.) 7 (DAY) 97 (YR.)

Well is near Parkers Chapel Road (road), approximately 5 miles N NE E SE S (SW) W NW of El Dorado (TOWN, ETC.)

Section 26AAB Township 18S Range 16W

Directions for reaching well: (use permanent landmarks) Rt. 6 Box 61A El Dorado AR

1. Total Depth of Well 85'
2. Water Producing Formation: From 60 ft. To 85 ft.
3. Method of Construction: Rotary ✓ Cable ___ R.C. ___ Driven ___ Jetted ___ Bored ___
4. Water Level Below Land Surface 45 ft.
5. Gallons per Hour 1800 Gallons per Minute 30
6. Well disinfected with HTH
7. Cased to 75 ft. with 4" Diameter Sch40PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from ___ ft. to ___ ft.
10. Well Backfilled with: Sand + Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 60 ft.
11. Gravel Pack from 60 ft. to 85 ft.
12. Screen Diameter: 4 inches from 75 ft. to 85 ft.
13. Type Screen Slot Fittings CxC Slot Size 015
14. Use of Well: ✓ DOMESTIC ___ IRRIGATION ___ MUNICIPAL ___ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil + Sand	0	20
Sand + Clay	20	40
Clay + Sand	40	60
Sand	60	85

Remarks:

This well is guaranteed against defective material or workmanship for a period of 1 YR

Signed: Philip Alford III

Date: 6 (MONTH) 20 (DAY) 98 (YEAR)

Mail to: Committee on Water Well Construction – 3815 W. Roosevelt Road – Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

NEW WELL [X] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Wesson-Newell Water Assn.
WELL CONTRACTOR: Layne Arkansas Company
CONTRACTOR LICENSE NO.: C-1099 NE¼ of NE¼
NAME OF DRILLER: Harvey Bullock
DRILLER REGISTRATION NO.: D-2204
DATE WELL WAS COMPLETED: January (MO.) 8 (DAY) 77 (YR.)

Well is near: Wesson Hwy. road, approximately
miles N NE E SE S SW W NW of (TOWN, ETC.)
Section 28 BBB1, Township 18S, Range 16W.
Directions for reaching well:
(use permanent landmarks)

1. Total Depth of Well: 636'
2. Water Producing Formation: From 596 ft. To 636 ft.
3. Method of Construction:
Rotary X Cable R.C. Driven Jetted Bored
4. Water Level Below Land Surface: 306 ft.
5. Gallons per Hour Gallons per Minute 110
6. Well disinfected with: HTH
7. Cased to 584 ft. with 8" Diameter .277 Casing
8. Cemented from 0 ft. to 584 ft.
9. Casing Perforated from ft. to ft.
10. Well Backfilled with:
(SAND, CLAY, CEMENT, MUD) from ft. to ft.
11. Gravel Pack from 596 ft. to 636 ft.
12. Screen Diameter:
4 inches from 596 ft. to 636 ft.
13. Type Screen Layne Fittings Stainless Steel Slot Size .010
14. Use of Well:
DOMESTIC | IRRIGATION | X MUNICIPAL | OTHER

RECEIVED
APR 6 1977
COMMITTEE ON WATER WELL CONSTRUCTION

Description and Color of Formation (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Sandy Clay	0	10
Clay	10	32
Sandy Clay	32	60
Blue Gumbo	60	166
Rock	166	167
Gumbo	167	214
Rock	214	215
Green Sand with Streaks of Shale	215	234
Sandy Shale	234	248
Green Sand	248	254
Shale	254	312
Sandy Shale	312	382
Shale	382	398
Sand	398	420
Sandy Shale	420	525
Shale	525	548
Sand with thin Streaks Shale or Lignite	548	572
Shale	572	582
Sand with thin Streaks Shale or Lignite	582	620
Sandy Shale	620	648
Hard Shale	648	740
Sandy Shale	740	750
Hard Shale	750	802

Remarks:

This well is guaranteed against defective material or workmanship for a period of

Signed: Dick Bennett

Date: January (MONTH) 10 (DAY) 1977 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [4] REPLACEMENT WELL [ ]

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Garfield Goodwin

WELL CONTRACTOR Alford Drilling Co.

CONTRACTOR LICENSE NO. C1317

NAME OF DRILLER Philip Alford III

DRILLER REGISTRATION NO. D2597

DATE WELL WAS COMPLETED 9 (MO.) 23 (DAY) 75 (YR.)

Well is near Norwood 5 miles N NE E SE S (SW) W NW of El Dorado (TOWN, ETC.) road, approximately

Section 30, Township 18S, Range 16W.

Directions for reaching well: (use permanent landmarks) Turn S. at Wyatt Bapt. Ch. on 82 Hwy. Well on Right appro 2½ Miles.

1. Total Depth of Well 270
2. Water Producing Formation: From 240 ft. To 270 ft.
3. Method of Construction: Rotary ✓ Cable ____ Driven ____ Jetted ____ Bored ____ Dug ____
4. Water Level Below Land Surface 115 ft.
5. Gallons per Hour 600 Gallons per Minute 10
6. Well disinfected with HTH
7. Cased to 270 ft. with 4" Diameter Sch40 PVC Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from 250 ft. to 270 ft.
10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 240 ft.
11. Gravel Pack from 240 ft. to 270 ft.
12. Screen Diameter: ____ inches from ____ ft. to ____ ft.
13. Type Screen ____ Fittings ____ Slot Size ____
14. Use of Well: ✓ DOMESTIC ____ IRRIGATION ____ MUNICIPAL ____ OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	2
Clay	2	38
Sand	38	76
Clay	76	240
Sand	240	270

Remarks:

Signed: [signature]

Date: 9 (MONTH) 23 (DAY) 76 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL ☑ REPLACEMENT WELL ☐

STATE OF ARKANSAS
Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL Mr Butch Caldwell
WELL CONTRACTOR Boreing WATER WELL, INC
CONTRACTOR LICENSE NO. 1269
NAME OF DRILLER DOAK Boreing
DRILLER REGISTRATION NO. D 2044
DATE WELL WAS COMPLETED July (MO) 29 (DAY) 1975 (YR.)

Well is near Hwy 19 road, approximately
8 miles · N NE E SE S (SW) W NW of ELD (TOWN, ETC.)
Section 33, Township 18, Range 16.
Directions for reaching well:
(use permanent landmarks)

1. Total Depth of Well 31
2. Water Producing Formation: From 15 ft. To 31 ft.
3. Method of Construction:
Rotary ____ Cable ____ Driven ____ Jetted ____ Bored V Dug ____
4. Water Level Below Land Surface 13 ft.
5. Gallons per Hour 1000 + Gallons per Minute
6. Well disinfected with HTH
7. Cased to 36 ft. with TILE Diameter 30 Casing
8. Cemented from 0 ft. to 10 ft.
9. Casing Perforated from 15 ft. to 31 ft.
10. Well Backfilled with:
CEMENT Grout (SAND, CLAY, CEMENT, MUD) from 0 ft. to 10 ft.
11. Gravel Pack from 10 ft. to 31 ft.
12. Screen Diameter:
NA inches from NA ft. to NA ft.
13. Type Screen NA Fittings NA Slot Size NA
14. Use of Well:
V (DOMESTIC) ____ (IRRIGATION) ____ (MUNICIPAL) ____ (OTHER)

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
surface soil	0	2
clay	2	14
sand	14	15
water sand	15	36

Remarks:

Signed: Doak V. B[illegible]
Date: July (MONTH) 29 (DAY) 1975 (YEAR)

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

GEOLOGY COPY

FORM NO. WD-1

NEW WELL [✓] REPLACEMENT WELL [ ] Report of Water Well Construction

County in which well is located: Union

(Please print or type)

OWNER OF WELL: Cecil Lowery

WELL CONTRACTOR: Alford Drilling

CONTRACTOR LICENSE NO.: C137

NAME OF DRILLER: Philip Alford III

DRILLER REGISTRATION NO.: D2597

DATE WELL WAS COMPLETED: MO. 9 DAY 26 YR. 77

Well is near: Southfield road, approximately 7 miles N NE E SE S SW W NW of El Dorado (TOWN, ETC.)

Section 36, Township 18 S, Range 16 W

Directions for reaching well: (use permanent landmarks) Rt. 1, Box 358 X El Dorado, Ark

1. Total Depth of Well: 100

2. Water Producing Formation: From 80 ft. To 100 ft.

3. Method of Construction: Rotary [✓] Cable [ ] R.C. [ ] Driven [ ] Jetted [ ] Bored [ ]

4. Water Level Below Land Surface: 34 ft.

5. Gallons per Hour: 1200 Gallons per Minute: 20

6. Well disinfected with: HTH

7. Cased to 90 ft. with 4" Diameter Sch 40 PVC Casing

8. Cemented from 0 ft. to 10 ft.

9. Casing Perforated from ____ ft. to ____ ft.

10. Well Backfilled with: Clay (SAND, CLAY, CEMENT, MUD) from 10 ft. to 80 ft.

11. Gravel Pack from 80 ft. to 100 ft.

12. Screen Diameter: 4 inches from 90 ft. to 100 ft.

13. Type Screen: Slott Fittings: C x C Slot Size: 016

14. Use of Well: [✓] DOMESTIC [ ] IRRIGATION [ ] MUNICIPAL [ ] OTHER

Description and Color of Formation: (Sand, Shale, Sandstone, etc.)	Depths in Feet From	To
Topsoil	0	3
Clay	3	18
Sand	18	29
Clay	29	70
Sand	70	100

Remarks:

RECEIVED

NOV 7 1977

COMMITTEE ON WATER WELL CONSTRUCTION

This well is guaranteed against defective material or workmanship for a period of 1 YR

Signed: [signature]

Date: MONTH 11 DAY 2 YEAR 77

Mail to: Committee on Water Well Construction — 3815 W. Roosevelt Road — Little Rock, Arkansas 72204

FORM NO. WD-1

GEOLOGY COPY

Ener

STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

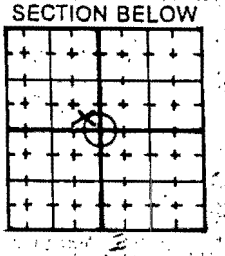
1 Contractor Name & Number: Diversified Drilling JER C# 1140

2 Driller Name & Number: Dewey Mc Murray D# 2089

3 Pump Installer Name & Number: _____ P# _____

4 Date Well Completed: 5/20/92 New Well ☒ Replace or Work-over ☐

10 LOCATE WITH 'X' IN SECTION BELOW



COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
Union	SE ¼ of NW ¼ of	8	18 S	16 W

GITUDE ° ' "

11 LATITUDE ° ' "

DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
Sandy Clay	0	10
Clay	10	13
Brown grey sand	13	60
Lignite	60	61
Sand	61	90
Clay	90	94

ATACH ADDITIONAL SHEETS IF NECESSARY

2 TOTAL DEPTH OF WELL 94 ft

3 DEPTHS TO WATER PRODUCING FORMATIONS. 60' to 90'

4 STATIC WATER LEVEL Artesian Ft below land surface

5 YIELD _____ gallons per ☐ min ☐ hr

6 DIAMETER OF BORE HOLE 12" IN

PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☐ TURBINE ☐ JET ☐

2 SETTING DEPTH: FEET

3 BRAND NAME AND SERIAL NUMBERS:

4 RATED CAPACITY gallons per minute

5 TYPE LUBRICATION

6 DROP PIPE OR COLUMN PIPE SIZE

7 WIRE SIZE

8 PRESSURE TANK SIZE, MAKE, MODEL

9 DATE OF INSTALLATION OR REPAIR

10 Is there an abandoned water well on the property?

D1 LAND OWNER OR OTHER CONTACT PERSON:

NAME AR. Chemical Corp

STREET ADDRESS 3940 Hayneville Hwy

CITY El Dorado, Ar

2 CASING FROM Gr TO 2' above ground FROM TO W/ "ID

TYPE CASING: 4" PVC

3 SCREEN
TYPE: PVC DIA 4" SLOT/GA .010
SET FROM 60 FT TO 90 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK 94 FROM 58 FT TO FT

5 BACK FILLED WITH: Grout
FROM 20 FT TO 0 FT

6 SEALED WITH: Bentonite Pellets
FROM 55 FT TO 58 FT
FROM FT TO FT

7 DISINFECTED WITH:

8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☒
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)

SOURCE	☐	RETURN	☐
CLOSED LOOP	☐		

9 (For A/C only) Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐

10 (For A/C open-loop only) Into what medium is water returned?

11 REMARKS DD&I did not install a pump

12 SIGNED Ray Hilyard DATE 6/22/92

GEOLOGY COPY

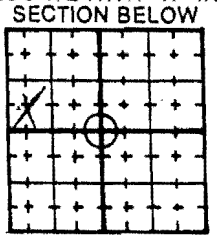
STATE OF ARKANSAS
REPORT ON WATER WELL CONSTRUCTION & PUMP INSTALLATION

1 Contractor Name & Number: HAMLIN & NOLTE C# 1054
2 Driller Name & Number: TOMMY HAMLIN D# 2545
3 Pump Installer Name & Number: TOMMY HAMLIN P# 4226
4 Date Well Completed: 8-21-95 New Well ☒ Replace or Work-over ☐

COUNTY	6 FRACTION	7 SECTION	8 TOWNSHIP	9 RANGE
UNION	SW ¼ of NW ¼ of	7	18S	16W

LONGITUDE ___ ° ___ ' ___ "
LATITUDE 11 ___ ° ___ ' ___ "

10 LOCATE WITH 'X' IN SECTION BELOW



SPENCER 1

11 DESCRIPTION OF FORMATION: DEPTHS IN FEET

	FROM	TO
CLAY	0	31
SAND	31	51
GREY CLAY	51	198
SAND W/CLAY LAYERS (GREEN)	198	263
ROCK	263	264
SANDY CLAY	264	269
SAND (SPARTA)	269	283

ATTACH ADDITIONAL SHEETS IF NECESSARY

12 TOTAL DEPTH OF WELL 263 ft
13 DEPTHS TO WATER PRODUCING FORMATIONS. 198
14 STATIC WATER LEVEL 149 Ft below land surface
15 YIELD 10 gallons per ☒ min ☐ hr
16 DIAMETER OF BORE HOLE 8 IN

C PUMP REPORT

1 TYPE PUMP: SUBMERSIBLE ☒ TURBINE ☐ JET ☐
2 SETTING DEPTH: 210 FEET
3 BRAND NAME AND SERIAL NUMBERS: GRUNDFOS 5S07-9
4 RATED CAPACITY 5 gallons per minute
5 TYPE LUBRICATION
6 DROP PIPE OR COLUMN PIPE SIZE 1"
7 WIRE SIZE 12-2/G 201'
8 PRESSURE TANK . . . SIZE, MAKE, MODEL
9 DATE OF INSTALLATION OR REPAIR 8-21-95
10 Is there an abandoned water well on the property? NO

D1 LAND OWNER OR OTHER CONTACT PERSON:
NAME GREAT LAKES CHEMICAL CO
STREET ADDRESS P O BOX 1878
CITY ELDORADO, AR 71730-1878

2 CASING FROM -1 TO 263 W/ 4 "ID
FROM TO W/ "ID
TYPE CASING: GALVANIZED

3 SCREEN
TYPE: STAINLESS DIA 2" SLOT/GA .025
SET FROM 223 FT TO 263 FT
TYPE: DIA SLOT/GA
SET FROM FT TO FT

4 GRAVEL PACK FROM 263 FT TO 200 FT
5 BACK FILLED WITH: MUD
FROM 200 FT TO 50 FT
6 SEALED WITH: CEMENT -GEL
FROM 0 FT TO 50 FT
FROM FT TO FT
7 DISINFECTED WITH: HTH
8 USE OF WELL:

DOMESTIC	☐	COMMERCIAL	☒
IRRIGATION	☐	MONITOR	☐
LIVESTOCK/POULTRY	☐	TEST WELL	☐
OIL/GAS SUPPLY	☐	SEMI-PUBLIC	☐
PUBLIC SUPPLY	☐	OTHER	

(A/C HEATPUMP TYPE WELLS)
SOURCE ☐ RETURN ☐
CLOSED LOOP ☐

9 (For A/C only). Will system also be used for purposes other than Heating or Air Conditioning?
If yes, name use: yes ☐ no ☐
10 (For A/C open-loop only) Into what medium is water returned?
11 REMARKS
12 SIGNED Tommy J Hamlin DATE 8-21-95

RECEIVED
SEP 6 1995

AWD-1 JAN 89 Arkansas Water Well Construction Commission, One Capitol Mall, Suite 2-C, Little Rock, AR 72201
ACI-5945
GEOLOGY COPY

ARKANSAS SOIL AND WATER CONSERVATION COMMISSION

REGISTERED GROUNDWATER USERS
HYDROLOGIC UNIT 08040201
DATA BASE SEARCH RESULTS

Arkansas Soil and Water Conservation Commission

J. Randy Young, P.E.
Executive Director

101 EAST CAPITOL
SUITE 350
LITTLE ROCK, ARKANSAS 72201

PHONE 501-682-1611
FAX 501-682-3991

January 24, 1997

Dear Ms Beck

SUBJECT: DATA BASE SEARCH

Here is the information on the registered ground water users in the hydrologic unit 08040201 in Arkansas that you requested on January 17, 1997.

The information on the enclosed list is easy to follow. The headings at the top of the page tell what each column is. Each time that an owner's name appears on the list represents a different measurement point for that owner.

If I can be of any further assistance, please feel free to contact me at (501) 682-3966. Thank you for your request.

Sincerely

Mike Guess

Mike A. Guess
Engineer Technician

Enclosure

REGISTERED WATER-USERS
FOR HYDROLOGIC UNIT 08040201

WATER USER ID	OWNER'S NAME	WATER USE	COUNTY	LAT./LONG.	LEGAL DESCRIPTION
3142	BILLY FRANK WILLIAMS	IR	CALHOUN	332846/922214	SWSW2014S12W
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333255/924930	
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333300/924930	
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333315/924915	
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333246/924940	
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333300/924950	
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333320/925015	
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333325/925020	
4107	INTERNAT'L PAPER-CAMDEN	IN	OUACHITA	333315/925025	
5955	BANKS WATERWORKS	WS	BRADLEY	333454/921600	
5955	BANKS WATERWORKS	WS	BRADLEY	333454/921600	SENW1113S02W
5958	BATTS LAPILE WATER ASSOC	WS	UNION	330409/921713	NWNW1819S11W
5958	BATTS LAPILE WATER ASSOC	WS	UNION	330410/921716	NENE1319S12W
5960	BEARDEN WATERWORKS	WS	OUACHITA	334331/923703	
5998	CALION WATER WORKS	WS	UNION	331944/923217	NESW1516S14W
5998	CALION WATER WORKS	WS	UNION	331948/923232	SWNW1516S14W
6002	CARTHAGE WATERWORKS	WS	DALLAS	340415/923330	
6026	CRABAPPLE POINT WATER SYS	WS	UNION	331926/923216	SESW1516S14W
6026	CRABAPPLE POINT WATER SYS	WS	UNION	331927/923211	SESW1516S14W
6056	EL DORADO WATERWORKS	WS	UNION	331303/924009	SWNE2917S15W
6056	EL DORADO WATERWORKS	WS	UNION	331227/923937	SESW2817S15W
6056	EL DORADO WATERWORKS	WS	UNION	331223/923923	NWNE3317S15W
6056	EL DORADO WATERWORKS	WS	UNION	331236/923856	SESE2817S15W
6056	EL DORADO WATERWORKS	WS	UNION	331358/924248	SENW2417S16W
6056	EL DORADO WATERWORKS	WS	UNION	331407/924256	NWNW2417S16W
6056	EL DORADO WATERWORKS	WS	UNION	331349/924244	NESW2417S16W
6056	EL DORADO WATERWORKS	WS	UNION	331228/924038	SESW2917S15W
6056	EL DORADO WATERWORKS	WS	UNION	331237/923921	SWSE2817S15W
6056	EL DORADO WATERWORKS	WS	UNION	331425/924030	SWSE2817S15W
6056	EL DORADO WATERWORKS	WS	UNION	331358/924250	NWSE2417S16W
6064	FAIRCREST WATER ASSN	WS	UNION	330657/923859	SENE3318S15W
6064	FAIRCREST WATER ASSN	WS	UNION	330631/923708	NESE3518S15W
6065	FELSENTHAL WATER ASSOC	WS	UNION	330327/920905	NWSW1619S10W
6065	FELSENTHAL WATER ASSOC	WS	UNION	330324/920845	NWSW1619S10W
6069	FORDYCE WATER CO	WS	DALLAS	334830/922445	
6069	FORDYCE WATER CO	WS	DALLAS	334830/922445	NESE3410S13W
6103	HAMPTON WATERWORKS	WS	CALHOUN	333230/922740	
6105	HARRELL WATERWORKS	WS	CARROLL	333040/922410	
6128	HWY 82 WATER ASSOC	WS	UNION	331226/924601	NWNW3317S16W
6150	LAWSON-URBANA WATER ASS'N	WS	UNION	331205/922916	NENW3117S13W
6150	LAWSON-URBANA WATER ASS'N	WS	UNION	331205/922926	NENW3117S13W
6164	LOUANN WATERWORKS	WS	OUACHITA	332330/924356	
6180	MARYSVILLE WATER ASSOC	WS	UNION	331351/925727	SWSE3017S17W
6202	MOUNT HOLLY WATERWORKS	WS	UNION	331808/925638	NWNW3516S18W

WATER USER ID	OWNER'S NAME	WATER USE	COUNTY	LAT./LONG.	LEGAL DESCRIPTION
6202	MOUNT HOLLY WATERWORKS	WS	UNION	331805/925709	NWNE3416S18W
6212	NEW HOPE WATER ASSN	WS	UNION	330455/925152	NWNE1619S17W
6212	NEW HOPE WATER ASSN	WS	UNION	330509/925138	NESE0919S17W
6213	NEW LONDON WATER ASSN	WS	UNION	331203/922218	NWNW3217S12W
6213	NEW LONDON WATER ASSN	WS	UNION	331204/922221	NWNW3217S12W
6220	NORPHLET WATERWORKS	WS	UNION	331900/923956	NESE2016S15W
6220	NORPHLET WATERWORKS	WS	UNION	331842/923950	SWSW2116S15W
6241	PARKERS CHAPEL WATER ASSN	WS	UNION	331011/924317	NESE1118S16W
6241	PARKERS CHAPEL WATER ASSN	WS	UNION	331024/924229	SWNE1218S16W
6241	PARKERS CHAPEL WATER ASSN	WS	UNION	331018/924223	SWNE1218S16W
6296	SHUMAKER PUBLIC SERV CO	WS	CALHOUN	333929/924211	
6296	SHUMAKER PUBLIC SERV CO	WS	CALHOUN	333944/924240	
6296	SHUMAKER PUBLIC SERV CO	WS	CALHOUN	333944/924252	
6296	SHUMAKER PUBLIC SERV CO	WS	CALHOUN	333944/924304	
6296	SHUMAKER PUBLIC SERV CO	WS	CALHOUN	333936/924306	
6299	SMACKOVER WATERWORKS	WS	UNION	332205/924330	NWNE0216S16W
6299	SMACKOVER WATERWORKS	WS	UNION	332115/924213	SESE0116S16W
6299	SMACKOVER WATERWORKS	WS	UNION	332131/924230	NWSE0116S16W
6299	SMACKOVER WATERWORKS	WS	UNION	332171/924283	
6299	SMACKOVER WATERWORKS	WS	UNION	332211/924337	
6299	SMACKOVER WATERWORKS	WS	UNION	332116/924205	
6299	SMACKOVER WATERWORKS	WS	UNION	332133/924234	
6309	STEPHENS WATERWORKS	WS	OUACHITA	332420/930400	
6309	STEPHENS WATERWORKS	WS	OUACHITA	332420/930400	NENE2815S19W
6322	THORNTON WATERWORKS	WS	CALHOUN	334630/922930	
6325	TINSMAN WATERWORKS	WS	CALHOUN	333745/922123	
6352	WESSON-NEWELL WATER ASSN	WS	UNION	330807/924613	NENE1918S16W
6388	JOHNSON TOWNSHIP WATER	WS	UNION	331040/923531	SWSW0618S14W
6546	OLD UNION WATER ASSN	WS	UNION	331421/923332	NWSW1617S14W
9003	EL DORADO CHEMICAL CO	IN	UNION	331548/924000	
9003	EL DORADO CHEMICAL CO	IN	UNION	331600/924100	
9003	EL DORADO CHEMICAL CO	IN	UNION	331554/924158	
9003	EL DORADO CHEMICAL CO	IN	UNION	331550/924253	
9003	EL DORADO CHEMICAL CO	IN	UNION	331540/923955	
11936	JAMES DAVID REDDIN	IR	CALHOUN		NWSW1413S13W
15010	STRIKER PAPER CORPORATION	IN	OUACHITA	332502/930315	SWNE2215S19W

ATTACHMENT 1
WELL SURVEY FOR DEVELOPMENT OF RISK-BASED TARGET MONITORING LEVELS

TABLE 1

WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
ADH	El Dorado Waterworks	PS	S28	T17S-R15W	33-12-30	92-39-45
ADH	El Dorado Waterworks	PS	S28	T17S-R15W	33-12-30	92-39-46
ADH	El Dorado Waterworks	PS	S28	T17S-R15W	33-12-40	92-38-56
ADH	El Dorado Waterworks	PS	S28	T17S-R15W	33-14-15	92-40-25
ADH	El Dorado Waterworks	PS	S29	T17S-R15W	33-12-28	92-40-38
ADH	El Dorado Waterworks	PS	S29	T17S-R15W	33-13-00	92-40-10
ADH	El Dorado Waterworks	PS	S33	T17S-R15W	33-12-25	92-39-20
ADH	El Dorado Waterworks	PS	S24	T17S-R16W	33-14-10	92-42-50
ADH	El Dorado Waterworks	PS	S24	T17S-R16W	33-14-10	92-42-55
ADH	El Dorado Waterworks	PS	S24	T17S-R16W	33-13-46	92-42-45
ADH	El Dorado Waterworks	PS	S26	T17S-R16W	33-13-12	92-43-42
ADPCE	WELL #23	DOM	S34	T16S-R16W	33-17-21	99-44-38
ADPCE	WELL #29	DOM	S34	T16S-R16W	33-17-19	92-44-43
ADPCE	WELL #26	DOM	S14	T17S-R14W	33-14-17	92-31-03
ADPCE	WELL #28	DOM	S32	T17S-R14W	33-11-53	92-34-28
ADPCE	WELL #24	COM	S09	T17S-R15W	33-15-55	92-39-54
ADPCE	WELL #21	COM	S16	T17S-R15W	33-15-01	92-39-44
ADPCE	WELL #115	U	S31	T17S-R15W	33-11-47	92-41-28
ADPCE	WELL #8	COM	S32	T17S-R15W	33-11-42	92-40-47
ADPCE	WELL #11	PS	S24	T17S-R16W	33-14-02	92-42-58
ADPCE	WELL #27	PS	S07	T18S-R14W	33-10-37	92-35-16
ADPCE	WELL #49	U	S05	T18S-R15W	33-11-24	92-40-56
ADPCE	WELL #55	U	S06	T18S-R15W	33-11-20	92-41-47
ADPCE	WELL #101	U	S06	T18S-R15W	33-11-20	92-41-47
ADPCE	WELL #56	U	S06	T18S-R15W	33-11-18	92-41-42

TABLE 1
WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
ADPCE	WELL #54	DOM	S07	T18S-R15W	33-10-28	92-41-35
ADPCE	WELL #10	DOM	S16	T18S-R15W	33-09-37	92-39-22
ADPCE	WELL #60	DOM	S18	T18S-R15W	33-09-48	92-41-18
ADPCE	WELL #63	DOM	S20	T18S-R15W	33-08-37	92-40-44
ADPCE	WELL #61	DOM	S21	T18S-R15W	33-08-23	92-39-08
ADPCE	WELL #62	COM	S22	T18S-R15W	33-08-10	92-38-21
ADPCE	WELL #25	PS	S35	T18S-R15W	33-06-35	92-37-05
ADPCE	WELL #15	COM	S01	T18S-R16W	33-11-02	92-42-25
ADPCE	WELL #94	DOM	S02	T18S-R16W	33-11-35	92-43-04
ADPCE	WELL #103	U	S02	T18S-R16W	33-11-20	92-43-16
ADPCE	WELL #99	U	S11	T18S-R16W	33-09-53	92-43-36
AGC	Dr. Don Goodwin	IRR	S20	T16S-R14W	NA	NA
AGC	Bessie Temple	DOM	NESW-S15	T16S-R15W	33-19-43	92-38-30
AGC	Bessie Temple	DOM	NESW-S15	T16S-R15W	33-19-15	92-38-04
AGC	Phillips Pet Co.	IND	S15	T16S-R15W	NA	NA
AGC	Dunauan D. Parsons, Jr.	DOM	S29	T16S-R15W	NA	NA
AGC	Long Oak Poultry	IRR	S08	T16S-R16W	NA	NA
AGC	Napoleon Boone	DOM	S21	T16S-R16W	NA	NA
AGC	Jerry Benton	DOM	S21	T16S-R16W	NA	NA
AGC	Jerry Benton	DOM	S21	T16S-R16W	NA	NA
AGC	Perry Bucton	DOM	S22	T16S-R16W	NA	NA
AGC	William E. Thompson	DOM	S33	T16S-R16W	NA	NA
AGC	Lindell Beene, Jr/	DOM	S34	T16S-R16W	NA	NA
AGC	John Wilson	DOM	S34	T16S-R16W	NA	NA
AGC	John Wilson	DOM	S34	T16S-R16W	NA	NA

TABLE 1

WELL SURVEY SUMMARY
EL DORADO CHEMICAL COMPANY

Reference	Owner's Name	Water Use	Fraction-Section	Township-Range	Latitude	Longitude
AGC	Mornington Farms	DOM/LIVESTOCK/POULTRY	S35	T16S-R16W	33-17-23	92-46-01
AGC	Jerry Smith	IRR	S29	T17S-R14W	NA	NA
AGC	Tom Sheppard	DOM	S32	T17S-R14W	NA	NA
AGC	Jimmy Ward	DOM	SSSW-S28	T17S-R14W	33-12-20	92-33-34
AGC	Monsanto Chemical Co.	Other	S08	T17S-R15W	NA	NA
AGC	Bob Crawford	DOM	S26	T17S-R15W	NA	NA
AGC	Tosco Corp.	Other	S32	T17S-R15W	NA	NA
AGC	Gary Thompson	DOM	S36	T17S-R15W	NA	NA
AGC	El Dorado Chemical Co.	COM	SWSW-S09	T17S-R15W	33-15-18	92-39-36
AGC	David McVay	IRR	SWSW-S22	T17S-R15W	33-13-25	92-38-40
AGC	Columbian Chem. Co.	COM	SWSW-S25	T17S-R15W	33-12-26	92-36-39
AGC	Joe Dumas	DOM	NENW-S15	T17S-R16W	NA	NA
AGC	El Dorado Water Utility	PS	NESW-S23	T17S-R16W	NA	NA
AGC	McBead Oil Co.	Other	S08	T17S-R16W	NA	NA
AGC	Elmer Dumas	DOM	S09	T17S-R16W	NA	NA
AGC	Doug Green	DOM	S09	T17S-R16W	NA	NA
AGC	Mike Neely	DOM	S09	T17S-R16W	NA	NA
AGC	Wayne Miller	DOM	S14	T17S-R16W	NA	NA
AGC	George Parks	DOM	S14	T17S-R16W	NA	NA
AGC	Dayyell Keykendall	DOM	S14	T17S-R16W	NA	NA
AGC	Tennyson Oil Co.	DOM	S18	T17S-R16W	NA	NA
AGC	Willetts Poultry Farm	DOM	S21	T17S-R16W	NA	NA
AGC	Lawrence Electric	DOM	S23	T17S-R16W	NA	NA
AGC	City of El Dorado	MUN	S24	T17S-R16W	NA	NA