APPENDIX H:
ADDITIONAL GROUNDWATER EVALUATIONS IN A PORTION OF THE HISTORICAL TULARE LAKE BED

TECHNICAL MEMORANDUM #1

TO: Mike Trouchon, Larry Walker Associates

FROM: Jacob Westra, Tulare Lake Baisn Water Storage District

DATE: July 14, 2016

RE: Additional Groundwater Evaluations in a Portion of the Historical Tulare Lake Bed

Regional Water Quality Control Board Staff, CEQA Consultant Staff, CV-SALTS representatives and Tulare Lake Bed Staff held a conference call on June 2, 2016, to discuss the draft Basin Plan Amendment Staff Report dated March 25, 2016, and the Technical and Regulatory Evaluation of MUN and AGR Beneficial Uses in the Tulare Lake Bed area Report dated December 4, 2015. The RWQCB staff asked that the following items be addressed:

1. A technical document determining the cone of depression for pumping public water supply wells from the City of Corcoran and Kettleman City.
2. Develop a three dimensional graphical model of the proposed de-designation area so one could better understand the vertical extent proposed for de-designation.
3. Determine if historical water quality data are available within the area proposed for de-designation west of the City of Corcoran to determine if gravel packs or wells without deep seals are negatively impacting groundwater quality underlying the areas proposed for de-designation.

Item 1: Zone of Capture

Kenneth D. Schmidt and Associates prepared a technical analysis (see Attachment 1) to determine the cone of depression or zone of capture for the pumping wells from the various urban communities surrounding the area proposed for de-designation of the MUN beneficial use. The City of Corcoran Public Works director in July 2016 was contacted to determine how its wells are operated. Information regarding the operation of Kettleman City wells was also received from Summers Engineering (the Community Services District Consultant) related to the operation of the wells. In personal conversation with Mr. Reynolds, he indicated that the two active wells would no longer be used as the primary water supply source. The active wells would become backup water supply wells once the surface water treatment plant came online.

In addition to Corcoran and Kettleman City, the municipal wells in the communities of Stratford and Alpaugh were also evaluated. To summarize the analysis, groundwater pumping from Stratford and Alpaugh do not impact the direction of groundwater flow or draw groundwater from the areas proposed for de-designation. The primary, active Kettleman City municipal well has a cone of depression of 130 feet and is located about 1-mile away from the proposed de-designation area. The City of Corcoran has a cone of depression of approximately 1,900 feet and

is located about 2 miles away from the proposed de-designation area. This analysis indicates that none of the public supply wells from the surrounding communities neither influence the direction of groundwater flow nor do they draw groundwater from the area proposed for de-designation.

Item 2: Three Dimensional Model

Using information from the report *Technical and Regulatory Evaluation of MUN and AGR Beneficial Uses in the Tulare Lake Bed Area dated December 4, 2015*, a three dimensional graphical model was created and is shown in Figure 1.

Item 3: Water Quality

Electrical Conductivity (EC) data were obtained from three representative irrigation wells located in the area proposed for de-designation (see Figures 2, 3, and 4). All three wells are screened below the Corcoran clay. One well (SEC. 35C, T21S-R22E) has a cement seal to a depth of 50 ft, with readings observed from January 2003 through March 2016 average 254.7 µmhos/cm and range from 198 to 300 µmhos/cm. The trends are decreasing over time. A second well, (SEC. 3A, T22S-R22E) has a cement seal to a depth of 500 ft, with readings observed from May 2008 through June 2016 average 341.3 µmhos/cm and range from 230 to 500 µmhos/cm. The trends are decreasing over time

A third well (SEC. 3B, T21S-R20E) has a cement seal at unknown depth has data dating back to 1966 where EC ranges from approximately 650 to 780 µmhos/cm in the same year. More recent EC data from February 2015 to May 2016 for this well ranged from 700 to 770 µmhos/cm. Although the trend line shows the EC is slightly increasing in the well, yet within the allowable Basin Plan rate of degradation, the recent maximum EC reading has not exceeded the maximum EC measurement observed in 1966. If a trend line was drawn using the maximum EC measurement observed in 1966 and maximum EC measurement observed in 2015, the trend line would be decreasing.

These EC data indicate that neither the groundwater wells nor the gravel packs are acting as conduits for the downward migration of poor quality shallow groundwater. Furthermore, the intervening clay layers are acting as a confining layer preventing the downward migration of poor quality water.

Attachment 1

KENNETH D. SCHMIDT AND ASSOCIATES
GROUNDWATER QUALITY CONSULTANTS
600 WEST SHAW AVE., SUITE 250
FRESNO, CALIFORNIA 93704
TELEPHONE (559) 224-4412

July 8, 2016

Mr. J.J. Westra
Assistant Manager
Tulare Lake Basin WSD
1001 Chase Avenue
Corcoran, CA 93212

Re: Lakebed De-Designation

Dear J.J.:

Submitted herewith is our enhanced discussion of potential groundwater flow near the urban areas.

Sincerely Yours,

Kenneth D. Schmidt
Geologist No. 1578
Certified Hydrogeologist
No. 176

KDS/td

REGISTERED GEOLOGIST
KENNETH D. SCHMIDT
NO. 1578
STATE OF CALIFORNIA

REGISTERED GEOLOGIST
KENNETH D. SCHMIDT
NO. 176
CERTIFIED
HYDROGEOLOGIST
STATE OF CALIFORNIA

TULARE LAKEBED DE-DESIGNATION

DIRECTIONS OF GROUNDWATER FLOW NEAR URBAN AREAS

This section provides a discussion of the direction of groundwater flow at and in the vicinity of the four urban areas surrounding the Project Study Area. In addition, the potential of pumping for these areas to change the direction of groundwater flow near the proposed de-designated area boundaries is evaluated.

Stratford

Data for the primary public supply well (Attachment D) in Stratford indicates that it is perforated from 660 to 1,170 feet in depth and taps strata below the Corcoran Clay. The deposits above the Corcoran Clay are sealed off in this well. There are two other wells in Stratford, but they are standby and aren't pumped significantly. The direction of shallow groundwater flow is indicated to be to the south, based primarily on monitoring at the Westlake Farms North Evaporation Basins and on the topography. The proposed de-designation in this area is to a depth of 75 feet. Pumpage from the Stratford supply well would not influence the direction of groundwater flow above the Corcoran Clay because of the intervening clays layers below the base of the de-designated strata and above the top of the perforations and opposite the annular seal nor would these wells draw groundwater from beneath the areas proposed for de-designation. In addition, this well is located more than half a mile from the proposed delisted area.

Alpaugh

The primary supply well in Alpaugh is perforated from 1,025 to 1,210 feet in depth and taps strata below the Corcoran Clay. This well is sealed off opposite all strata above a depth of 900 feet (Attachment D). This well is more than a mile from the nearest boundary of the area proposed for de-designation, and the interval to be de-designated is above a depth of 110 feet. The direction of shallow groundwater flow near Alpaugh is indicated to be to the west, based on topography. The annular seal in this well would preclude any influence on the direction of groundwater flow in shallow strata due to pumping of the well. This is because of the extensive clay layers between 110 feet and 900 feet in depth in the vicinity of the well.

The two Angiola W.D. wells (G-30 and W-18), which could be used for Alpaugh, are perforated from 260 to 500 feet in depth

and tap strata above the Corcoran Clay. These wells have annular seals extending from the surface to at least 220 feet in depth. These wells are located about one mile east of the proposed de-designation boundary. The proposed de-designation in this area is for the interval above 110 feet in depth. The direction of shallow groundwater flow in that area (between Avenues 104 and 112 and Roads 32 and 40) is indicated to be to the west, based on topography. Each of these wells is sealed opposite three clay layers between 115 feet and 220 feet in depth. These clay layers would preclude the pumping of the wells from affecting the direction of groundwater flow in strata above a depth of 100 feet. Additionally, these wells would not draw groundwater from beneath the areas proposed for de-designation.

Kettleman City

There are two active public supply wells in Kettleman City, and they range from about 550 feet to 700 feet deep. A third well (school well) is used only for landscape irrigation due to high arsenic levels (Attachment D). These wells tap strata only above the Corcoran Clay, which is indicated to be below a depth of about 800 feet near Kettleman City. The direction of shallow groundwater flow is indicated to be to the northeast, based primarily on the topography and the direction of groundwater flow at the Westlake Farms South Evaporation Basins. These public supply wells are located outside of the proposed de-designation boundary by 0.6 to 1.0 mile. A zone of capture evaluation was conducted to evaluate the extent that the Kettleman City pumpage could reverse the direction of groundwater flow in strata above the Corcoran Clay. The slope of the land surface between the two wells and the Blakely Canal to the northeast averages about 60 feet per mile. This is the best estimate of the water-level slope for strata above the Corcoran Clay. An aquifer test was conducted on the Kettleman City CSD Maud Street Well in 1995. This well was perforated from 250 to 545 feet in depth. The pumping rate was about 500 gpm and a transmissivity of 9,000 gpd per foot was indicated by the pump test. The measured annual pumping for Kettleman City during 2013-15 ranged from only 27 to 29 acre-feet per year. A zone of capture evaluation was done. The distance between the wells and the stagnation point is the downgradient extent of the cone of depression due to pumping of the wells. The distance to the stagnation point is determined from the following equation from Fetter (1994):

$$Xo = \frac{Q}{2\Pi Kbi}$$

Where X_0 : distance to stagnation point (feet)
Q: pumping rate (ft^3 /day)
K: hydraulic conductivity (ft/day)
b: aquifer initial thickness (ft)
i: hydraulic gradient (unitless).

Q = 0.26 acre-foot per day or 11,230 cubic feet per day
K = 9,000 gpd/ft divided by 335 feet = 27 gpd/ft^2 divided by 7.48 = 3.6 feet per day.
b = 335 feet.

$$I = \frac{60 \text{ feet/mile}}{5{,}280 \text{ feet per mile}} = 0.0144.$$

$$Xo = \frac{11{,}230}{86} = 130 \text{ feet.}$$

This indicates that even if the water-level slope was greater, the cone of depression would only extend less than 200 feet northeast of the well. Both wells are located west of Highway 41 and are more than 0.6 mile upgradient of the proposed de-designation boundary. Thus there would be no impact on the direction of groundwater flow near the de-designation boundary, nor would these wells draw groundwater from beneath the areas proposed for de-designation.

City of Corcoran

Active City of Corcoran public supply wells are located east of 5th Avenue and north of Orange Avenue. All of these wells are located more than two miles outside of the proposed de-designation boundary. None of the active City wells located between Orange and Niles Avenues and 4-1/2 and 5th Avenues is pumped significantly. The City has another well (4-B), which is located farther to the northeast, between 4th and 4 1/2th Avenues. This well is perforated from 235 to 485 feet in depth, and is heavily pumped. Thus most of the upper aquifer City pumpage closest to the de-designation area is from Well No. 4-B, which is located about two and a half miles from the de-designation boundary. The remaining City wells are located either east of 4th Avenue or farther north, much farther distant from the proposed de-designation area.

Water-level maps for the period 1997-2003 were generally based on more measurements near Corcoran, and are thus considered more representative. These maps consistently indicate a southwesterly direction of groundwater flow toward the central part of the lake-

bed. Because the proposed de-designation area southwest of Corcoran extends to the top of the Corcoran Clay, a zone of capture evaluation was done for City Well No. 4B. The annual pumpage from Well 4-B was 1,330 acre-feet in 2015. Aquifer tests were conducted on five upper aquifer City of Corcoran wells in 1993. The hydraulic conductivities averaged about 250 gpd per square foot. The saturated thickness of the upper aquifer tapped by Well No. 4B and is 275 feet. The lateral hydraulic conductivity of 250 gpd per square foot is equal to 33.4 feet per day.

The distance from Well 4-B to the downgradient stagnation point is as follows:

$$Xo = \frac{160{,}700\ ft^3/day}{2\Pi(33.4\ ft/day)(275\ ft)\ 0.00144}$$

$$Xo = \frac{160{,}700\ ft^3/day}{83.07\ ft^2/day}$$

$$Xo = 1{,}934\ feet.$$

The depression cone from pumping this well could extend about 1,900 feet to the southwest of the well, but would still be about two miles from the proposed de-designation boundary. Thus pumping of the City of Corcoran wells wouldn't influence the direction of groundwater flow in the area proposed for de-designation, nor would these wells draw groundwater from beneath the areas proposed for de-designation.

Attachment D

Construction Data and Chemical Analyses for Public Supply Wells

STRATFORD PUD

20/20-17

ORIGINAL
File with DWR

175

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do Not Fill In

№ 148864

State Well No.

Other Well No.

(1) OWNER:

Name Stratford Public Utility Dist.
Address 19681- Railroad Calif.
Stratford, Calif.

(2) LOCATION OF WELL:

County Kings Owner's number, if any

Township, Range, and Section:

Distance from cities, roads, railroads, etc. 200' S-100' E. of rail road Ave.

(3) TYPE OF WORK *(check)*:

New Well [X] Deepening [ ] Reconditioning [ ] Destroying [ ]

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE *(check)*:

Domestic [ ] Industrial [ ] Municipal [X]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:

Rotary Rev. [X]
Cable [ ]
Other [ ]

(6) CASING INSTALLED:

STEEL: X OTHER:
SINGLE [X] DOUBLE [ ]

If gravel packed

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	580	18	1/4	28	0	610

Size of shoe or well ring: bullnose Size of gravel: 5/16x16

Describe joint

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen Louver

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
400	580	8	4½	1/8x2 3/8

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes [X] No [ ] To what depth 400 ft.

Were any strata sealed against pollution? Yes [ ] No [ ] If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing

(9) WATER LEVELS:

Depth at which water was first found, if known ft.

Standing level before perforating, if known ft.

Standing level after perforating and developing ft.

(10) WELL TESTS:

Was pump test made? Yes [ ] No [ ] If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

Was electric log made of well? Yes [ ] No [ ] If yes, attach copy

(11) WELL LOG:

Total depth 610 ft. Depth of completed well 580 ft.

Formation: *Describe by color, character, size of material, and structure*

ft. to ft.	
0-10	sand
10-15	clay
15-20	sand
20-90	clay
90-120	blue clay
120-160	clay
160-180	blue clay
180-230	clay
230-240	blue clay
240-275	clay
275-285	blue clay
285-290	clay
290-295	blue clay
295-438	clay
438-440	sand 2
440-449	clay
449-451	sand 2
451-454	clay
454-456	sand 2
456-505	clay
505-511	sand 6
511-530	clay
530-565	sand 35
565-610	clay

UNCONFINED

Work started Aug. 10, 1976. Completed Aug. 14, 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Grabow Well Drilling Co. Inc.
(Person, firm, or corporation) (Typed or printed)

Address 12522-9th Ave.
Hanford, Calif.

[SIGNED] Dean Grabow
(Well Driller)

License No. 288489 Dated Aug. 19, 1976

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 9-68) 1 8-72 20M TRIP ⓘT OSP

ORIGINAL
File with DWR

17K

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **816228**

DWR USE ONLY — DO NOT FILL IN
2015/1201E-1117
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. 7734

Date Work Began 6/13/2005, Ended 6/20/2005

Local Permit Agency KINGS COUNTY PLANNING AGENCY

Permit No. W0408-017 Permit Date 6/7/2005

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL — HORIZONTAL — ANGLE — (SPECIFY)

DRILLING METHOD REVERSE FLUID WATER

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain, size, color, etc.*
0	5	TOP SOIL WITH SAND
5	8	SAND
8	20	GRAY CLAY
20	60	TAN CLAY
60	150	SOFT BLUE CLAY
150	240	SOFT BROWN CLAY
240	420	SOFT GRAY CLAY WITH SAND
420	465	SAND
465	480	GRAY CLAY
480	560	SAND
560	570	BLUE CLAY WITH SAND STREAK
570	660	GRAY BLUE CLAY (CORCORAN)
660	720	SAND
720	750	GRAY BLUE CLAY
750	950	GRAY BLUE CLAY WITH SAND STREAKS
950	1010	SAND
1010	1112	GRAY BLUE CLAY WITH SAND AND BRITTLE CLAY STREAKS
1112	1142	SAND
1142	1190	GRAY BLUE CLAY
1190	1230	SAND WITH GRAY BLUE CLAY STREAKS
1230	1250	GRAY BLUE CLAY
1250	1270	SAND
1270	1305	GRAY BLUE CLAY WITH SAND AND BRITTLE CLAY STREAKS

TOTAL DEPTH OF BORING 1250 (Feet)

TOTAL DEPTH OF COMPLETED WELL 1190 (Feet)

WELL OWNER

Name STRATFORD PUBLIC UTILITIES

Mailing Address PO BOX 85

STRATFORD (CITY) CA (STATE) 93266 (ZIP)

WELL LOCATION

Address 180' EOF RAILROAD ST & 185' NOF 5TH ST

City CA

County KINGS

APN Book 026 Page 154 Parcel 015

Township 20 S Range 20 E Section 17

Latitude ___ DEG. ___ MIN. ___ SEC. ___ DEG. ___ MIN. ___ SEC.

LOCATION SKETCH

NORTH

WEST EAST

SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. **PLEASE BE ACCURATE & COMPLETE.**

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR
— Deepen
— Other (Specify)

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY
— Domestic — Public
— Irrigation — Industrial

MONITORING —
TEST WELL —
CATHODIC PROTECTION —
HEAT EXCHANGE —
DIRECT PUSH —
INJECTION —
VAPOR EXTRACTION —
SPARGING —
REMEDIATION —
OTHER (SPECIFY) ✓
MUN

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 197 (Ft.) & DATE MEASURED 6/28/2005

ESTIMATED YIELD 1000 (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN 58 (Ft.)

May not be representative of a well's long-term yield.

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	500	28					ACCESS TB	2	SCH 40	
0	300	28	✓				ASTM-135	16	.312	
300	660	28	✓				ASTM-135	16	.375	
660	720	28		✓			DBL MILLSL	16	.375	.060
720	780	28/24	✓				ASTM-135	12-3/4	.312	
780	800	24		✓			DBL MILLSL	12-3/4	.312	.060

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	620	✓			SAND SLURRY
620	1250			✓	SRI#8 SAND

ATTACHMENTS (✓)

— Geologic Log
— Well Construction Diagram
— Geophysical Log(s)
— Soil/Water Chemical Analysis
— Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME EATON DRILLING CO.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

20 W. KENTUCKY AVE. (ADDRESS) WOODLAND (CITY) CA (STATE) 95695 (ZIP)

Signed Mark D Damian (WELL DRILLER/AUTHORIZED REPRESENTATIVE) 07/14/05 (DATE SIGNED) C57 A HIC - 133783 (C-57 LICENSE NUMBER)

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **816228**

DWR USE ONLY — DO NOT FILL IN
2015/20E-17
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. 7734
Date Work Began 6/13/2005, Ended 6/20/2005
Local Permit Agency KINGS COUNTY PLANNING AGENCY
Permit No. W0408-017 Permit Date 6/7/2005

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD REVERSE FLUID WATER

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain, size, color, etc.*
0	5	TOP SOIL WITH SAND
5	8	SAND
8	20	GRAY CLAY
20	60	TAN CLAY
60	150	SOFT BLUE CLAY
150	240	SOFT BROWN CLAY
240	420	SOFT GRAY CLAY WITH SAND
420	465	SAND
465	480	GRAY CLAY
480	560	SAND
560	570	BLUE CLAY WITH SAND STREAK
570	660	GRAY BLUE CLAY (CORCORAN)
660	720	SAND
720	750	GRAY BLUE CLAY
750	950	GRAY BLUE CLAY WITH SAND STREAKS
950	1010	SAND
1010	1112	GRAY BLUE CLAY WITH SAND AND BRITTLE CLAY STREAKS
1112	1142	SAND
1142	1190	GRAY BLUE CLAY
1190	1230	SAND WITH GRAY BLUE CLAY STREAKS
1230	1250	GRAY BLUE CLAY
1250	1270	SAND
1270	1305	GRAY BLUE CLAY WITH SAND AND BRITTLE CLAY STREAKS

TOTAL DEPTH OF BORING 1250 (Feet)
TOTAL DEPTH OF COMPLETED WELL 1190 (Feet)

WELL OWNER

Name STRATFORD PUBLIC UTILITIES
Mailing Address PO BOX 85
STRATFORD (CITY) CA (STATE) 93266 (ZIP)

WELL LOCATION

Address 180' EOF RAILROAD ST & 185' NOF 5TH ST
City CA
County KINGS
APN Book 026 Page 154 Parcel 015
Township 20 S Range 20 E Section 17
Latitude ___ DEG. ___ MIN. ___ SEC. ___ DEG. ___ MIN. ___ SEC.

LOCATION SKETCH

NORTH
WEST EAST
SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. **PLEASE BE ACCURATE & COMPLETE.**

ACTIVITY (✓)

✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)
WATER SUPPLY
___ Domestic ___ Public
___ Irrigation ___ Industrial
MONITORING ___
TEST WELL ___
CATHODIC PROTECTION ___
HEAT EXCHANGE ___
DIRECT PUSH ___
INJECTION ___
VAPOR EXTRACTION ___
SPARGING ___
REMEDIATION ___
OTHER (SPECIFY) ✓ MUN

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 197 (Ft.) & DATE MEASURED 6/28/2005
ESTIMATED YIELD * 1000 (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN 58 (Ft.)
May not be representative of a well's long-term yield.

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
800	900	24	✓				ASTM-135	12-3/4	.312	
900	920	24		✓			DBL MILLSL	12-3/4	.312	.060
920	930	24	✓				ASTM-135	12-3/4	.312	
930	940	24					SLIP JOINT	12-3/4		
940	950	24	✓				ASTM-135	12-3/4	.312	
950	1170	24		✓			DBL MILLSL	12-3/4	.312	.060

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	620	✓			SAND SLURRY
620	1250			✓	SRI#8 SAND

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analysis
___ Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME EATON DRILLING CO.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 20 W. KENTUCKY AVE. CITY WOODLAND STATE CA ZIP 95695
Signed Mark Davis
WELL DRILLER/AUTHORIZED REPRESENTATIVE
DATE SIGNED 07/14/05
C-57 LICENSE NUMBER C57 A HIC - 133783

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
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STATE OF CALIFORNIA

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Refer to Instruction Pamphlet

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STATE WELL NO./ STATION NO.
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Owner's Well No. 7734

Date Work Began 6/13/2005, Ended 6/20/2005

Local Permit Agency KINGS COUNTY PLANNING AGENCY

Permit No. W0408-017 Permit Date 6/7/2005

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL — HORIZONTAL — ANGLE — (SPECIFY)

DRILLING METHOD REVERSE FLUID WATER

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain, size, color, etc.*
0	5	TOP SOIL WITH SAND
5	8	SAND
8	20	GRAY CLAY
20	60	TAN CLAY
60	150	SOFT BLUE CLAY
150	240	SOFT BROWN CLAY
240	420	SOFT GRAY CLAY WITH SAND
420	465	SAND
465	480	GRAY CLAY
480	560	SAND
560	570	BLUE CLAY WITH SAND STREAK
570	660	GRAY BLUE CLAY (CORCORAN)
660	720	SAND
720	750	GRAY BLUE CLAY
750	950	GRAY BLUE CLAY WITH SAND STREAKS
950	1010	SAND
1010	1112	GRAY BLUE CLAY WITH SAND AND BRITTLE CLAY STREAKS
1112	1142	SAND
1142	1190	GRAY BLUE CLAY
1190	1230	SAND WITH GRAY BLUE CLAY STREAKS
1230	1250	GRAY BLUE CLAY
1250	1270	SAND
1270	1305	GRAY BLUE CLAY WITH SAND AND BRITTLE CLAY STREAKS

TOTAL DEPTH OF BORING 1250 (Feet)

TOTAL DEPTH OF COMPLETED WELL 1190 (Feet)

WELL OWNER

Name STRATFORD PUBLIC UTILITIES

Mailing Address PO BOX 85

STRATFORD (CITY) CA (STATE) 93266 (ZIP)

WELL LOCATION

Address 180' EOF RAILROAD ST & 185' NOF 5TH ST

City CA

County KINGS

APN Book 026 Page 154 Parcel 015

Township 20 S Range 20 E Section 17

Latitude ___ DEG. ___ MIN. ___ SEC. ___ DEG. ___ MIN. ___ SEC.

LOCATION SKETCH

NORTH

WEST EAST

SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. **PLEASE BE ACCURATE & COMPLETE.**

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR
— Deepen
— Other (Specify)

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY
— Domestic — Public
— Irrigation — Industrial

MONITORING —
TEST WELL —
CATHODIC PROTECTION —
HEAT EXCHANGE —
DIRECT PUSH —
INJECTION —
VAPOR EXTRACTION —
SPARGING —
REMEDIATION —
OTHER (SPECIFY) ✓
MUN

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 197 (Ft.) & DATE MEASURED 6/28/2005

ESTIMATED YIELD * 1000 (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN 58 (Ft.)

May not be representative of a well's long-term yield.

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
1170	1190	24	✓				ASTM-135	12-3/4	.312	

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	620	✓			SAND SLURRY
620	1250			✓	SRI#8 SAND

ATTACHMENTS (✓)

— Geologic Log
— Well Construction Diagram
— Geophysical Log(s)
— Soil/Water Chemical Analysis
— Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME EATON DRILLING CO.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 20 W. KENTUCKY AVE. WOODLAND (CITY) CA (STATE) 95695 (ZIP)

Signed Mark Damion
WELL DRILLER/AUTHORIZED REPRESENTATIVE

07/14/05
DATE SIGNED

C57 A HIC - 133783
C-57 LICENSE NUMBER

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

DRINKING WATER ANALYSES RESULTS REPORT
LAST SAMPLE FOR ALL CONSTITUENTS - ALL RESULTS
REPORT OF COUNTY: 16 KINGS

SYSTEM NO: 1610006 NAME: STRATFORD PUD
SOURCE NO: 001 NAME: WELL 05 - RAW

COUNTY: KINGS
PSCODE: 1610006-001 CLASS: CMGA STATUS: AR

GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION	SAMPLE DATE		RESULT	MCL	DLR	TRIGGER	UNIT
GP SECONDARY/GP							
82383 AGGRSSIVE INDEX (CORROSIVITY)	12/16/2011		12.0000	----------	----------	----------	
00440 BICARBONATE ALKALINITY	12/16/2011		330.0000	----------	----------	----------	MG/L
00916 CALCIUM	12/16/2011		20.0000	----------	----------	----------	MG/L
00445 CARBONATE ALKALINITY	12/16/2011	<	.0000	----------	----------	----------	MG/L
00940 CHLORIDE	12/16/2011		51.0000	600.0000	----------	500.0000	MG/L
00081 COLOR	11/11/2011		45.0000	15.0000	----------	15.0000	UNITS
01042 COPPER	12/16/2011	<	.0000	1,000.0000	50.0000	1,000.0000	UG/L
38260 FOAMING AGENTS (MBAS)	12/16/2011	<	.0000	.5000	----------	.5000	MG/L
00900 HARDNESS (TOTAL) AS CACO3	12/16/2011		65.0000	----------	----------	----------	MG/L
71830 HYDROXIDE ALKALINITY	12/16/2011	<	.0000	----------	----------	----------	MG/L
01045 IRON	12/16/2011	<	.0000	300.0000	100.0000	300.0000	UG/L
00927 MAGNESIUM	12/16/2011		3.9000	----------	----------	----------	MG/L
01055 MANGANESE	12/16/2011		99.0000	50.0000	20.0000	50.0000	UG/L
00086 ODOR THRESHOLD @ 60 C	11/11/2011	<	.0000	3.0000	1.0000	3.0000	TON
00403 PH, LABORATORY	12/16/2011		8.3000	----------	----------	----------	
01077 SILVER	12/16/2011	<	.0000	100.0000	10.0000	100.0000	UG/L
00929 SODIUM	12/16/2011		240.0000	----------	----------	----------	MG/L
00095 SPECIFIC CONDUCTANCE	12/16/2011		1,100.0000	2,200.0000	----------	1,600.0000	US
00945 SULFATE	12/16/2011		170.0000	600.0000	500.0000	600.0000	MG/L
70300 TOTAL DISSOLVED SOLIDS	12/16/2011		750.0000	1,500.0000	----------	1,000.0000	MG/L
82079 TURBIDITY, LABORATORY	11/11/2011	<	.0000	5.0000	----------	5.0000	NTU
01092 ZINC	12/16/2011	<	.0000	5,000.0000	50.0000	5,000.0000	UG/L

NOTE1: = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
NOTE2: .000 = RESULT WAS REPORTED AS NON-DETECTED EXCEPT FOR RAD

STATE OF CALIFORNIA
DRINKING WATER PROGRAM

DRINKING WATER ANALYSES RESULTS REPORT
LAST SAMPLE FOR ALL CONSTITUENTS - ALL RESULTS
REPORT OF COUNTY: 16 KINGS

SYSTEM NO: 1610006 NAME: STRATFORD PUD COUNTY: KINGS
SOURCE NO: 001 NAME: WELL 05 - RAW PSCODE: 1610006-001 CLASS: CMGA STATUS: AR

GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION	SAMPLE DATE		RESULT	MCL	DLR	TRIGGER	UNIT
IO INORGANIC							
01105 ALUMINUM	07/13/2011	<	.0000	1,000.0000	50.0000	200.0000	UG/L
01097 ANTIMONY	07/13/2011	<	.0000	6.0000	6.0000	6.0000	UG/L
01002 ARSENIC	11/11/2011		3.4000	10.0000	2.0000	5.0000	UG/L
01007 BARIUM	07/13/2011	<	.0000	1,000.0000	100.0000	1,000.0000	UG/L
01012 BERYLLIUM	07/13/2011	<	.0000	4.0000	1.0000	4.0000	UG/L
01027 CADMIUM	07/13/2011	<	.0000	5.0000	1.0000	5.0000	UG/L
01034 CHROMIUM (TOTAL)	07/13/2011	<	.0000	50.0000	10.0000	50.0000	UG/L
01032 CHROMIUM, HEXAVALENT	06/13/2002		.0000	----------	----------	----------	UG/L
01291 CYANIDE	07/13/2011	<	.0000	150.0000	100.0000	150.0000	UG/L
00951 FLUORIDE (F) (NATURAL-SOURCE)	07/13/2011		.1400	2.0000	.1000	2.0000	MG/L
01051 LEAD	07/13/2011	<	.0000	----------	5.0000	15.0000	UG/L
71900 MERCURY	07/13/2011	<	.0000	2.0000	1.0000	2.0000	UG/L
01067 NICKEL	07/13/2011	<	.0000	100.0000	10.0000	100.0000	UG/L
A-031 PERCHLORATE	11/11/2011	<	.0000	6.0000	4.0000	4.0000	UG/L
01147 SELENIUM	07/13/2011	<	.0000	50.0000	5.0000	50.0000	UG/L
01059 THALLIUM	07/13/2011	<	.0000	2.0000	1.0000	2.0000	UG/L
NI NITRATE/NITRITE							
71850 NITRATE (AS NO3)	07/13/2011	<	.0000	45.0000	2.0000	23.0000	MG/L
A-029 NITRATE + NITRITE (AS N)	08/15/2002		.0000	10,000.0000	400.0000	5,000.0000	UG/L
00620 NITRITE (AS N)	07/13/2011	<	.0000	1,000.0000	400.0000	500.0000	UG/L

NOTE1: = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
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STATE OF CALIFORNIA
DRINKING WATER PROGRAM

DRINKING WATER ANALYSES RESULTS REPORT
LAST SAMPLE FOR ALL CONSTITUENTS - ALL RESULTS
REPORT OF COUNTY: 16 KINGS

SYSTEM NO: 1610006 NAME: STRATFORD PUD COUNTY: KINGS
SOURCE NO: 002 NAME: WELL 06 - RAW (COLPSD06)REHB 0 PSCODE: 1610006-002 CLASS: CMGA STATUS: AR

GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION	SAMPLE DATE		RESULT	MCL	DLR	TRIGGER	UNIT
GP SECONDARY/GP							
82383 AGGRSSIVE INDEX (CORROSIVITY)	06/18/2008		12.0000	----------	----------	----------	
00440 BICARBONATE ALKALINITY	06/18/2008		290.0000	----------	----------	----------	MG/L
00916 CALCIUM	06/18/2008		20.0000	----------	----------	----------	MG/L
00445 CARBONATE ALKALINITY	06/18/2008		4.2000	----------	----------	----------	MG/L
00940 CHLORIDE	06/18/2008		41.0000	600.0000	----------	500.0000	MG/L
00081 COLOR	06/18/2008		25.0000	15.0000	----------	15.0000	UNITS
01042 COPPER	06/18/2008		.0000	1,000.0000	50.0000	1,000.0000	UG/L
38260 FOAMING AGENTS (MBAS)	06/18/2008	<	.0500	.5000	----------	.5000	MG/L
00900 HARDNESS (TOTAL) AS CACO3	06/18/2008		70.0000	----------	----------	----------	MG/L
71830 HYDROXIDE ALKALINITY	06/18/2008	<	1.0000	----------	----------	----------	MG/L
01045 IRON	06/18/2008		140.0000	300.0000	100.0000	300.0000	UG/L
00927 MAGNESIUM	06/18/2008		4.8000	----------	----------	----------	MG/L
01055 MANGANESE	09/02/2009		320.0000	50.0000	20.0000	50.0000	UG/L
00086 ODOR THRESHOLD @ 60 C	06/18/2008		.0000	3.0000	1.0000	3.0000	TON
00403 PH, LABORATORY	06/18/2008		8.4000	----------	----------	----------	
01077 SILVER	06/18/2008		.0000	100.0000	10.0000	100.0000	UG/L
00929 SODIUM	06/18/2008		280.0000	----------	----------	----------	MG/L
00095 SPECIFIC CONDUCTANCE	10/01/2008		1,100.0000	2,200.0000	----------	1,600.0000	US
00945 SULFATE	06/18/2008		340.0000	600.0000	500.0000	600.0000	MG/L
70300 TOTAL DISSOLVED SOLIDS	06/18/2008		870.0000	1,500.0000	----------	1,000.0000	MG/L
82079 TURBIDITY, LABORATORY	06/18/2008		.4700	5.0000	----------	5.0000	NTU
01092 ZINC	06/18/2008		.0000	5,000.0000	50.0000	5,000.0000	UG/L

NOTE1: = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
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DRINKING WATER ANALYSES RESULTS REPORT
LAST SAMPLE FOR ALL CONSTITUENTS - ALL RESULTS
REPORT OF COUNTY: 16 KINGS

SYSTEM NO: 1610006 NAME: STRATFORD PUD COUNTY: KINGS
SOURCE NO: 002 NAME: WELL 06 - RAW (COLPSD06)REHB 0 PSCODE: 1610006-002 CLASS: CMGA STATUS: AR

GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION	SAMPLE DATE		RESULT	MCL	DLR	TRIGGER	UNIT
IO INORGANIC							
01105 ALUMINUM	06/18/2008		.0000	1,000.0000	50.0000	200.0000	UG/L
01097 ANTIMONY	06/18/2008		.0000	6.0000	6.0000	6.0000	UG/L
01002 ARSENIC	09/02/2009		13.0000	10.0000	2.0000	5.0000	UG/L
01007 BARIUM	06/18/2008		.0000	1,000.0000	100.0000	1,000.0000	UG/L
01012 BERYLLIUM	06/18/2008		.0000	4.0000	1.0000	4.0000	UG/L
01027 CADMIUM	06/18/2008		.0000	5.0000	1.0000	5.0000	UG/L
01034 CHROMIUM (TOTAL)	06/18/2008		.0000	50.0000	10.0000	50.0000	UG/L
01032 CHROMIUM, HEXAVALENT	06/13/2002		.0000	----------	----------	----------	UG/L
01291 CYANIDE	06/18/2008		.0000	150.0000	100.0000	150.0000	UG/L
00951 FLUORIDE (F) (NATURAL-SOURCE)	06/18/2008		.3100	2.0000	.1000	2.0000	MG/L
01051 LEAD	06/18/2008		.0000	----------	5.0000	15.0000	UG/L
71900 MERCURY	06/18/2008		.0000	2.0000	1.0000	2.0000	UG/L
01067 NICKEL	06/18/2008		.0000	100.0000	10.0000	100.0000	UG/L
A-031 PERCHLORATE	10/01/2008		.0000	6.0000	4.0000	4.0000	UG/L
01147 SELENIUM	06/18/2008		.0000	50.0000	5.0000	50.0000	UG/L
01059 THALLIUM	06/18/2008		.0000	2.0000	1.0000	2.0000	UG/L
NI NITRATE/NITRITE							
71850 NITRATE (AS NO3)	09/02/2009	<	3.0000	45.0000	2.0000	23.0000	MG/L
A-029 NITRATE + NITRITE (AS N)	08/15/2002		.0000	10,000.0000	400.0000	5,000.0000	UG/L
00620 NITRITE (AS N)	06/18/2008		.0000	1,000.0000	400.0000	500.0000	UG/L

NOTE1: = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
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STATE OF CALIFORNIA
DRINKING WATER PROGRAM

DRINKING WATER ANALYSES RESULTS REPORT
LAST SAMPLE FOR ALL CONSTITUENTS - ALL RESULTS
REPORT OF COUNTY: 16 KINGS

SYSTEM NO: 1610006 NAME: STRATFORD PUD COUNTY: KINGS
SOURCE NO: 005 NAME: WELL 07 - RAW PSCODE: 1610006-005 CLASS: CMGA STATUS: AR

GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION	SAMPLE DATE		RESULT	MCL	DLR	TRIGGER	UNIT
GP SECONDARY/GP							
82383 AGGRSSIVE INDEX (CORROSIVITY)	12/16/2011		12.0000	----------	----------	----------	
00440 BICARBONATE ALKALINITY	12/16/2011		440.0000	----------	----------	----------	MG/L
00916 CALCIUM	12/16/2011		6.4000	----------	----------	----------	MG/L
00445 CARBONATE ALKALINITY	12/16/2011		20.0000	----------	----------	----------	MG/L
00940 CHLORIDE	12/16/2011		45.0000	600.0000	----------	500.0000	MG/L
00081 COLOR	11/11/2011		45.0000	15.0000	----------	15.0000	UNITS
01042 COPPER	12/16/2011		390.0000	1,000.0000	50.0000	1,000.0000	UG/L
38260 FOAMING AGENTS (MBAS)	12/16/2011	<	.0000	.5000	----------	.5000	MG/L
00900 HARDNESS (TOTAL) AS CACO3	12/16/2011		28.0000	----------	----------	----------	MG/L
71830 HYDROXIDE ALKALINITY	12/16/2011	<	.0000	----------	----------	----------	MG/L
01045 IRON	12/16/2011		1,300.0000	300.0000	100.0000	300.0000	UG/L
00927 MAGNESIUM	12/16/2011		2.9000	----------	----------	----------	MG/L
01055 MANGANESE	12/16/2011		48.0000	50.0000	20.0000	50.0000	UG/L
00086 ODOR THRESHOLD @ 60 C	11/11/2011		1.0000	3.0000	1.0000	3.0000	TON
00403 PH, LABORATORY	12/16/2011		8.6000	----------	----------	----------	
01077 SILVER	12/16/2011	<	.0000	100.0000	10.0000	100.0000	UG/L
00929 SODIUM	12/16/2011		210.0000	----------	----------	----------	MG/L
00095 SPECIFIC CONDUCTANCE	12/16/2011		930.0000	2,200.0000	----------	1,600.0000	US
00945 SULFATE	12/16/2011		7.8000	600.0000	500.0000	600.0000	MG/L
70300 TOTAL DISSOLVED SOLIDS	12/16/2011		550.0000	1,500.0000	----------	1,000.0000	MG/L
82079 TURBIDITY, LABORATORY	11/11/2011		4.0000	5.0000	----------	5.0000	NTU
01092 ZINC	12/16/2011	<	.0000	5,000.0000	50.0000	5,000.0000	UG/L

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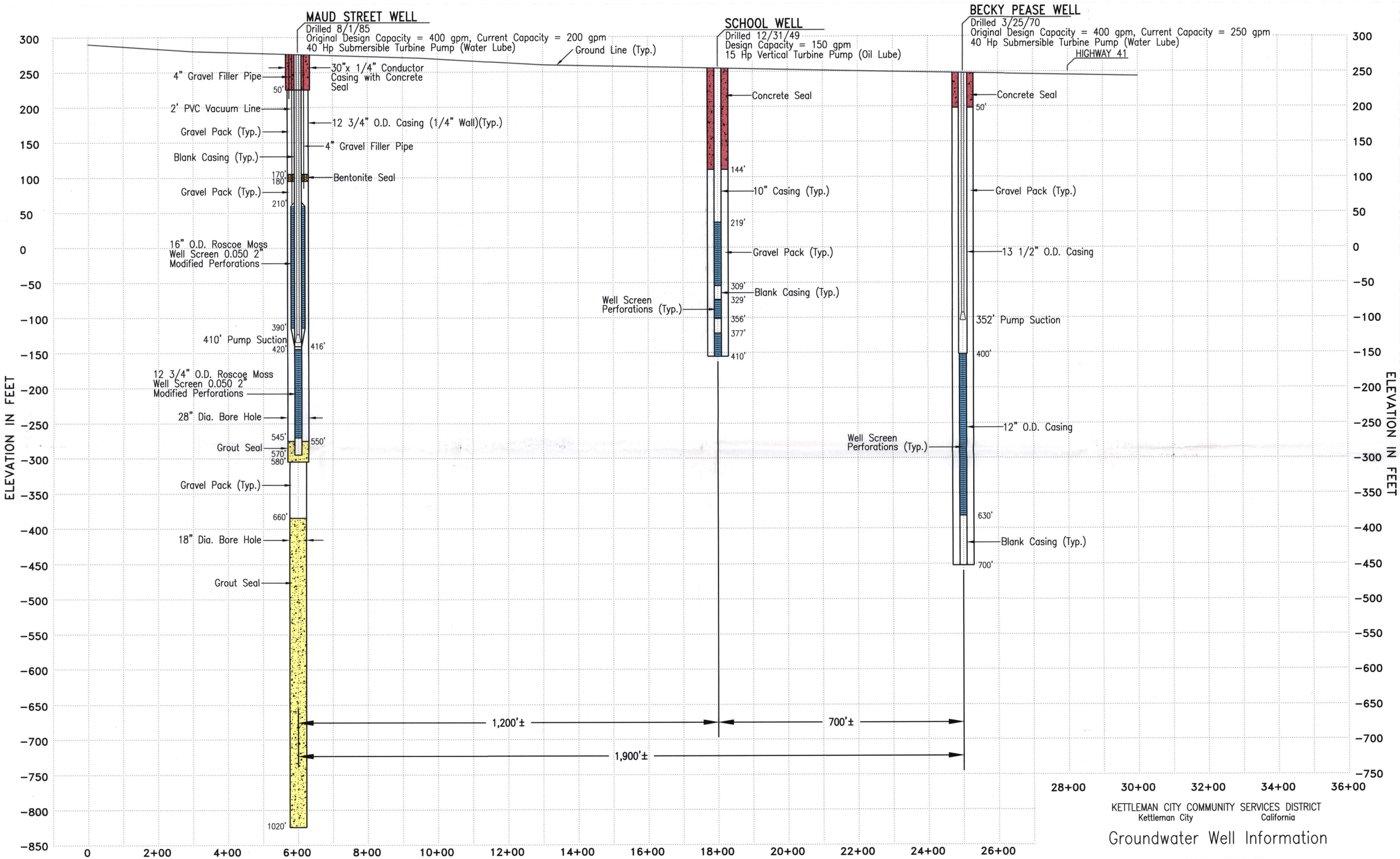
DRINKING WATER ANALYSES RESULTS REPORT
LAST SAMPLE FOR ALL CONSTITUENTS - ALL RESULTS
REPORT OF COUNTY: 16 KINGS

SYSTEM NO: 1610006 NAME: STRATFORD PUD COUNTY: KINGS
SOURCE NO: 005 NAME: WELL 07 - RAW PSCODE: 1610006-005 CLASS: CMGA STATUS: AR

GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION	SAMPLE DATE		RESULT	MCL	DLR	TRIGGER	UNIT
IO INORGANIC							
01105 ALUMINUM	07/13/2011	<	.0000	1,000.0000	50.0000	200.0000	UG/L
01097 ANTIMONY	07/13/2011	<	.0000	6.0000	6.0000	6.0000	UG/L
01002 ARSENIC	11/11/2011	<	.0000	10.0000	2.0000	5.0000	UG/L
01007 BARIUM	07/13/2011	<	.0000	1,000.0000	100.0000	1,000.0000	UG/L
01012 BERYLLIUM	07/13/2011	<	.0000	4.0000	1.0000	4.0000	UG/L
01027 CADMIUM	07/13/2011	<	.0000	5.0000	1.0000	5.0000	UG/L
01034 CHROMIUM (TOTAL)	07/13/2011	<	.0000	50.0000	10.0000	50.0000	UG/L
01291 CYANIDE	07/13/2011	<	.0000	150.0000	100.0000	150.0000	UG/L
00951 FLUORIDE (F) (NATURAL-SOURCE)	07/13/2011		.1400	2.0000	.1000	2.0000	MG/L
01051 LEAD	07/13/2011	<	.0000	----------	5.0000	15.0000	UG/L
71900 MERCURY	07/13/2011	<	.0000	2.0000	1.0000	2.0000	UG/L
01067 NICKEL	07/13/2011	<	.0000	100.0000	10.0000	100.0000	UG/L
A-031 PERCHLORATE	11/11/2011	<	.0000	6.0000	4.0000	4.0000	UG/L
01147 SELENIUM	07/13/2011	<	.0000	50.0000	5.0000	50.0000	UG/L
01059 THALLIUM	07/13/2011	<	.0000	2.0000	1.0000	2.0000	UG/L
NI NITRATE/NITRITE							
71850 NITRATE (AS NO3)	07/13/2011	<	.0000	45.0000	2.0000	23.0000	MG/L
00620 NITRITE (AS N)	07/13/2011	<	.0000	1,000.0000	400.0000	500.0000	UG/L
RA RADIOLOGICAL							
01501 GROSS ALPHA	07/13/2011	<	.0000	15.0000	3.0000	5.0000	PCI/L

NOTE1: = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
NOTE2: .000 = RESULT WAS REPORTED AS NON-DETECTED EXCEPT FOR RAD

KETTLEMAN CITY CSD



Section A–A

KETTLEMAN CITY COMMUNITY SERVICES DISTRICT
Kettleman City California

Groundwater Well Information

SUMMERS ENGINEERING, INC.
Consulting Engineers
HANFORD CALIFORNIA

October 1994

Revised November 2001

TRIPLICATE
Owner's Copy

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

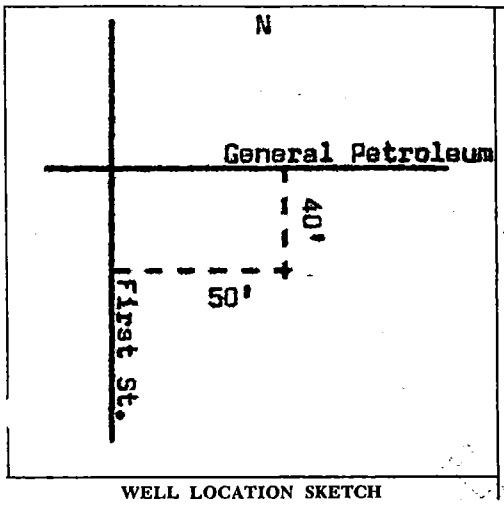
Do not fill in
No. 174253

Notice of Intent No. _____
Permit No. or Date 8-1-85

State Well No. _____
Other Well No. _____

(1) OWNER: Name Kettleman City Community Services Dist.
Address P.O. Box 177
City Kettleman City, CA Zip 93239

(2) LOCATION OF WELL (See instructions):
County Kings Owner's Well Number _____
Well address if different from above _____
Township _____ Range _____ Section _____
Distance from cities, roads, railroads, fences, etc. 50' East of First St. and 40' South of General Petroleum Ave. City of Kettleman City, CA Kings County



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well [X] Deepening [ ]
Reconstruction [ ]
Reconditioning [ ]
Horizontal Well [ ]
Destruction [ ] (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic [ ]
Irrigation [ ]
Industrial [ ]
Test Well [ ]
Stock [ ]
Municipal [X]
Other [ ]

(5) EQUIPMENT:
Rotary [ ] Reverse [X]
Cable [ ] Air [ ]
Other [ ] Bucket [ ]

(6) GRAVEL PACK:
Yes [X] No [ ] Size _____
Diameter of bore 28"
Packed from 0 to 170 ft. / 180 to 550 ft.

(7) CASING INSTALLED:
Steel [X] Plastic [ ] Concrete [ ]

(8) PERFORATIONS: Louver
Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
			OOAL	CASED		

(9) WELL SEAL:
Was surface sanitary seal provided? Yes [X] No [ ] If yes, to depth 50 ft.
Were strata sealed against pollution? Yes [ ] No [ ] Interval 170-180 ft.
Method of sealing 0-50 Conductor 170-180 Bentonite

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion _____ ft.

(11) WELL TESTS:
Was well test made? Yes [X] No [ ] If yes, by whom? Schafers
Type of test Pump [X] Bailer [ ] Air lift [ ]
Depth to water at start of test _____ ft. At end of test _____ ft
Discharge _____ gal/min after _____ hours Water temperature _____
ical analysis made? Yes [ ] No [ ] If yes, by whom? _____
Was electric log made? Yes [X] No [ ] If yes, attach copy to this report

(12) WELL LOG: Total depth 580 ft. Depth of completed well 570 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	50	Sandy Clay
50	125	Fine Sand & Clay
125	132	Sandstone & Fine Gravel
132	168	Clay W/Fine Sand Stringers
168	219	Brown Clay
219	231	Brown Clay W/Coarse Sand Stringers
231	307	Brown Clay
307	312	Coarse Sand & Gravel
312	384	Hard Brown Clay
384	408	Blue Clay
408	443	Brown Clay
443	455	Sandy Brown Clay W/Med. Sand Strin
455	458	Coarse Sand & Gravel
458	488	Sandy Brown Clay
488	489	Sandstone
489	515	Brown Clay
515	519	Med. Sand
519	579	Blue Clay
579	580	Med. Sand & Gravel
580		Stopped
		CONDUCTOR
0	50	30" OD x ¼ Cemented in Place
		CASING SET
0	420	12 3/4" OD X ¼ Blank
420	545	12 3/4" OD X ¼ .050 Modified 2" centers
545	570	12 3/4" OD X ¼ Blank
210	390	16" OD X ¼ .050 Modified 2" center
390	416	Starter Section
		SEALS
170	180	140 lbs. Bentonite
550	580	3 Yards Cement
		GRAVEL PACK
0	170	5/16 X 2
180	550	20% 12 X 20 60% 6 X 12 Monterey sand
		MISCELLANEOUS
0	200	4" Gravel Tube
0	210	2" Vacuum Line

Work started 12-3 19 85 Completed 12-5 19 85

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED _____ (Well Driller)
NAME Myers Brothers Inc. (Person, firm, or corporation) (Typed or printed)
Address 8650 E. Lacey Blvd.
City Hanford, CA Zip 93230
License No. 280310 Date of this report 12-6-85

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

MYERS REVERSE DRILLING

RECEIVED
FEB 10 1986

JOSEPH B. SUMMERS

T22S/R19E - 18P

Well No. 3
Drilled 3/25/70 Becker Pers #1

Depth from	to	Formation
0'	50'	Top soil
50'	103'	Clay-shale
103'	126'	Fine sand and clay
126'	203'	Clay
203'	270'	Fine sand and clay
270'	281'	Blue clay
281'	300'	Fine sand and clay
300'	326'	Sand-clay
326'	348'	Sand
348'	371'	Clay
371'	398'	Sand and clay
398'	410'	Clay
410'	470'	Sand
470'	503'	Sand and clay
503'	517'	Fine sand
517'	536'	Fine sand and clay
536'	542'	Fine sand, clay and gravel
542'	586'	Shale-clay
586'	601'	Sand-clay
601'	618'	Fine sand
618'	628'	Shale-clay
628'	700'	Clay

Perforated 400' to 630'

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

/ELL DATA

(1) Place and Owner Kettleman City Community Services District

(2) Source of Information John Turner

Collected by Kenneth L. Phillips Date May 1, 1979

(3) Number or Name	#2	#3	School
Date drilled	3-24-46	3-25-70	12-31-49
(4) Location: Neighborhood	Residential	Residential	School ground
Size of lot	50'x 80'	90'x 120'	200'x 200'
Distance to: Sewer	40'	58'	7100'
Sewage disposal	200'	150'	7200'
Abandoned well	none	none	150'
Nearest property line	25'	25'	50'
(5) Housing: Type	none	none	none
Condition	-	-	-
Pit depth *(if any)*	none	none	none
Floor *(material)*			
Drainage	away	away	away
(6) Well Depth	390'	700'	410'
(7) Casing: Depth	390'	630'	410'
Diameter	14' inch	12 and 14 inch	10 inch
Kind	spiral welded	welded collar	steel
Height above floor	6 inch	6 inch	
Distance to highest perforations	149'	400'	219'
Surface sealed *(yes or no)*	yes	yes	yes
Gravel pack *(yes or no)*	yes	yes	yes
Second casing depth	none	none	none
Second casing diameter	none	none	none
Annular seal *(depth)*		50'	mud 144'
(8) Impervious Strata: Penetrated — Thickness	10'	77'	20'
(8) Impervious Strata: Penetrated — Depth to	130'	126'	49'
(9) Water Levels: Depth to — Surface	186'	226'	
(9) Water Levels: Depth to — Static			105'
(9) Water Levels: Depth to — When pumping	233'	250'	145'
(10) Pump: Make	Fairbanks Morse	Jacuzzi	Fairbanks Morse
Type	Turbine	Turbine	Turbine
Capacity, g.p.m.	185	403	150
Lubrication	oil drip	oil drip	oil drip
Power	25 hp electric	40 hp electric	15 hp electric
Auxiliary power	none	none	none
Control	auto	auto	auto
Discharge location	above ground	above ground	above ground
Discharge to	main	main	pressure tank
(11) Frequency of Use	Not in use	Daily	Daily
(12) Flood Hazard	none	none	none
(13) Remarks and Defects (Use other side if necessary)	Maud and General Petroleum	100 Becky Pease	

(14) Show well log on other side.

FRESNO COUNTY PUBLIC HEALTH LABORATORY

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ELAP Certification Number: 1868 James J. Spoisdoff, Laboratory Director

0904-05770	17095	4/17/2009	4/17/2009	10:30 AM	Tito Balling
Lab Number	Account #	Date Received	Date Collected	Time Collected	Collector/Inspector

California Water Services
P.O. Box 343
Coalinga,CA 93210

Attn: Kim Taylor

SystemType: 99
Sample Type: Special
Water Sys #: Not State
Census Tract:
Well Number:
APN:

Sample Site: Kettleman City - 100 GPM - Hawitson Well Site

GENERAL MINERAL, PHYSICAL & INORGANIC CHEMISTRY ANALYSES

Analysis	Storet #	Result	Flag	MCL	DLR	Chemist	Date Analyzed
Aluminum	01105	<50 µg/L		1000 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Arsenic	01002	16.4 µg/L	High	10 µg/L	2 µg/L	M. Ickes, PHC	4/23/2009
Barium	01007	<100 µg/L		1000 µg/L	100 µg/L	M. Ickes, PHC	4/23/2009
Cadmium	01027	<1 µg/L		5 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Total Chromium	A-044	<1.0 µg/L		50 µg/L	1.0 µg/L	M. Ickes, PHC	4/23/2009
Lead	01051	<5 µg/L		AL=15 µg/L	5 µg/L	M. Ickes, PHC	4/23/2009
Mercury	71900	<0.5 µg/L		2 µg/L	0.5 µg/L	L. Assadourian	4/24/2009
Selenium	01147	<5 µg/L		50 µg/L	5 µg/L	M. Ickes, PHC	4/23/2009
Silver	01077	<10 µg/L		100 µg/L	10 µg/L	M. Ickes, PHC	4/23/2009
Antimony	01097	<6 µg/L		6 µg/L	6 µg/L	M. Ickes, PHC	4/23/2009
Beryllium	01012	<1 µg/L		4 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Nickel	01067	<10 µg/L		100 µg/L	10 µg/L	M. Ickes, PHC	4/23/2009
Thallium	01059	<1 µg/L		2 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Calcium	00916	16.3 mg/L			2 mg/L	S. Stasikonis, PHC	4/24/2009
Copper	01042	<50 µg/L		1300 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Iron	01045	<100 µg/L		300 µg/L	100 µg/L	S. Stasikonis, PHC	5/6/2009
Magnesium	00927	6.4 mg/L			2 mg/L	S. Stasikonis, PHC	4/29/2009
Manganese	01055	35.4 µg/L		50 µg/L	20 µg/L	M. Ickes, PHC	4/23/2009
Potassium	00937	1.25 mg/L			1.0 mg/L	K. Lor, PHC	5/8/2009
Sodium	00929	154 mg/L			2 mg/L	K. Lor, PHC	5/12/2009
Zinc	01092	<50 µg/L		5000 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Color	00081	<5 Units		15 Units	5 Units	K. Lor, PHC	4/17/2009
S.E.C.	00095	920 µmho/cm	High	900 µmho/cm	20 µmho/cm	K. Lor, PHC	4/17/2009
Turbidity	82079	0.30 NTU		5 NTU	0.05 NTU	K. Lor, PHC	4/17/2009
Total Hardness	00900	70.0 mg/L			20 mg/L	K. Lor, PHC	4/17/2009
Alkalinity	00410	87.7 mg/L			20 mg/L	K. Lor, PHC	4/17/2009
Chloride	00940	41.0 mg/L		250 mg/L	2 mg/L	S. Stasikonis, PHC	4/17/2009
Fluoride	00951	<0.1 mg/L		2.0 mg/L	0.1 mg/L	S. Stasikonis, PHC	4/17/2009
Nitrate (ion)	71850	53.3 mg/L	High	45 mg/L	2.0 mg/L	S. Stasikonis, PHC	4/17/2009
Nitrite (as N)	00620	<400 µg/L		1000 µg/L	400 µg/L	S. Stasikonis, PHC	4/17/2009
Sulfate	00945	278 mg/L	High	250 mg/L	0.5 mg/L	S. Stasikonis, PHC	4/21/2009
pH	00403	8.24 Std Units				K. Lor, PHC	4/17/2009

MCL = Maximum Contaminant Level
DLR = Detection Level for Reporting
QNS = Quantity Not Sufficient for Analysis
NTP = No Test Performed on Sample
Flag = "High" If Result Exceeds MCL

L L Bruins
Director / Chemistry Supervisor / QA Officer

Date Reported: 05/19/2009

FRESNO COUNTY PUBLIC HEALTH LABORATORY

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ELAP Certification Number: 1888 James J. Spotsdoff, Laboratory Director

0904-05770	17095	4/17/2009	4/17/2009	10:30 AM	Tito Balling
Lab Number	Account #	Date Received	Date Collected	Time Collected	Collector/Inspector

SystemType: 99
Sample Type: Special
Water Sys #: Not State
Census Tract:
Well Number:
APN:

California Water Services
P.O. Box 343
Coalinga,CA 93210

Attn: Kim Taylor

Sample Site: Kettleman City - 100 GPM - Hewitson Well Site

GENERAL MINERAL, PHYSICAL & INORGANIC CHEMISTRY ANALYSES

Analysis	Storet #	Result	Flag	MCL	DLR	Chemist	Date Analyzed
Bicarbonate (HCO3)	00440	86 mg/L			2 mg/L	L. Soriano, PHC	5/1/2009
Carbonate (CO3)	00445	<2 mg/L			2 mg/L	L. Soriano, PHC	5/1/2009
Corrosivity		Mod Aggressive				L. Soriano, PHC	5/1/2009
MBAS	38260	<0.025 mg/L		0.5 mg/L	0.025 mg/L	M. Ickes, PHC	4/27/2009
Odor	00086	Not Detected		3 TON	0 TON	K. Lor, PHC	4/17/2009
TDS	70300	630 mg/L	High	500 mg/L	1 mg/L	K. Lor, PHC	4/21/2009
Hydroxide (OH)	71830	<0.5 mg/L			0.5 mg/L	L. Soriano, PHC	5/1/2009

Comment: Well runs off & on daily.

MCL = Maximum Contaminant Level
DLR = Detection Level for Reporting
QNS = Quantity Not Sufficient for Analysis
NTP = No Test Performed on Sample
Flag = "High" if Result Exceeds MCL

J J Spotsdoff
Director / Chemistry Supervisor / QA Officer

Date Reported: 05/19/2009

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0904-05769	17095	4/17/2009	4/17/2009	9:45 AM	Tito Balling
Lab Number	Account #	Date Received	Date Collected	Time Collected	Collector/Inspector

SystemType: 99
Sample Type: Special
Water Sys #: Not State
Census Tract:
Well Number:
APN:

California Water Services
P.O. Box 343
Coalinga,CA 93210

Attn: Kim Taylor

Sample Site: Kettleman City - 400 GPM - Powers Well Site

GENERAL MINERAL, PHYSICAL & INORGANIC CHEMISTRY ANALYSES

Analysis	Storet #	Result	Flag	MCL	DLR	Chemist	Date Analyzed
Aluminum	01105	329 µg/L		1000 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Arsenic	01002	24.3 µg/L	High	10 µg/L	2 µg/L	M. Ickes, PHC	4/23/2009
Barium	01007	<100 µg/L		1000 µg/L	100 µg/L	M. Ickes, PHC	4/23/2009
Cadmium	01027	<1 µg/L		5 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Total Chromium	A-044	4 µg/L		50 µg/L	1.0 µg/L	M. Ickes, PHC	4/23/2009
Lead	01051	14.6 µg/L		AL=15 µg/L	5 µg/L	M. Ickes, PHC	4/23/2009
Mercury	71900	<0.5 µg/L		2 µg/L	0.5 µg/L	L. Assadourian	4/24/2009
Selenium	01147	10.5 µg/L		50 µg/L	5 µg/L	M. Ickes, PHC	4/23/2009
Silver	01077	<10 µg/L		100 µg/L	10 µg/L	M. Ickes, PHC	4/23/2009
Antimony	01097	<6 µg/L		6 µg/L	6 µg/L	M. Ickes, PHC	4/23/2009
Beryllium	01012	<1 µg/L		4 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Nickel	01067	<10 µg/L		100 µg/L	10 µg/L	M. Ickes, PHC	4/23/2009
Thallium	01059	<1 µg/L		2 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Calcium	00916	15.9 mg/L			2 mg/L	S. Stasikonis, PHC	4/28/2009
Copper	01042	<50 µg/L		1300 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Iron	01045	7480 µg/L		300 µg/L	100 µg/L	S. Stasikonis, PHC	5/7/2009
Magnesium	00927	7 mg/L			2 mg/L	K. Lor, PHC	6/11/2009
Manganese	01055	121 µg/L	High	50 µg/L	20 µg/L	M. Ickes, PHC	4/23/2009
Potassium	00937	<1.0 mg/L			1.0 mg/L	S. Stasikonis, PHC	5/8/2009
Sodium	00929	332 mg/L			2 mg/L	K. Lor, PHC	5/12/2009
Zinc	01092	<50 µg/L		5000 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Color	00081	>25 Units	High	15 Units	5 Units	K. Lor, PHC	4/17/2009
S.E.C.	00095	1600 µmho/cm	High	900 µmho/cm	20 µmho/cm	K. Lor, PHC	4/17/2009
Turbidity	82079	42 NTU	High	5 NTU	0.05 NTU	K. Lor, PHC	4/17/2009
Total Hardness	00900	105 mg/L			20 mg/L	K. Lor, PHC	4/17/2009
Alkalinity	00410	235 mg/L			20 mg/L	K. Lor, PHC	4/17/2009
Chloride	00940	386 mg/L		250 mg/L	2 mg/L	S. Stasikonis, PHC	4/21/2009
Fluoride	00951	<0.1 mg/L		2.0 mg/L	0.1 mg/L	S. Stasikonis, PHC	4/17/2009
Nitrate (ion)	71850	<2.0 mg/L		45 mg/L	2.0 mg/L	S. Stasikonis, PHC	4/17/2009
Nitrite (as N)	00620	<400 µg/L		1000 µg/L	400 µg/L	S. Stasikonis, PHC	4/17/2009
Sulfate	00945	10.4 mg/L		250 mg/L	0.5 mg/L	S. Stasikonis, PHC	4/17/2009
pH	00403	8.21 Std Units				K. Lor, PHC	4/17/2009

MCL = Maximum Contaminant Level
DLR = Detection Level for Reporting
QNS = Quantity Not Sufficient for Analysis
NTP = No Test Performed on Sample
Flag = "High" If Result Exceeds MCL

Director / Chemistry Supervisor / QA Officer

Date Reported: 05/19/2009

FRESNO COUNTY PUBLIC HEALTH LABORATORY

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ELAP Certification Number: 1888 James J. Spoisdoff, Laboratory Director

Lab Number	Account #	Date Received	Date Collected	Time Collected	Collector/Inspector
0904-05769	17095	4/17/2009	4/17/2009	9:45 AM	Tito Balling

SystemType: 99
Sample Type: Special
Water Sys #: Not State
Census Tract:
Well Number:
APN:

California Water Services
P.O. Box 343
Coalinga,CA 93210
Attn: Kim Taylor

Sample Site: Kettleman City - 400 GPM - Powers Well Site

GENERAL MINERAL, PHYSICAL & INORGANIC CHEMISTRY ANALYSES

Analysis	Storet #	Result	Flag	MCL	DLR	Chemist	Date Analyzed
Bicarbonate (HCO3)	00440	230 mg/L			2 mg/L	L. Soriano, PHC	5/1/2009
Carbonate (CO3)	00445	<2 mg/L			2 mg/L	L. Soriano, PHC	5/1/2009
Corrosivity		Nonaggressive				L. Soriano, PHC	5/1/2009
MBAS	38260	<0.025 mg/L		0.5 mg/L	0.025 mg/L	M. Ickes, PHC	4/27/2009
Odor	00086	1.4 TON		3 TON	0 TON	K. Lor, PHC	4/17/2009
TDS	70300	880 mg/L	High	500 mg/L	1 mg/L	K. Lor, PHC	4/21/2009
Hydroxide (OH)	71830	<0.5 mg/L			0.5 mg/L	L. Soriano, PHC	5/1/2009

Comment: Well was on for 1 hour

MCL = Maximum Contaminant Level
DLR = Detection Level for Reporting
QNS = Quantity Not Sufficient for Analysis
NTP = No Test Performed on Sample
Flag = "High" If Result Exceeds MCL

L L Soriano
Director / Chemistry Supervisor / QA Officer

Date Reported: 05/19/2009

FRESNO COUNTY PUBLIC HEALTH LABORATORY

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ELAP Certification Number: 1888 James J. Spoisdoff, Laboratory Director

0904-05771	17095	4/17/2009	4/17/2009	11:10 AM	Tito Balling
Lab Number	Account #	Date Received	Date Collected	Time Collected	Collector/Inspector

California Water Services
P.O. Box 343
Coalinga,CA 93210

Attn: Kim Taylor

SystemType: 99
Sample Type: Special
Water Sys #: Not State
Census Tract:
Well Number:
APN:

Sample Site: Kettleman City - 1200 GPM - Lewis Well Site

GENERAL MINERAL, PHYSICAL & INORGANIC CHEMISTRY ANALYSES

Analysis	Storet #	Result	Flag	MCL	DLR	Chemist	Date Analyzed
Aluminum	01105	199 µg/L		1000 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Arsenic	01002	12.6 µg/L	High	10 µg/L	2 µg/L	M. Ickes, PHC	4/23/2009
Barium	01007	<100 µg/L		1000 µg/L	100 µg/L	M. Ickes, PHC	4/23/2009
Cadmium	01027	<1 µg/L		5 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Total Chromium	A-044	2.4 µg/L		50 µg/L	1.0 µg/L	M. Ickes, PHC	4/23/2009
Lead	01051	<5 µg/L		AL=15 µg/L	5 µg/L	M. Ickes, PHC	4/23/2009
Mercury	71900	<0.5 µg/L		2 µg/L	0.5 µg/L	L. Assadourian	4/24/2009
Selenium	01147	<5 µg/L		50 µg/L	5 µg/L	M. Ickes, PHC	4/23/2009
Silver	01077	<10 µg/L		100 µg/L	10 µg/L	M. Ickes, PHC	4/23/2009
Antimony	01097	<6 µg/L		6 µg/L	6 µg/L	M. Ickes, PHC	4/23/2009
Beryllium	01012	<1 µg/L		4 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Nickel	01067	<10 µg/L		100 µg/L	10 µg/L	M. Ickes, PHC	4/23/2009
Thallium	01059	<1 µg/L		2 µg/L	1 µg/L	M. Ickes, PHC	4/23/2009
Calcium	00916	16.2 mg/L			2 mg/L	S. Stasikonis, PHC	4/28/2009
Copper	01042	<50 µg/L		1300 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Iron	01045	729 µg/L		300 µg/L	100 µg/L	S. Stasikonis, PHC	5/7/2009
Magnesium	00927	3 mg/L			2 mg/L	K. Lor, PHC	5/11/2009
Manganese	01055	68 µg/L	High	50 µg/L	20 µg/L	M. Ickes, PHC	4/23/2009
Potassium	00937	<1.0 mg/L			1.0 mg/L	S. Stasikonis, PHC	5/8/2009
Sodium	00929	191 mg/L			2 mg/L	K. Lor, PHC	5/12/2009
Zinc	01092	<50 µg/L		5000 µg/L	50 µg/L	M. Ickes, PHC	4/23/2009
Color	00081	5 Units		15 Units	5 Units	K. Lor, PHC	4/17/2009
S.E.C.	00095	900 µmho/cm	High	900 µmho/cm	20 µmho/cm	K. Lor, PHC	4/17/2009
Turbidity	82079	1.2 NTU		5 NTU	0.05 NTU	K. Lor, PHC	4/17/2009
Total Hardness	00900	84.5 mg/L			20 mg/L	K. Lor, PHC	4/17/2009
Alkalinity	00410	59.2 mg/L			20 mg/L	K. Lor, PHC	4/17/2009
Chloride	00940	76.2 mg/L		250 mg/L	2 mg/L	S. Stasikonis, PHC	4/17/2009
Fluoride	00951	<0.1 mg/L		2.0 mg/L	0.1 mg/L	S. Stasikonis, PHC	4/17/2009
Nitrate (ion)	71850	5.9 mg/L		45 mg/L	2.0 mg/L	S. Stasikonis, PHC	4/17/2009
Nitrite (as N)	00620	<400 µg/L		1000 µg/L	400 µg/L	S. Stasikonis, PHC	4/17/2009
Sulfate	00945	300 mg/L	High	250 mg/L	0.5 mg/L	S. Stasikonis, PHC	4/21/2009
pH	00403	8.29 Std Units				K. Lor, PHC	4/17/2009

MCL = Maximum Contaminant Level
DLR = Detection Level for Reporting
QNS = Quantity Not Sufficient for Analysis
NTP = No Test Performed on Sample
Flag = "High" If Result Exceeds MCL

Director / Chemistry Supervisor / QA Officer

Date Reported: 05/19/2009

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ELAP Certification Number: 1888 James J. Spolsdoff, Laboratory Director

Lab Number	Account #	Date Received	Date Collected	Time Collected	Collector/Inspector
0904-05771	17095	4/17/2009	4/17/2009	11:10 AM	Tito Balling

California Water Services
P.O. Box 343
Coalinga,CA 93210

Attn: Kim Taylor

SystemType: 99
Sample Type: Special
Water Sys #: Not State
Census Tract:
Well Number:
APN:

Sample Site: Kettleman City - 1200 GPM - Lewis Well Site

GENERAL MINERAL, PHYSICAL & INORGANIC CHEMISTRY ANALYSES

Analysis	Storet #	Result	Flag	MCL	DLR	Chemist	Date Analyzed
Bicarbonate (HCO3)	00440	58 mg/L			2 mg/L	L. Soriano, PHC	5/1/2009
Carbonate (CO3)	00445	1 mg/L			2 mg/L	L. Soriano, PHC	5/1/2009
Corrosivity		Mod Aggressive				L. Soriano, PHC	5/1/2009
MBAS	38260	<0.025 mg/L		0.5 mg/L	0.025 mg/L	M. Ickes, PHC	4/27/2009
Odor	00086	Not Detected		3 TON	0 TON	K. Lor, PHC	4/17/2009
TDS	70300	620 mg/L	High	500 mg/L	1 mg/L	K. Lor, PHC	4/21/2009
Hydroxide (OH)	71830	<0.5 mg/L			0.5 mg/L	L. Soriano, PHC	5/1/2009

Comment: Well running.

MCL = Maximum Contaminant Level
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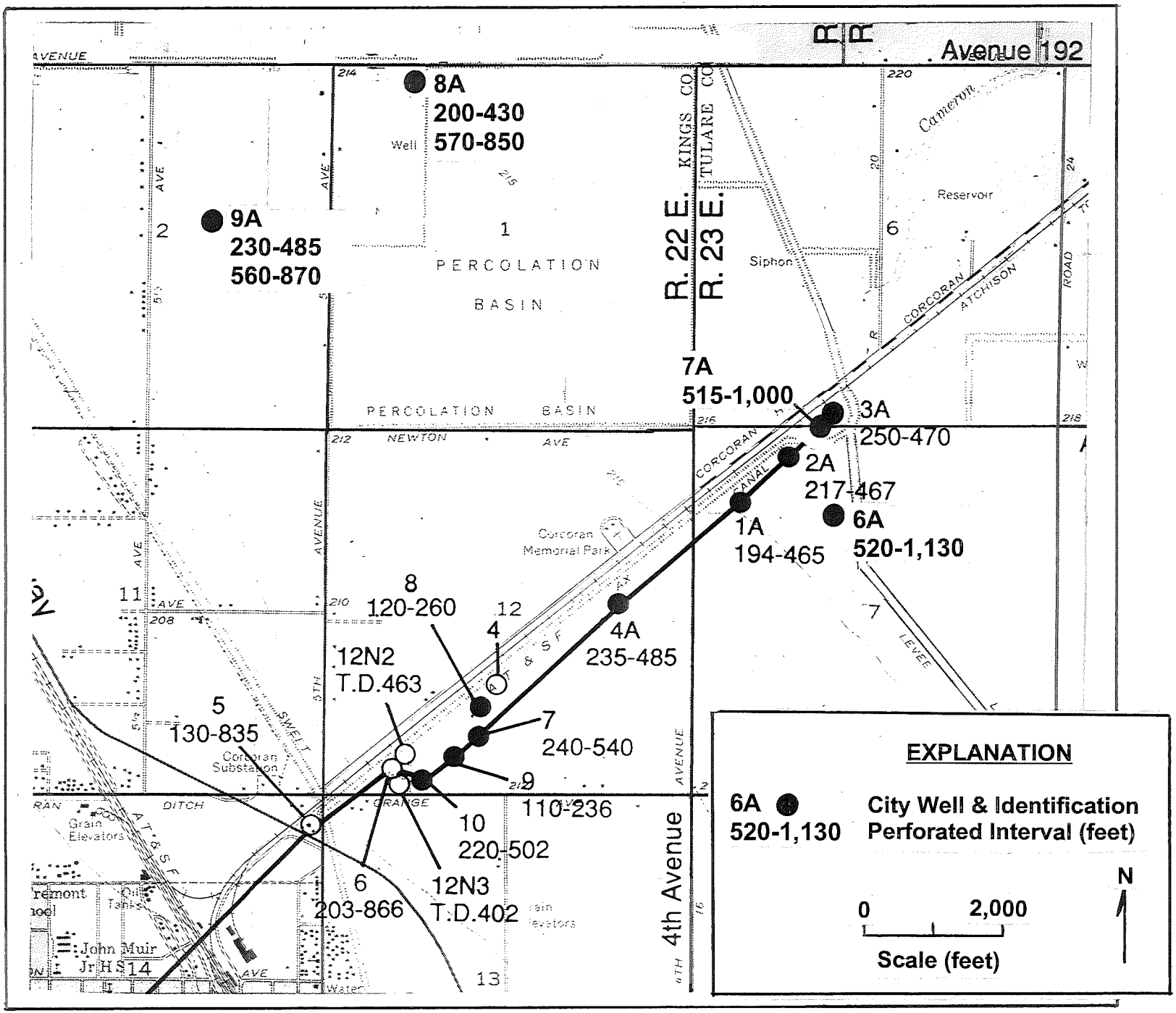
NTP = No Test Performed on Sample
Flag = "High" if Result Exceeds MCL

Director / Chemistry Supervisor / QA Officer

Date Reported: 05/19/2009

CITY OF CORCORAN



LOCATION OF THE CITY OF CORCORAN SUPPLY WELLS

TABLE 1 - CONSTRUCTION DATA FOR ACTIVE CITY OF CORCORAN WELLS

No.	State Location	Date Drilled	Depth (feet)	Cased Depth (feet)	Casing Diameter (inches)	Perforated Interval (feet)
7	T21S/R22E-12P	7/59	540	540	14	240-540
8	12L1	11/60	270	270	14	130-270
9	12P	4/63	240	236	14	110-236
10	12P	5/67	505	502	14	226-252 290-502
1-A	T21S/R23E-7D	3/75	515	465	16	194-465
2-A	7D	3/75	510	467	16	217-467
3-A	6P	12/81	477	475	16	250-470
4-A	T21S/R22E-12H	9/87	515	495	16	235-485

Information from drillers logs and City of Corcoran records.

DUPLICATE
Driller's Copy

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

Page 1 of 1
Owner's Well No. City of Corcoran (6A)
No. 500146
Date Work Began 6-2-97, Ended 7-7-97
Local Permit Agency Tulare County
Permit No. 10642 Permit Date 4-10-97

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

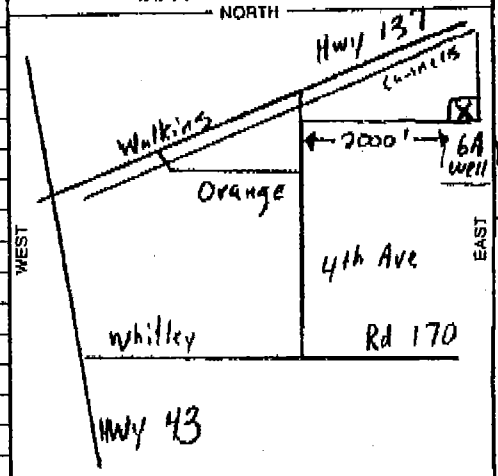
ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	50'	Clay
50'	60	Sand + Clay
60	120'	Sand
120	140	Clay + Sand
140	180	Sand
180	370	Clay + Sand
370	420	Sand
420	470	Clay + Sand
470	520	Corcoran Clay Blue
520	530	Sand + Clay
530	920	Clay + Sand
920	960	Clay
960	1350	Sand + Little clay

TOTAL DEPTH OF BORING 1350 (Feet)
TOTAL DEPTH OF COMPLETED WELL 1150 (Feet)

WELL OWNER
Name City of Corcoran City Hall
Mailing Address 1033 Chittenden Ave
City Corcoran CA 93212 (State, Zip)

WELL LOCATION
Address South East of Hwy 137 + Whit
City East of Corcoran
County Tulare County
APN Book 200 Page 050 Parcel 26-000
Township 21S Range 23E Section 7
Latitude ___ (Deg. Min. Sec.) North Longitude ___ (Deg. Min. Sec.) W

LOCATION SKETCH


Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specif
___ DESTROY (Describe Procedures and Mat. Under "GEOLOGIC L
PLANNED USE (✓)
___ MONITORING
WATER SUPPLY
✓ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify

DRILLING METHOD Reverse Circulation FLUID Poly Bore

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL 124 (Ft.) & DATE MEASURED 6-19-9
ESTIMATED YIELD* 50 (GPM) & TEST TYPE 2500
TEST LENGTH 11 (Hrs.) TOTAL DRAWDOWN 48 (Ft.)
** May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
+5'	50'	48	X				A139	34"	3/8	
+5'	520	28	X				Cole 10 Mass	16"	5/16	
520'	1130'	28		X			Cole 10 Mass	16"	5/16	.050
1120'	1150'	28	X				Cole 10 Mass	16"	5/16	
+5'	515'	28	X				Gravel Pipe	3"	Sch 40	

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	490	X			
490	1170				8x20 Col.

ATTACHMENTS (✓)
✓ Geologic Log
✓ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and bell
NAME Bakersfield Well + Pump (Div. of Zim Ind.)
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 1600 E California CITY CA STATE 93307 ZIP
Signed [signature] (WELL DRILLER/AUTHORIZED REPRESENTATIVE) DATE SIGNED 7-8-97 C-57 LICENSE NUM 44053

DWR 188 REV. 7-90
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

BC LABORATORIES

WATER ANALYSIS
(GENERAL CHEMISTRY)

KENNETH D. SCHMIDT & ASSOCIATES, INC.
600 WEST SHAW
SUITE 250
FRESNO, CA 93704
Attn: KEN SCHMIDT 209-224-4412

Date Reported: 07/08/97
Date Received: 06/27/97
Laboratory No.: 97-06717-1

Sample Description: CITY OF CORCORAN WELL 6-A: PUMP TEST SAMPLED BY J. DILLARD

Sampling Date/Time: 06/26/97 @ 05:50PM

Constituents	Results	Units	P.Q.L.	Method
Calcium	1.7	mg/L	0.1	EPA-7140
Magnesium	0.08	mg/L	0.01	EPA-7450
Sodium	54.	mg/L	0.1	EPA-7770
Potassium	0.3	mg/L	0.1	EPA-7610
Total Cations	2.45	meq/L		Calculated
Hydroxide	None Detected	mg/L	0.8	EPA-310.1
Carbonate	28.2	mg/L	2.6	EPA-310.1
Bicarbonate	62.6	mg/L	2.6	EPA-310.1
Sulfate	3.6	mg/L	1.0	EPA-300.0
Chloride	8.9	mg/L	1.0	EPA-300.0
Nitrate as NO3	None Detected	mg/L	0.4	EPA-353.2
Fluoride	1.2	mg/L	0.05	EPA-340.2
Total Anions	2.35	meq/L		Calculated
pH	9.33	pH Units	-	EPA-9040
Electrical Conductivity @ 25 C	242.	umhos/cm	1.	EPA-9050
Total Dissolved Solids @ 180 C	156.	mg/L	10.	EPA-160.1
Hardness as CaCO3	4.6	mg/L	1.0	SM-2340B
Alkalinity as CaCO3	98.4	mg/L	5.0	EPA-310.1
Total Cyanide	None Detected	µg/L	0.02	EPA-335.3
Total Sulfide	0.5	mg/L	0.1	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
California D.O.H.S. Cert. #1186

Marna Atencio
Department Supervisor

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

4100 Atlas Ct. - Bakersfield, CA 93308 - (805) 327-4911 - FAX (805) 327-1918

Wet Lab Analysis

Kenneth D. Schmidt & Assoc.
600 West Shaw Avenue Suite 250
Fresno, CA 93704

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: CHERYL LASSOTOVITCH

Sample ID: CORCORAN WELL 6A
Sample Collection Date: 6/26/97

APPL ID: AP52282
ARF: 25379

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
EPA 180.1	Turbidity	4.2	0.1	NTU	6/28/97	6/28/97
SM 2120B	Color	20	1	color units	6/28/97	6/28/97
SM 2150B	Odor in plastic	Not detected	1	T.O.N.	6/28/97	6/28/97
SM 2510B	Specific Conductance	228	3.0	umhos/cm @ 25C	7/3/97	7/3/97
SM 5540C	MBAS by SM 5540C	Not detected	0.03	mg/L	7/8/97	7/8/97

BC LABORATORIES

WATER ANALYSIS
(METALS)

KENNETH D. SCHMIDT & ASSOCIATES, INC.
600 WEST SHAW
SUITE 250
FRESNO, CA 93704
Attn: KEN SCHMIDT 209-224-4412

Date Reported: 07/08/97
Date Received: 06/27/97
Laboratory No.: 97-06717-1

Sample Description: CITY OF CORCORAN WELL 6-A: PUMP TEST SAMPLED BY J. DILLARD

Sampling Date/Time: 06/26/97 @ 05:50PM

Constituents	Results	Units	P.Q.L.	Method
Dissolved Aluminum	138.	µg/L	50.	EPA-6010
Dissolved Antimony	None Detected	µg/L	1.	EPA-200.8
Dissolved Arsenic	15.	µg/L	2.	EPA-200.8
Dissolved Barium	None Detected	µg/L	100.	EPA-6010
Dissolved Beryllium	None Detected	µg/L	1.	EPA-200.8
Dissolved Cadmium	None Detected	µg/L	1.	EPA-200.8
Dissolved Chromium	None Detected	µg/L	10.	EPA-6010
Dissolved Copper	None Detected	µg/L	10.	EPA-6010
Dissolved Iron	None Detected	µg/L	50.	EPA-6010
Dissolved Lead	None Detected	µg/L	5.	EPA-200.8
Dissolved Manganese	None Detected	µg/L	10.	EPA-6010
Dissolved Mercury	None Detected	µg/L	0.2	EPA-7470
Dissolved Nickel	None Detected	µg/L	5.	EPA-200.8
Dissolved Selenium	None Detected	µg/L	2.	SM-3114B
Dissolved Silver	None Detected	µg/L	10.	EPA-6010
Dissolved Thallium	None Detected	µg/L	1.	EPA-200.8
Dissolved Zinc	None Detected	µg/L	10.	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).

Sample was filtered thru 0.45 µ filter and acidified prior to metal analysis.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

GENERAL MINERAL, PHYSICAL, INORGANIC, & RADIOLOGICAL CHEMICAL ANALYSES

Date of Report: July 18, 1997
Laboratory Name: FGL Environmental
Name of Sampler: Jim Dilliard
Date/time Sample Collected: 06/26/1997-1750
Date/Time Sample Rec. @ Lab: 07/01/1997-1030

Sample ID No. SP 705103-01
Signature Lab Director:
Employed By: Schmidt & Assoc.
Date Analyses Completed: 07/10/1997

System Name: CITY OF CORCORAN
System Number:

Name or Number of Sample Source: Well 6A Pump Test

User ID:
Station Number:
Date/Time of Sample: 9 7 0 6 2 6 1 7 5 0
Y Y M M D D T T T T
Laboratory Code: 5 8 6 7
Submitted by: FGL Environmental
Phone #(805) 659-0910

RADIOLOGICAL CHEMICALS

MCL	UNITS	CHEMICAL	ENTRY	RESULT	DLR
5-35 !!	pCi/L	Gross Alpha	01501	8	
	pCi/L	Gross Alpha Counting Error	01502	± 1	
20	pCi/L	Uranium	28012	0.0	
	pCi/L	Uranium Counting Error	A-028	± 1	

!! >= 5 May require testing for U_α , $^{226}Ra_\alpha$ >= 15 Unaccounted Alpha (Total α - U_α) >= 35 Total Gross Alpha limit.

Corporate Offices & Laboratory
PO Box 272 / 853 Corporation Street
Santa Paula, CA 93061-0272

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215

Field Office
Visalia, CA
TEL: 209/734-9473

BC LABORATORIES

WATER ANALYSIS
(GENERAL CHEMISTRY)

KENNETH D. SCHMIDT & ASSOCIATES, INC.
600 WEST SHAW
SUITE 250
FRESNO, CA 93704
Attn: KEN SCHMIDT 209-224-4412

Date Reported: 08/25/97
Date Received: 08/11/97
Laboratory No.: 97-08465-1

End of Constant Discharge Test

Sample Description: CITY OF CORCORAN WELL 7A 12 HR SAMPLED BY DILLIARD

Sampling Date/Time: 08/04/97 @ 04:50PM

Constituents	Results	Units	P.Q.L.	Method
Calcium	1.7	mg/L	0.1	EPA-7140
Magnesium	0.09	mg/L	0.01	EPA-7450
Sodium	50.	mg/L	0.1	EPA-7770
Potassium	0.3	mg/L	0.1	EPA-7610
Total Cations	2.27	meq/L		Calculated
Hydroxide	None Detected	mg/L	0.8	EPA-310.1
Carbonate	23.1	mg/L	2.6	EPA-310.1
Bicarbonate	75.6	mg/L	2.6	EPA-310.1
Sulfate	5.6	mg/L	1.0	EPA-300.0
Chloride	7.0	mg/L	1.0	EPA-300.0
Nitrate as NO3	None Detected	mg/L	0.4	EPA-353.2
Fluoride	1.2	mg/L	0.05	EPA-340.2
Total Anions	2.32	meq/L		Calculated
pH	8.94	pH Units	-	EPA-9040
Electrical Conductivity @ 25 C	244.	umhos/cm	1.	EPA-9050
Hardness as CaCO3	4.6	mg/L	1.0	SM-2340B
Alkalinity as CaCO3	101.	mg/L	5.0	EPA-310.1
Total Cyanide	None Detected	mg/L	0.02	EPA-335.3

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

BC LABORATORIES

WATER ANALYSIS
(METALS)

KENNETH D. SCHMIDT & ASSOCIATES, INC.
600 WEST SHAW
SUITE 250
FRESNO, CA 93704
Attn: KEN SCHMIDT 209-224-4412

Date Reported: 09/02/97
Date Received: 08/11/97
Laboratory No.: 97-08465-1

Sample Description: CITY OF CORCORAN WELL 7A 12 HR SAMPLED BY DILLIARD

Sampling Date/Time: 08/04/97 @ 04:50PM

Constituents	Results	Units	P.Q.L.	Method
Dissolved Aluminum	199.	µg/L	50.	EPA-6010
Dissolved Antimony	None Detected	µg/L	1.	EPA-200.8
Dissolved Arsenic	20.	µg/L	2.	EPA-200.8
Dissolved Barium	None Detected	µg/L	100.	EPA-6010
Dissolved Beryllium	None Detected	µg/L	1.	EPA-200.8
Dissolved Cadmium	None Detected	µg/L	1.	EPA-200.8
Dissolved Chromium	None Detected	µg/L	10.	EPA-6010
Dissolved Copper	None Detected	µg/L	10.	EPA-6010
Dissolved Iron	None Detected	µg/L	50.	EPA-6010
Dissolved Lead	None Detected	µg/L	5.	EPA-200.8
Dissolved Manganese	None Detected	µg/L	10.	EPA-6010
Dissolved Mercury	None Detected	µg/L	0.2	EPA-7470
Dissolved Nickel	None Detected	µg/L	5.	EPA-200.8
Dissolved Selenium	None Detected	µg/L	2.	SM-3114B
Dissolved Silver	None Detected	µg/L	10.	EPA-6010
Dissolved Thallium	None Detected	µg/L	1.	EPA-200.8
Dissolved Zinc	None Detected	µg/L	10.	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).

Sample was filtered thru 0.45 µ filter and acidified prior to metal analysis.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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Kenneth D. Schmidt and Associates
600 West Shaw Avenue, Suite 250
Fresno, California 93704
Attn: Jim Dillard

Sample Date: 08/04/97
Report Date: 09/09/97

Sample I.D. No: City of Corcoran Well 7A 12 HR
APPL Sample No: R25680-53984W

Date Received: 08/05/97

Analysis Results:

	Results	Quantitation Limit	Method Number
pH @ 21.0°C	9.4	NA	EPA 150.1
Turbidity (N.T.U.)	2.6	0.1	EPA 180.1
Color (apparent) @pH [.0	15.0	1	SM 2120B
Odor (T.O.N.)	<1	1	SM 2150B
Specific Conductivity (EC) µmhos/cm @ 25°C	207	3.0	SM 2510B
Methylene Blue Active Substances (MBAS) mg/L	<0.03	0.03	SM 5540C

Tested By Francis Lydiard

Checked By

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

GENERAL MINERAL, PHYSICAL, INORGANIC, & RADIOLOGICAL CHEMICAL ANALYSES

Date of Report: August 28, 1997
Laboratory Name: FGL Environmental
Name of Sampler: Dillard
Date/time Sample Collected: 08/04/1997-1650

Sample ID No. SP 706174-01
Signature Lab Director:
Employed By: Schmidt & Assoc.
Date/Time Sample Rec. @ Lab: 08/07/1997-0945
Date Analyses Completed: 08/22/1997

System Name: CITY OF CORCORAN

System Number:

Name or Number of Sample Source: Well 7A 12 HR

User ID:

Station Number:

Date/Time of Sample: 9 7 0 8 0 4 1 6 5 0
Y Y M M D D T T T T

Laboratory Code: 5 8 6 7

Submitted by: FGL Environmental

Phone #(805) 659-0910

RADIOLOGICAL CHEMICALS

MCL	UNITS	CHEMICAL	ENTRY	RESULT	DLR
5-35 !!	pCi/L	Gross Alpha	01501	3	
	pCi/L	Gross Alpha Counting Error	01502	± 1	
20	pCi/L	Uranium	28012	1.0	
	pCi/L	Uranium Counting Error	A-028	± 1	

!! >= 5 May require testing for U_α , $^{226}Ra_\alpha$ >= 15 Unaccounted Alpha (Total α - U_α) >= 35 Total Gross Alpha limit.

DUPLICATE
Driller's Copy
Page 1 of 1
Owner's Well No. 7A
Date Work Began 6-16-97 Ended 8-18-97
Local Permit Agency TULARE County
Permit No. 23246 Permit Date 6-11-97

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 515951

OWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

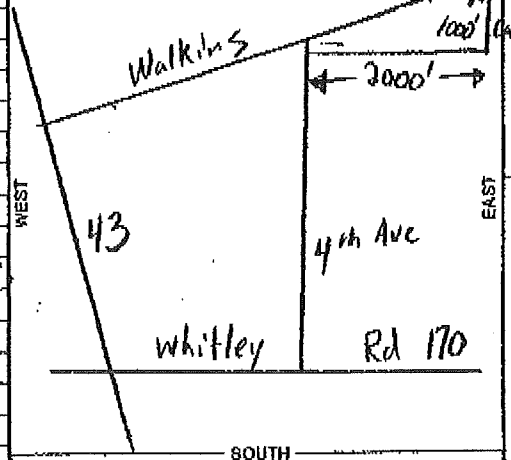
DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	50	Clay
50	170	Sand + Gravel
170	240	Sand + Clay
240	270	Clay
270	480	Sand + Clay
480	500	Clay
500	650	Very Sandy + Clay Lenses
650	790	Sand + Clay
760	860	Clay
860	890	Sand
890	1210	Sand + Clay Lenses
1210	1230	Sand
1230	1250	Sand + Clay
1250	1300	Clay + Sand
1300	1350	Clay

TOTAL DEPTH OF BORING 1350 (Feet)
TOTAL DEPTH OF COMPLETED WELL 1020' (Feet)

WELL OWNER
Name City of Corcoran
Mailing Address City Hall 1033 Chittenden Av
Corcoran CA 93212
CITY STATE ZIP

WELL LOCATION
Address South East of Hwy 137 + Walk
City East of Corcoran
County Tulare County
APN Book 200 Page 050 Parcel 26-000
Township or 21S Range 23E Section 7
Latitude DEG. MIN. SEC. NORTH Longitude DEG. MIN. SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Material Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)
___ MONITORING
WATER SUPPLY
X Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Reverse Circulation FLUID Polybore

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL 144 (Ft.) & DATE MEASURED 7-31-97
ESTIMATED YIELD* 36 (GPM) & TEST TYPE 2900 Step
TEST LENGTH 12 (Hrs.) TOTAL DRAWDOWN 80 (Ft.)
* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/ GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
+18	50	48	X				A 139 Mass	35	3/8	
+18	515	28	X				Copper Bearing	16	5/16	
515	1000	28		X			Full Flow	16	5/16	.050
1000	1020	28	X				Copper Bearing	16	5/16	

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	485	X			
485	495			X	Sand
495	1005				8x20 Col.S.
1005	1020		X		
1020	1040			X	Gravel

ATTACHMENTS (✓)
___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Bakersfield Well + Pump (Div. of Zim Indu)
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 7210 Fruitvale CITY Bakersfield STATE CA ZIP 93306
Signed [signature] DATE SIGNED 8-18-97
WELL DRILLER/AUTHORIZED REPRESENTATIVE
C-57 LICENSE NUMBER 440537

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Corcoran - City

DUPLICATE
Driller's Copy

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **E005952**

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./ STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. 8A

Date Work Began 5/11/2004, Ended 7/17/2004

Local Permit Agency

Permit No. Permit Date

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL — HORIZONTAL — ANGLE — (SPECIFY)

DRILLING METHOD REVERSE FLUID

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain, size, color, etc.*
0	5	TOP SOIL
5	14	BROWN CLAY
14	16	MEDIUM SAND
16	32	BROWN CLAY
32	35	SANDY BROWN CLAY
35	50	BROWN CLAY
50	65	FINE & COARSE SAND
65	75	GREEN CLAY
75	78	LIGHT BROWN CLAY
78	79	MEDIUM SAND
79	96	LIGHT BROWN CLAY
96	123	COARSE SAND
123	144	LIGHT BROWN CLAY
144	153	COARSE SAND
153	172	SAND & CLAY
172	185	COARSE SAND
185	198	GREEN CLAY
198	225	COARSE SAND
225	232	BROWN CLAY
232	247	GREEN CLAY
247	253	BROWN CLAY
253	261	GREEN CLAY
261	272	COARSE SAND
272	288	GREEN CLAY
288	320	COARSE SAND
320	323	BLUE CLAY
323	326	COARSE SAND
326	370	BLUE CLAY
370	380	COARSE SAND
380	412	BLUE CLAY

TOTAL DEPTH OF BORING 870 (Feet)

TOTAL DEPTH OF COMPLETED WELL 870 (Feet)

WELL OWNER

Name CORCORAN CITY WELL

Mailing Address 1033 CHITTENDEN

CORCORAN CA 93212
CITY STATE ZIP

WELL LOCATION

Address NEVADA AND 5 1/2 AVE

City CORCORAN CA

County

APN Book Page Parcel

Township Range Section

Latitude DEG. MIN. SEC. DEG. MIN. SEC.

LOCATION SKETCH

NORTH

WEST Nevada EAST

1/4 mile

SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. **PLEASE BE ACCURATE & COMPLETE.**

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR
— Deepen
— Other (Specify)

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY
— Domestic ✓ Public
— Irrigation — Industrial

MONITORING —
TEST WELL —
CATHODIC PROTECTION —
HEAT EXCHANGE —
DIRECT PUSH —
INJECTION —
VAPOR EXTRACTION —
SPARGING —
REMEDIATION —
OTHER (SPECIFY) —

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL (Ft.) & DATE MEASURED

ESTIMATED YIELD * (GPM) & TEST TYPE

TEST LENGTH (Hrs.) TOTAL DRAWDOWN (Ft.)

May not be representative of a well's long-term yield.

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	50	44"			✓		STEEL	32"	3/8"	
0	200	32"	✓				STEEL	20 5/8"	5/16"	
200	400	32"		✓			STEEL	20 5/8"	5/16"	.050 FF
400	435	32"	✓				STEEL	20 5/8"	5/16"	W/TAPER
46	400	32"	✓				STEEL	16 5/8"	5/16"	
400	430	32"		✓			STEEL	16 5/8"	5/16"	WINDOW

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	✓			8 SACK
0	150	✓			8 SACK
150	880			✓	6 X 20

ATTACHMENTS (✓)

— Geologic Log
✓ Well Construction Diagram
✓ Geophysical Log(s)
— Soil/Water Chemical Analysis
— Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME MYERS BROS. WELL DRILLING, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

8650 E. LACEY BLVD. HANFORD CA 93230-4844
ADDRESS CITY STATE ZIP

Signed Richard
WELL DRILLER/AUTHORIZED REPRESENTATIVE

07/22/04 DATE SIGNED

548214 C-57 LICENSE NUMBER

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

DUPLICATE
Driller's Copy

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **E005952**

Owner's Well No. 8A

Date Work Began 5/11/2004, Ended 7/17/2004

Local Permit Agency

Permit No. Permit Date

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./ STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL — HORIZONTAL — ANGLE — (SPECIFY)

DRILLING METHOD REVERSE FLUID

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain, size, color, etc.*
412	555	BLUE CLAY CORCORAN
555	595	BLUE CLAY
595	615	BLUE CLAY & SAND
615	617	WHITE CLAY & SAND
617	621	COARSE SAND
621	632	BLUE CLAY & SAND
632	636	COARSE SAND
636	645	BLUE CLAY
645	665	BLUE CLAY & SAND
665	670	SAND SOME BLUE CLAY
670	674	BLUE CLAY
674	705	BLUE CLAY & SAND
705	715	SAND LITTLE BLUE CLAY
715	720	BLUE CLAY & SOME SAND
720	727	MEDIUM SAND
727	729	BROWN CLAY
729	734	MEDIUM SAND
734	755	BLUE CLAY
755	760	MEDIUM SAND
760	797	BLUE CLAY
797	800	MEDIUM SAND
800	838	BLUE CLAY
838	840	MEDIUM SAND
840	880	BLUE CLAY

TOTAL DEPTH OF BORING 870 (Feet)

TOTAL DEPTH OF COMPLETED WELL 870 (Feet)

WELL OWNER

Name CORCORAN CITY WELL

Mailing Address 1033 CHITTENDEN

CORCORAN CA 93212

CITY STATE ZIP

WELL LOCATION

Address NEVADA AND 5 1/2 AVE

City CORCORAN CA

County

APN Book Page Parcel

Township Range Section

Latitude DEG. MIN. SEC. DEG. MIN. SEC.

LOCATION SKETCH

NORTH

WEST EAST

SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. **PLEASE BE ACCURATE & COMPLETE.**

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR

— Deepen

— Other (Specify)

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY

— Domestic ✓ Public

— Irrigation — Industrial

MONITORING —

TEST WELL —

CATHODIC PROTECTION —

HEAT EXCHANGE —

DIRECT PUSH —

INJECTION —

VAPOR EXTRACTION —

SPARGING —

REMEDIATION —

OTHER (SPECIFY) —

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL (Ft.) & DATE MEASURED

ESTIMATED YIELD * (GPM) & TEST TYPE

TEST LENGTH (Hrs.) TOTAL DRAWDOWN (Ft.)

May not be representative of a well's long-term yield.

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
435	570	28"	✓				STEEL	16 5/8"	5/16"	
570	850	28"		✓			STEEL	16 5/8"	5/16"	FF .050
850	870	28"	✓				STEEL	16 5/8"	5/16"	
0	155					✓	BLK STEEL	3"		

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	✓			8 SACK
0	150	✓			8 SACK
150	880			✓	6 X 20

ATTACHMENTS (✓)

— Geologic Log

✓ Well Construction Diagram

✓ Geophysical Log(s)

— Soil/Water Chemical Analysis

— Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME MYERS BROS. WELL DRILLING, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

8650 E. LACEY BLVD. HANFORD CA 93230-4844
ADDRESS CITY STATE ZIP

Signed
WELL DRILLER/AUTHORIZED REPRESENTATIVE

07/22/04
DATE SIGNED

548214
C-57 LICENSE NUMBER

DWR 188 REV. 11-97

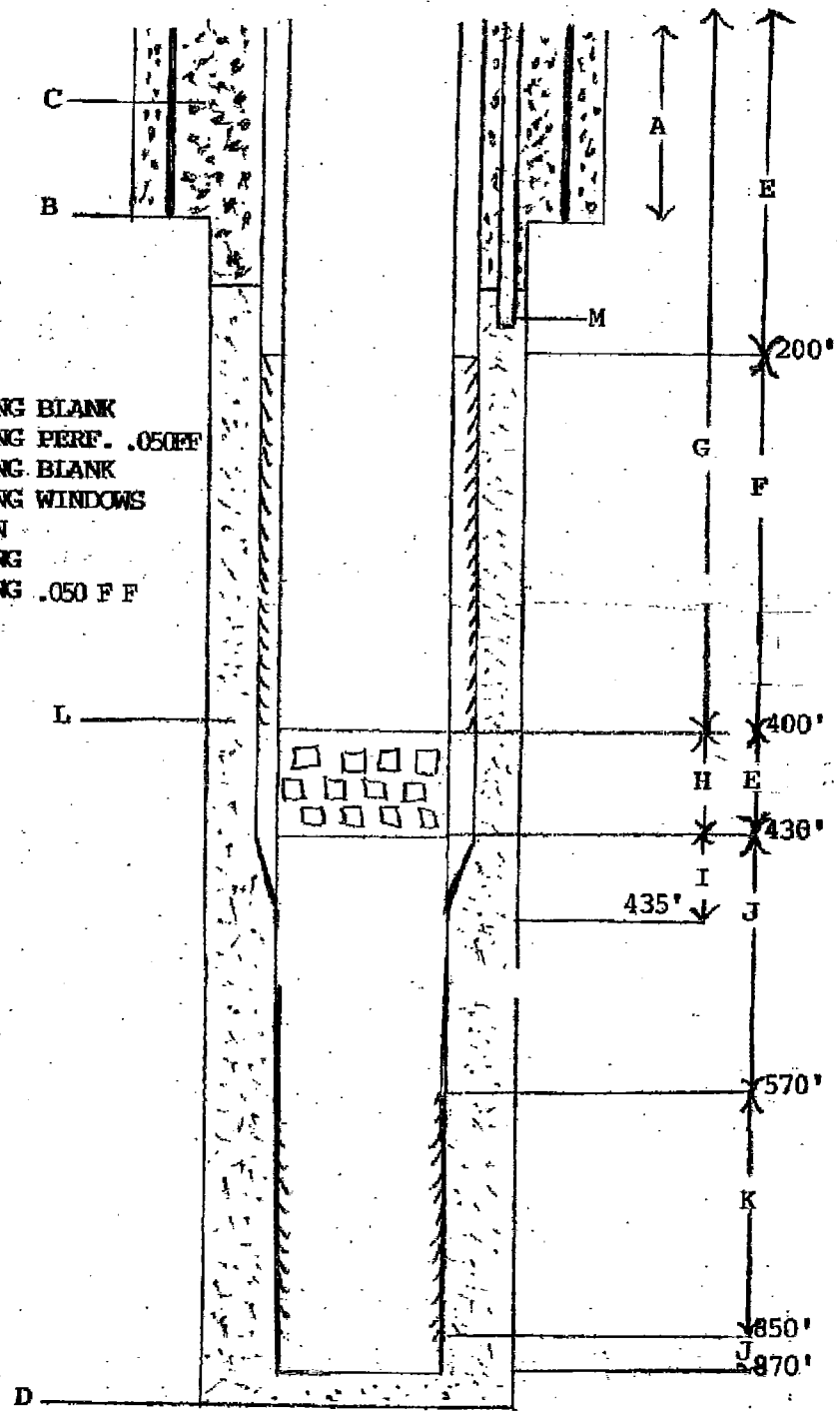
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

MYERS BROTHERS A PARTNERSHIP
DIVERSIFIED FARMING
8650 E. LACEY BLVD.
HANFORD, CA 93230-4844
Phone (559) 582-9031 Fax (559) 582-5744

CITY OF CORCORAN
WELL 8A
JULY 17, 2004

NOTES:

A. 50 L.F. 44" BORE HOLE
B. 50 L.F. 32" CONDUCTOR
C. 50 L.F. 8 SACK MIX SEAL
D. 820 L.F. 32-28" BOREHOLE
E. 200 L.F. 20 5/8 X 5/16 OUTER CASING BLANK
F. 200 L.F. 20 5/8 X 5/16 OUTER CASING PERF. .050FF
G. 406 L.F. 16 5/8 X 5/16 INNER CASING BLANK
H. 30 L.F. 16 5/8 X 5/16 INNER CASING WINDOWS
I. 5 L.F. 20" to 16" TAPER SECTION
J. 155 L.F. 16 5/8 X 5/16 BLANK CASING
K. 280 L.F. 16 5/8 X 5/16 PERF. CASING .050 F F
L. 730 L.F. 6 X 20 GRAVEL PACK
M. 155 L.F. 3" GRAVEL CHUTE



ENVIRONMENTAL

ANALYTICAL CHEMISTS

September 14, 2004

City of Corcoran
1033 Chiltenden
Corcoran, CA 93212

Lab ID : SP 408200-01
Customer ID: 2-21279

Sampled On : August 6, 2004-11:30
Sampled By : Jenifer McPhetridge
Received On: August 11, 2004-09:30
Matrix : Ground Water

Description : City of Corcoran Well 8A
Project : City of Corcoran Well 8A

Sample Results - Inorganic

Constituent	Results	PQL	Units	MCL	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
General Mineral P:1,5,4								
Total Hardness	20.0	2.5	mg/L		Calculation		Calculation	
Calcium	8	1	mg/L		200.7	08/13/04:A203	200.7	08/13/2004:A01
Magnesium	ND	1	mg/L		200.7	08/13/04:A203	200.7	08/13/2004:A01
Potassium	ND	1	mg/L		200.7	08/13/04:A203	200.7	08/13/2004:A01
Sodium	39	1	mg/L		200.7	08/13/04:A203	200.7	08/13/2004:A01
Total Cations	2.1	--	meq/L		Calculation		Calculation	
Boron	ND	0.1	mg/L		200.7	08/13/04:A203	200.7	08/13/2004:A01
Copper	ND	10	ug/L	1000[2]	200.7	08/13/04:A203	200.7	08/13/2004:A01
Iron	140	50	ug/L	300[2]	200.7	08/13/04:A203	200.7	08/13/2004:A01
Manganese	20	10	ug/L	50[2]	200.7	08/13/04:A203	200.7	08/13/2004:A01
Zinc	ND	20	ug/L	5000[2]	200.7	08/13/04:A203	200.7	08/13/2004:A01
Total Alkalinity (as CaCO3)	80	10	mg/L		2320B	08/12/04:A202	2320B	08/12/2004:A01
Hydroxide	ND	10	mg/L		2320B	08/12/04:A202	2320B	08/12/2004:A01
Carbonate	ND	10	mg/L		2320B	08/12/04:A202	2320B	08/12/2004:A01
Bicarbonate	100	10	mg/L		2320B	08/12/04:A202	2320B	08/12/2004:A01
Sulfate	10	1	mg/L	500[2]	300.0	08/11/04:B215	300.0	08/12/2004:A09
Chloride	12	1	mg/L	500[2]	300.0	08/11/04:B215	300.0	08/12/2004:A09
Nitrate	ND	0.4	mg/L	45	4500NO3F	08/18/04:A220 13:20	4500NO3F	08/18/2004:A01 13:11
Nitrite as N	ND	0.1	mg/L	1	300.0	08/11/04:B215 18:00	300.0	08/12/2004:A09 09:50
Fluoride	0.4	0.1	mg/L	2	300.0	08/11/04:B215	300.0	08/12/2004:A09
Total Anions	2.2	--	meq/L		Calculation		Calculation	
pH	8.2	--	units		4500-H B	08/11/04:A246	4500-H B	08/11/2004:A01 17:20
Specific Conductance	222	1	umhos/cm	1600[2]	2510B	08/12/04:A212	2510B	08/12/2004:A01
Total Dissolved Solids	170	40	mg/L	1000[2]	2540C	08/12/04:A235	2540 C,E	08/13/2004:A00
MBAS (foaming agents)	ND	0.1	mg/L	0.5[2]	5540C	08/11/04:A218 15:15	5540C	08/11/2004:A01 15:34
Aggressiveness Index	11.4	1.0	mg/L		Calculation		Calculation	
Langlier Index	-0.4	1.0	mg/L		Calculation		Calculation	

Table continued next page...

Corporate Offices & Laboratory
P.O. Box 272 / 853 Corporation Street
Santa Paula, CA 93061-0272
TEL: (805) 392-2000
FAX: (805) 525-4172
CA NELAP Certification No. 01110CA

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942-0181
FAX: (209) 942-0423
CA ELAP Certification No. 1563

Field Office
Visalia, California
TEL: (559) 734-9473
FAX: (559) 734-8435
Mobile: (559) 737-2399

September 14, 2004

City of Corcoran

Lab ID : SP 408200-01
Customer ID: 2-21279
Description : City of Corcoran Well 8A

Sample Results - Inorganic

Constituent	Results	PQL	Units	MCL	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Metals, Diss P:1								
Aluminum	ND	0.01	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Antimony	ND	0.001	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Arsenic	0.040	0.002	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Barium	0.0339	0.0002	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Beryllium	ND	0.0002	mg/L		200.8	08/12/04:E204	200.8	08/13/2004:B03
Cadmium	ND	0.0002	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Chromium	ND	0.001	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Lead	0.0013	0.0002	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Mercury	ND	0.0001	mg/L		7470/1A	08/16/04:B212	245.1	08/16/2004:A02
Nickel	0.002	0.001	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Selenium	ND	0.002	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Silver	ND	0.001	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Thallium	ND	0.0002	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11
Vanadium	0.016	0.002	mg/L		200.8	08/12/04:E204	200.8	08/12/2004:A11

ND=Non-Detect. PQL=Practical Quantitation Limit. ♦ PQL adjusted for dilutions, concentrations, dry weight reporting, or limited sample.
MCL = Maximium Contaminat Level. [2] - Secondary Standard.
Containers: (P) Plastic Preservatives: (1) Cool 4°C, (5) HNO3 pH < 2, (4) H2SO4 pH < 2

ENVIRONMENTAL

ANALYTICAL CHEMISTS

September 14, 2004

City of Corcoran
1033 Chiltenden
Corcoran, CA 93212

Lab ID : SP 408200-01
Customer ID: 2-21279

Sampled On : August 6, 2004-11:30
Sampled By : Jenifer McPhetridge
Received On: August 11, 2004-09:30
Matrix : Ground Water

Description : City of Corcoran Well 8A
Project : City of Corcoran Well 8A

Sample Results - Radio

Constituents	Result ± Error	Units	MCL	Preparation Method	Preparation Date/ID	Analysis Method	Analysis Date/ID
Radio Chemistry P:1							
Gross Alpha	5.12 ± 1.19	pCi/L	15*	900.0	09/01/04:A207	900.0	09/09/2004:A01

MCL = Maximium Contaminat Level. Containers: (P) Plastic Preservatives: (1) Cool 4°C
* Including Radium but excluding Uranium. (Ref. Title 22 sec. 64441.)

Corporate Offices & Laboratory
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Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942-0181

Field Office
Visalia, California
TEL: (559) 734-9473
FAX: (559) 734-8435

Wetlab Results

ARF: 45076

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Kenneth D. Schmidt & Assoc.
600 West Shaw Avenue Suite 250
Fresno, CA 93704

Attn: Cheryl Lassotovitch

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AP73539 -Client Sample ID: City of Corcoran Well 8A -Sample Collection Date: 08/06/04					Project: City of Corcoran Well	
EPA 150.1	pH	8.5 @ 21.5	N/A	pH Units	08/06/04	08/06/04
EPA 180.1	Turbidity	1.8	0.10	NTU	08/06/04	08/06/04
EPA 425.1	MBAS	Not detected	0.02	mg/L	08/06/04	08/06/04
SM 2120B	Color	5.0	1.0	UNITS	08/06/04	08/06/04
SM 2150B	Odor	Not detected	1.0	T.O.N.	08/06/04	08/06/04

DUPLICATE
Driller's Copy
Page 1 of 1

Sent to J. @ Quadkwopt & DWR

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 1095719

Owner's Well No. 9A
Date Work Began 7-20-04 Ended 10-21-04
Local Permit Agency City of Corcoran
Permit No. NA Permit Date NA

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD Reverse Rotary FLUID Geotonic

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION (Describe material, grain size, color, etc.)
0	50	Clay & Sand
50	83	Fine to med. Sand
83	102	Sandy Clay
102	120	Brown Clay
120	135	Fine to medium Sand
135	165	Sandy Clay
165	172	Sand
172	183	Clay
183	203	Fine Sand & silt
203	232	Blue clay w/ Streaks of Sand
232	248	Medium to coarse sand
248	486	Blue-gray Clay with intermittent Sand
486	552	Corcoran Clay
552	572	Medium to Coarse Sand
572	592	Blue-gray Clay
592	683	Sand
683	708	Clay & Sandy Clay
708	716	Fine to medium Sand
716	733	Clay
733	745	Sand
745	753	Clay
753	772	Medium to coarse sand
772	790	Sandy Clay
790	810	Fine to medium Sand little Clay
810	829	Sandy Clay
829	849	Medium to coarse Sand & gravel
849	863	Clay
863	881	medium to coarse Sand
881	900	Clay
900	910	Clay w/ some Fine Sand

TOTAL DEPTH OF BORING 910 (Feet)
TOTAL DEPTH OF COMPLETED WELL 890 (Feet)

WELL OWNER
Name City of Corcoran
Mailing Address 1033 Chittenden Ave
Corcoran CA 93212
CITY STATE ZIP

WELL LOCATION
Address 1/4 mi. to East of Ave 5 1/2 So of Nevada Ave
City Corcoran
County Kings
APN Book ___ Page ___ Parcel ___
Township 21S Range 22E Section 24
Lat ___ N (DEG. MIN. SEC.) Long ___ W (DEG. MIN. SEC.)

LOCATION SKETCH
NORTH
Nevada Ave
Ave 5 1/2
1/4 mi
1/4 mi
1/4 mi
WEST
EAST
well 9A
SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES (✓)
WATER SUPPLY
___ Domestic ✓ Public
___ Irrigation ___ Industrial
MONITORING ___
TEST WELL ___
CATHODIC PROTECTION ___
HEAT EXCHANGE ___
DIRECT PUSH ___
INJECTION ___
VAPOR EXTRACTION ___
SPARGING ___
REMEDIATION ___
OTHER (SPECIFY) ___

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH TO FIRST WATER NA (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 148 (Ft.) & DATE MEASURED 10-21-04
ESTIMATED YIELD * 2600 (GPM) & TEST TYPE Constant Rate
TEST LENGTH 24 (Hrs.) TOTAL DRAWDOWN 165 (Ft.)
* May not be representative of a well's long-term yield.

CASING (S) Dual Cased well

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE (IF ANY) (Inches)
0	50	46			✓		A53 Gr B	35 1/4	.375	
0	500	34	✓				HSLA	20 3/4	.312	
230	485	34		✓			HSLA EF	20 3/4	.312	.060
500	505	34	✓				HSLA	20 3/4 - 16	.312	Reduced
505	890	28	✓				HSLA	16	.312	
560	870	28		✓			HSLA EF	16	.312	.060

DEPTH FROM SURFACE Ft.	to Ft.	ANNULAR MATERIAL TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	175	✓			
175	180		✓		
180	910			✓	6x10 Col-Seal
0	185			✓	3" Fill Pipe
0	505	16"	inner		Casing
		w/	window		section

ATTACHMENTS (✓)
___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Zim Industries Inc. (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 4545 E. Lincoln Fresno CA 93725 (CITY STATE ZIP)
Signed Robert J. Zimmerman C-57 LICENSED WATER WELL CONTRACTOR
DATE SIGNED 11-20-04
C-57 LICENSE NUMBER 440537

DWR 188 REV. (10-93)
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Wet Lab Analysis

Kenneth D. Schmidt & Assoc.
600 West Shaw Avenue Suite 250
Fresno, CA 93704

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Cheryl Lassotovitch

Project: City of Corcoran Well 9A

Sample ID: City of Corcoran Well 9A

Sample Collection Date: 10/28/04

APPL ID: AP77813

ARF: 45790

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
EPA 180.1	Turbidity	0.23	0.10	NTU	10/29/04	10/29/04
EPA 425.1	MBAS	Not detected	0.02	mg/L	10/29/04	10/29/04
SM 2120B	Color	18.0	1.0	UNITS	10/29/04	10/29/04
SM 2150B	Odor	Not detected	1.0	T.O.N.	10/29/04	10/29/04

Form 1 - APPL Standard Wetlab - No MC
Printed: 11/19/04 11:26:01 AM

November 18, 2004

Kenneth D. Schmidt & Associates

Lab ID : SP 411470-01
Customer ID: 2-6051
Description : City of Corcoran Well 9A

Sample Results - Inorganic

Constituent	Results	PQL	Units	MCL	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Metals, Diss P:1								
Aluminum	ND	0.01	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Antimony	ND	0.001	mg/L		200.8	11/05/04:A204	200.8	11/09/2004:A01
Arsenic	0.031	0.002	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Barium	0.0207	0.0002	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Beryllium	ND	0.0002	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Cadmium	ND	0.0002	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Chromium	ND	0.001	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Lead	ND	0.0002	mg/L		200.8	11/05/04:A204	200.8	11/09/2004:A01
Mercury	0.00003	0.00002	mg/L		7470A	11/09/04:A212	245.1	11/11/2004:B04
Nickel	ND	0.001	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Selenium	ND	0.002	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Silver	ND	0.001	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Thallium	ND	0.0002	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05
Vanadium	ND	0.002	mg/L		200.8	11/05/04:A204	200.8	11/05/2004:A05

ND=Non-Detect. PQL=Practical Quantitation Limit. ♦ PQL adjusted for dilutions, concentrations, dry weight reporting, or limited sample.
MCL = Maximium Contaminat Level. [2] - Secondary Standard.
Containers: (P) Plastic Preservatives: (1) Cool 4°C, (5) HNO3 pH < 2, (4) H2SO4 pH < 2

ENVIRONMENTAL

ANALYTICAL CHEMISTS

November 18, 2004

Kenneth D. Schmidt & Associates
600 West Shaw Avenue, #250
Fresno, CA 93704

Description : City of Corcoran Well 9A
Project : City of Corcoran Well 9A

Lab ID : SP 411470-01
Customer ID: 2-6051

Sampled On : October 29, 2004-13:30
Sampled By : Cheryl Lassotovitch
Received On: November 3, 2004-10:00
Matrix : Ground Water

Sample Results - Radio

Constituents	Result ± Error	Units	MCL	Preparation Method	Preparation Date/ID	Analysis Method	Analysis Date/ID
Radio Chemistry P:1							
Gross Alpha	3.32 ± 1.02	pCi/L	15*	900.0	11/05/04:A207	900.0	11/09/2004:A01
Uranium	0.611 ± 0.672	pCi/L	20	908.0	11/08/04:A218	908.0	11/11/2004:A01

MCL = Maximium Contaminat Level. Containers: (P) Plastic Preservatives: (1) Cool 4°C
* Including Radium but excluding Uranium. (Ref. Title 22 sec. 64441.)

Corporate Offices & Laboratory
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FAX: (209) 942-0423
CA ELAP Certification No. 1563

Field Office
Visalia, California
TEL: (559) 734-9473
FAX: (559) 734-8435
Mobile: (559) 737-2399

ENVIRONMENTAL

ANALYTICAL CHEMISTS

November 18, 2004

Kenneth D. Schmidt & Associates
600 West Shaw Avenue, #250
Fresno, CA 93704

Description : City of Corcoran Well 9A
Project : City of Corcoran Well 9A

Lab ID : SP 411470-01
Customer ID: 2-6051

Sampled On : October 29, 2004-13:30
Sampled By : Cheryl Lassotovitch
Received On: November 3, 2004-10:00
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Results	PQL	Units	MCL	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
General Mineral P:1,5,4								
Total Hardness	25.0	2.5	mg/L		Calculation		Calculation	
Calcium	10	1	mg/L		200.7	11/09/04:A203	200.7	11/09/2004:A02
Magnesium	ND	1	mg/L		200.7	11/09/04:A203	200.7	11/09/2004:A02
Potassium	ND	1	mg/L		200.7	11/09/04:A203	200.7	11/09/2004:A02
Sodium	44	1	mg/L		200.7	11/09/04:A203	200.7	11/09/2004:A02
Total Cations	2.4	--	meq/L		Calculation		Calculation	
Boron	0.1	0.1	mg/L		200.7	11/09/04:A203	200.7	11/09/2004:A02
Copper	ND	10	ug/L	1000[2]	200.7	11/09/04:A203	200.7	11/09/2004:A02
Iron	ND	50	ug/L	300[2]	200.7	11/09/04:A203	200.7	11/09/2004:A02
Manganese	30	10	ug/L	50[2]	200.7	11/09/04:A203	200.7	11/09/2004:A02
Zinc	ND	20	ug/L	5000[2]	200.7	11/09/04:A203	200.7	11/09/2004:A02
Total Alkalinity (as CaCO3)	90	10	mg/L		2320B	11/05/04:A202	2320B	11/05/2004:A01
Hydroxide	ND	10	mg/L		2320B	11/05/04:A202	2320B	11/05/2004:A01
Carbonate	ND	10	mg/L		2320B	11/05/04:A202	2320B	11/05/2004:A01
Bicarbonate	120	10	mg/L		2320B	11/05/04:A202	2320B	11/05/2004:A01
Sulfate	12	1	mg/L	500[2]	300.0	11/03/04:A215	300.0	11/04/2004:A03
Chloride	12	1	mg/L	500[2]	300.0	11/03/04:A215	300.0	11/04/2004:A03
Nitrate	ND	0.4	mg/L	45	4500NO3F	11/10/04:A220 12:05	4500NO3F	11/10/2004:F01 15:24
Nitrite as N	ND	0.1	mg/L	1	300.0	11/03/04:A215 19:00	300.0	11/04/2004:A03 02:41
Fluoride	0.6	0.1	mg/L	2	300.0	11/03/04:A215	300.0	11/04/2004:A03
Total Anions	2.6	--	meq/L		Calculation		Calculation	
pH	8.5	--	units		4500-H B	11/03/04:A246	4500-H B	11/03/2004:A01 19:44
Specific Conductance	245	1	umhos/cm	1600[2]	2510B	11/04/04:B212	2510B	11/04/2004:A01
Total Dissolved Solids	160	40	mg/L	1000[2]	2540C	11/04/04:A235	2540 C,E	11/05/2004:A00
MBAS (foaming agents)	ND	0.1	mg/L	0.5[2]	5540C	11/03/04:A218 19:00	5540C	11/03/2004:A01 19:40
Aggressiveness Index	11.9	1.0	mg/L		Calculation		Calculation	
Langlier Index	0.0	1.0	mg/L		Calculation		Calculation	

Table continued next page...

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ALPAUGH JPA

ORIGINAL
File with DWR

Page 1 of ___
Owner's Well No. 11

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 1095876

DWR USE ONLY — DO NOT FILL IN
23S/23E-13H
STATE WELL NO./STATION NO.
LATITUDE ___ LONGITUDE ___
APN/TRS/OTHER

Date Work Began 6-20-04, Ended 7-27-04
Local Permit Agency Tulare County Envir. Health
Permit No. 7656 Permit Date 6-20-04

GEOLOGIC LOG

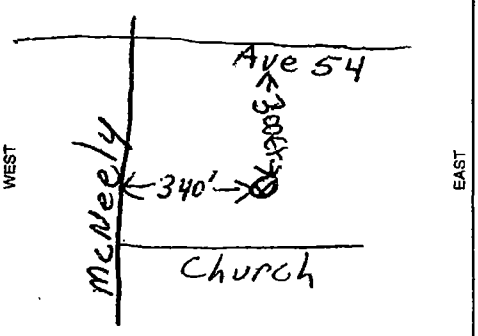
ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD Reverse Rotary FLUID Bentonite

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	10	Silt, sandy clay
10	12	Silt & sand (water)
12	34	Brown clay
34	36	Sand
36	40	Sticky gray clay
40	43	Sand
43	45	gray clay
45	47	Sand
47	60	Sandy clay
60	110	Fine sand & clay
110	210	Silty clay
210	310	Silty clay & Fine sand
310	430	Sand & silty clay
430	440	Silty gray clay
440	620	Blue clay (corcoran clay)
620	660	Sand & silty clay
660	690	Blue, gray clay
690	730	Fine sand & silty clay
730	760	silty clay
760	910	Blue gray clay
910	930	Silty sandy clay
930	960	Fine sand & silt
960	1020	Blue gray clay
1020	1120	Fine sand & clay
1120	1140	Silt & clay
1140	1190	Sandy silty clay
1190	1220	Med sand little clay
1220	1245	Blue gray clay

TOTAL DEPTH OF BORING 1245 (Feet)
TOTAL DEPTH OF COMPLETED WELL 1230 (Feet)

WELL OWNER
Name Alpaugh Joint Powers Authority
Mailing Address PO 262
City Alpaugh CA 93201 (STATE ZIP)

WELL LOCATION
Address McNeely Rd / Church Ave
City Alpaugh
County Tulare
APN Book 311 Page 120 Parcel 36
Township 23 Range 23 Section 34
Lat ___ N (DEG. MIN. SEC.) Long ___ W (DEG. MIN. SEC.)

LOCATION SKETCH
NORTH


SOUTH
Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (*Describe Procedures and Materials Under "GEOLOGIC LOG"*)

USES (✓)
WATER SUPPLY
___ Domestic ✓ Public
___ Irrigation ___ Industrial
MONITORING ___
TEST WELL ___
CATHODIC PROTECTION ___
HEAT EXCHANGE ___
DIRECT PUSH ___
INJECTION ___
VAPOR EXTRACTION ___
SPARGING ___
REMEDIATION ___
OTHER (SPECIFY) ___

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH TO FIRST WATER 10 (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 314.75 (Ft.) & DATE MEASURED 7-26-04
ESTIMATED YIELD * 1050 (GPM) & TEST TYPE Constant
TEST LENGTH 12 (Hrs.) TOTAL DRAWDOWN 79.27 (Ft.)
** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	50	42			✓		A53 Gr B	31 3/8	.312	
0	1230	26	✓				HSLA	13 7/8	.375	
1005	1025	26	✓				HSLA	13 7/8	.375	Compression ST
1025	1085	26		✓			FF Louver	14	.312	.050
1160	1210	26		✓			FF Louver	14	.312	.050
0	185	26			✓		Steel Sch 40	3	.250	gravel trap
0	500				✓			2	.250	solid trap

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	✓			
0	975	✓			
975	980		✓		
980	1245			✓	8X20 Col Sil

ATTACHMENTS (✓)
___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Zim Industries Inc. (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 4545 E. Lincoln CITY Fresno STATE CA ZIP 93725
Signed Robert A. Zimmerman C-57 LICENSED WATER WELL CONTRACTOR
DATE SIGNED 8-26-04 C-57 LICENSE NUMBER 440537

BC Laboratories, Inc

KENNETH D. SCHMIDT AND ASSOC.
3701 PEGASUS DRIVE.,SUITE 112
BAKERSFIELD, CA 93308
Attn: JIM ANGELL

Water Analysis (General Chemistry)

COC Number	---	**Receive Date/Time**	07/27/2004 @ 14:15
Project Number	---	**Sampling Date/Time**	07/27/2004 @ 09:20
Sampling Location	---	**Sample Depth**	---
Sampling Point	ALPAUGH JPA	**Sample Matrix**	Drinking Water
Sampled By	JENIFER MCPHETRIDGE	**BCL Sample ID**	04-07685-1

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date	Run Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Total Recoverable Calcium	10	mg/L	0.05	0.011	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Magnesium	1.8	mg/L	0.05	0.0063	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Sodium	68	mg/L	0.5	0.031	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Potassium	2.6	mg/L	1	0.071	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Cations	3.67	meq/L	0.1		Calculated									
Hydroxide	< PQL	mg/L	0.81	0.81	EPA-310.1	07/29/04	07/29/04	08:10	JSM	BDB	1	283-101376	ND	
Carbonate	14	mg/L	1.5	1.5	EPA-310.1	07/29/04	07/29/04	08:10	JSM	BDB	1	283-101376	ND	
Bicarbonate	180	mg/L	2.9	2.9	EPA-310.1	07/29/04	07/29/04	08:10	JSM	BDB	1	283-101376	ND	
Sulfate	< PQL	mg/L	1	0.098	EPA-300.0	07/27/04	07/27/04	20:03	ES1	IC1	1	268-103088	ND	
Chloride	8.8	mg/L	0.5	0.061	EPA-300.0	07/27/04	07/27/04	20:03	ES1	IC1	1	268-103088	ND	
Nitrate as NO3	< PQL	mg/L	0.44	0.069	EPA-300.0	07/27/04	07/27/04	20:03	ES1	IC1	1	268-103088	ND	
Fluoride	0.82	mg/L	0.05	0.0063	EPA-300.0	07/27/04	07/27/04	20:03	ES1	IC1	1	268-103088	ND	
Total Anions	3.66	meq/L	0.1		Calculated									
pH	8.33	pH Units	0.05	0.05	EPA-150.1	07/29/04	07/29/04	09:30	JSM	B360	1	257-101918		
Electrical Conductivity @ 25 C	336	umhos/cm	1	1	EPA-120.1	07/29/04	07/29/04	09:30	JSM	CND-3	1	196-101751		
Total Dissolved Solids @ 180 C	218	mg/L	20	10	EPA-160.1	07/30/04	07/30/04	19:30	MV1	MANUAL	2	284-102531	ND	
Color	20	Color Units	1	1	EPA-110.2	07/28/04	07/28/04	06:55	JSM	MANUAL	1	193-100515		
Odor	1	Odor Units	1	1	EPA-140.1	07/28/04	07/28/04	06:55	JSM	MANUAL	1	256-100465	No Obs Odor	
Turbidity	2.7	NT Units	0.1	0.1	EPA-180.1	07/28/04	07/28/04	06:55	JSM	T2100	1	262-100988		
MBAS	< PQL	mg/L	0.1	0.04	EPA-425.1	07/28/04	07/28/04	11:00	CEH	SPEC05	2	235-100801	ND	A01
Hardness as CaCO3	32	mg/L	0.5		SM-2340B									
Alkalinity as CaCO3	170	mg/L	2.5	2.5	EPA-310.1	07/29/04	07/29/04	08:10	JSM	BDB	1	283-101376	ND	

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

BC Laboratories, Inc

Water Analysis (General Chemistry)

Sample Description	ALPAUGH JPA, 07/27/2004 @ 09:20, JENIFER MCPHETRIDGE													
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date	Run Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Langlier Index	+0.05	-			Calculated									
Total Cyanide	< PQL	mg/L	0.02	0.0063	EPA-335.3	07/29/04	07/30/04	05:20	MRM2	AAII-1	1	216-100926	ND	
Nitrite as N	< PQL	ug/L	20	10	EPA-353.2	07/28/04	07/28/04	15:20	PDL	KONE-1	1	390-100474	ND	
Hydrogen Sulfide (H2S)	< PQL	mg/L	0.1		Calculated									
Dissolved Sulfide	< PQL	mg/L	0.1	0.050	EPA-376.2	07/29/04	07/29/04	04:15	MRM2	SPEC05	1	241-100568	ND	

Flag	Explanations
A01	PQL's and MDL's are raised due to sample dilution.

Comments

The Langlier Index indicates the tendency to deposit CaCO3.

California DOHS Certification #1186

cc: ALPAUGH JOINT POWERS AUTHORITY - G. GREGORY

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BC Laboratories, Inc

KENNETH D. SCHMIDT AND ASSOC.
3701 PEGASUS DRIVE.,SUITE 112
BAKERSFIELD, CA 93308
Attn: JIM ANGELL

Water Analysis (Metals)

COC Number	---	**Receive Date/Time**	07/27/2004 @ 14:15
Project Number	---	**Sampling Date/Time**	07/27/2004 @ 09:20
Sampling Location	---	**Sample Depth**	---
Sampling Point	ALPAUGH JPA	**Sample Matrix**	Drinking Water
Sampled By	JENIFER MCPHETRIDGE	**BCL Sample ID**	04-07685-1

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date	Run Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Dissolved Silicon as SiO2	34000	ug/L	200	17	EPA-6010	08/02/04	08/03/04	17:58	ARD	PE-OP2	1	385-101381	ND	
Total Recoverable Aluminum	< PQL	ug/L	50	14	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Antimony	< PQL	ug/L	2	0.25	EPA-200.8	07/28/04	07/28/04	15:09	TMS	PE-EL1	1	352-101462	ND	
Total Recoverable Arsenic	18	ug/L	2	0.77	EPA-200.8	07/28/04	07/28/04	15:09	TMS	PE-EL1	1	352-101462	ND	
Total Recoverable Barium	38	ug/L	10	0.94	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Beryllium	< PQL	ug/L	1	0.018	EPA-200.8	07/28/04	07/28/04	15:09	TMS	PE-EL1	1	352-101462	ND	
Total Recoverable Boron	220	ug/L	100	7.4	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Cadmium	< PQL	ug/L	1	0.012	* EPA-200.8	07/28/04	07/28/04	15:09	TMS	PE-EL1	1	352-101462	ND	
Total Recoverable Chromium	< PQL	ug/L	10	0.44	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Copper	< PQL	ug/L	10	0.87	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Iron	61	ug/L	50	2.1	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Lead	< PQL	ug/L	1	0.027	EPA-200.8	07/28/04	07/28/04	15:09	TMS	PE-EL1	1	352-101462	ND	
Total Recoverable Manganese	49	ug/L	10	0.31	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Mercury	< PQL	ug/L	0.2	0.050	EPA-245.1	07/28/04	07/29/04	16:15	JEE2	CETAC1	1	215-101361	ND	
Total Recoverable Nickel	< PQL	ug/L	10	2.3	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Selenium	22	ug/L	2	0.34	EPA-200.8	07/28/04	07/28/04	15:09	TMS	PE-EL1	1	352-101462	ND	
Total Recoverable Silver	< PQL	ug/L	10	1.2	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	
Total Recoverable Thallium	1.6	ug/L	1	0.045	EPA-200.8	07/28/04	07/28/04	15:09	TMS	PE-EL1	1	352-101462	ND	
Total Recoverable Zinc	< PQL	ug/L	50	5.4	EPA-200.7	07/29/04	08/03/04	14:57	ARD	PE-OP2	1	385-101378	ND	

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TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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REPORT

Client: BC Laboratories
4100 Atlas Court
Bakersfield, CA93308
Attention: W.Underwood

Report Date: August 13, 2004
Date Received: July 30, 2004
Laboratory No: 933500

Sample: Water/1

Investigation: **Gross Alpha Analysis**

Analytical Results

Sample ID:	Method	Activity pCi/L	Two Sigma Error	MDA pCi/L	Date Analyzed
04-07685-1	SM7110C	2.81	+/- 0.96	1.12	08/12/04

Respectfully submitted,
TRUESDAIL LABORATORIES, INC

Rossina Tomova, Project Manager
Radiochemistry Group

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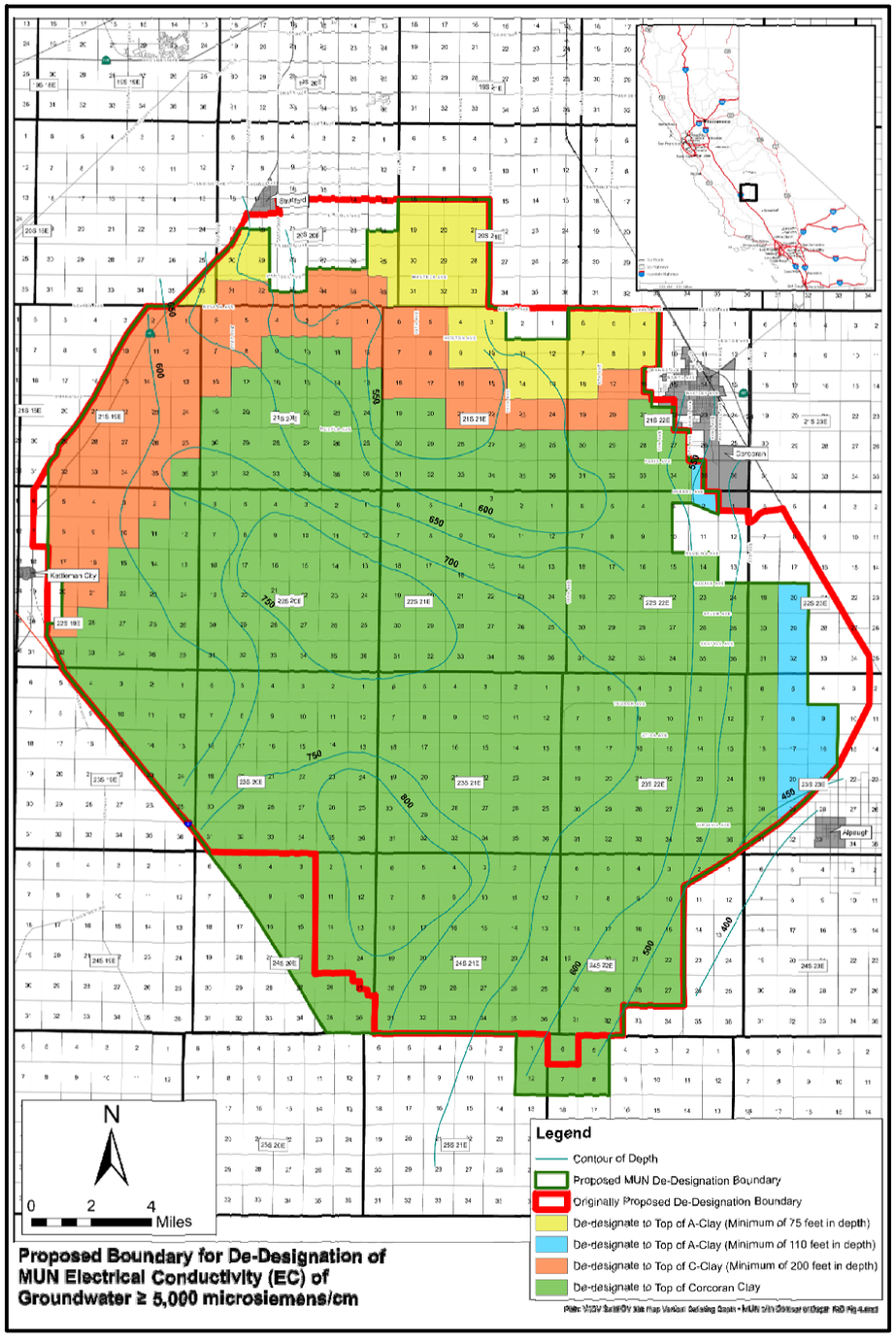
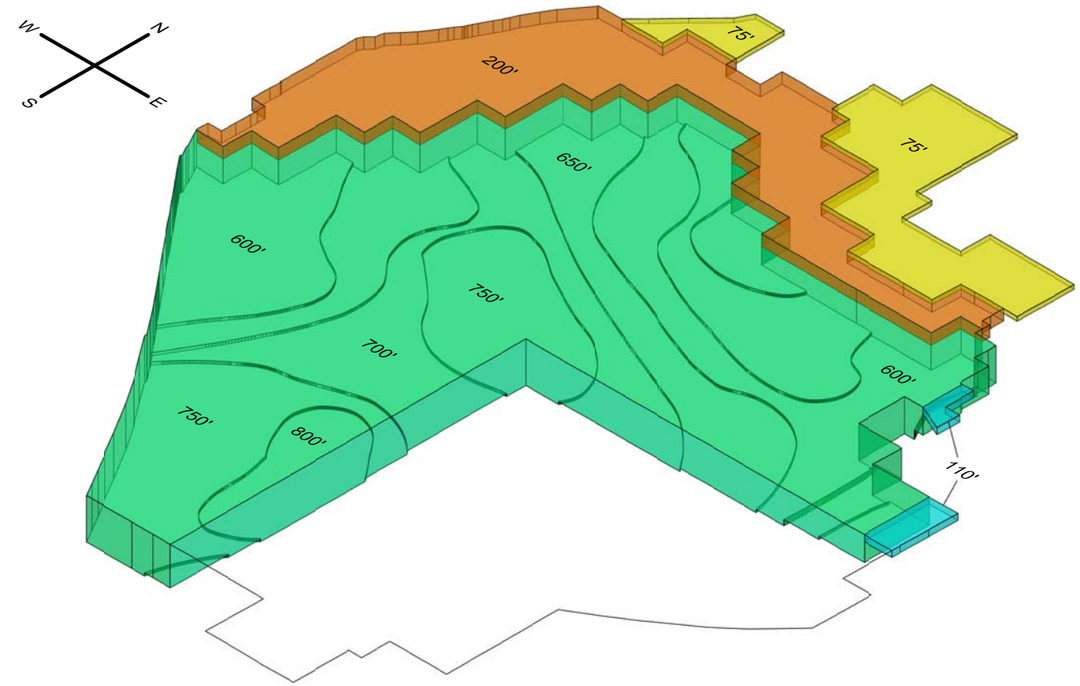
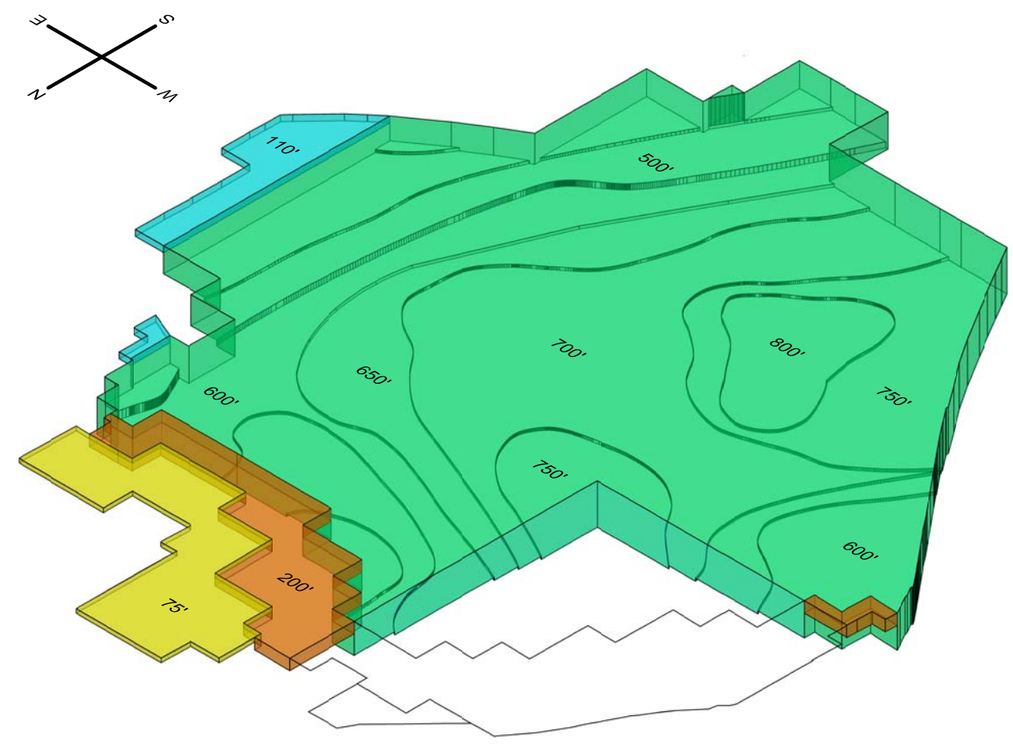
FIGURE 1. MUN 3-D MODEL



Proposed Boundary for De-Designation of MUN Electrical Conductivity (EC) of Groundwater ≥ 5,000 microsiemens/cm

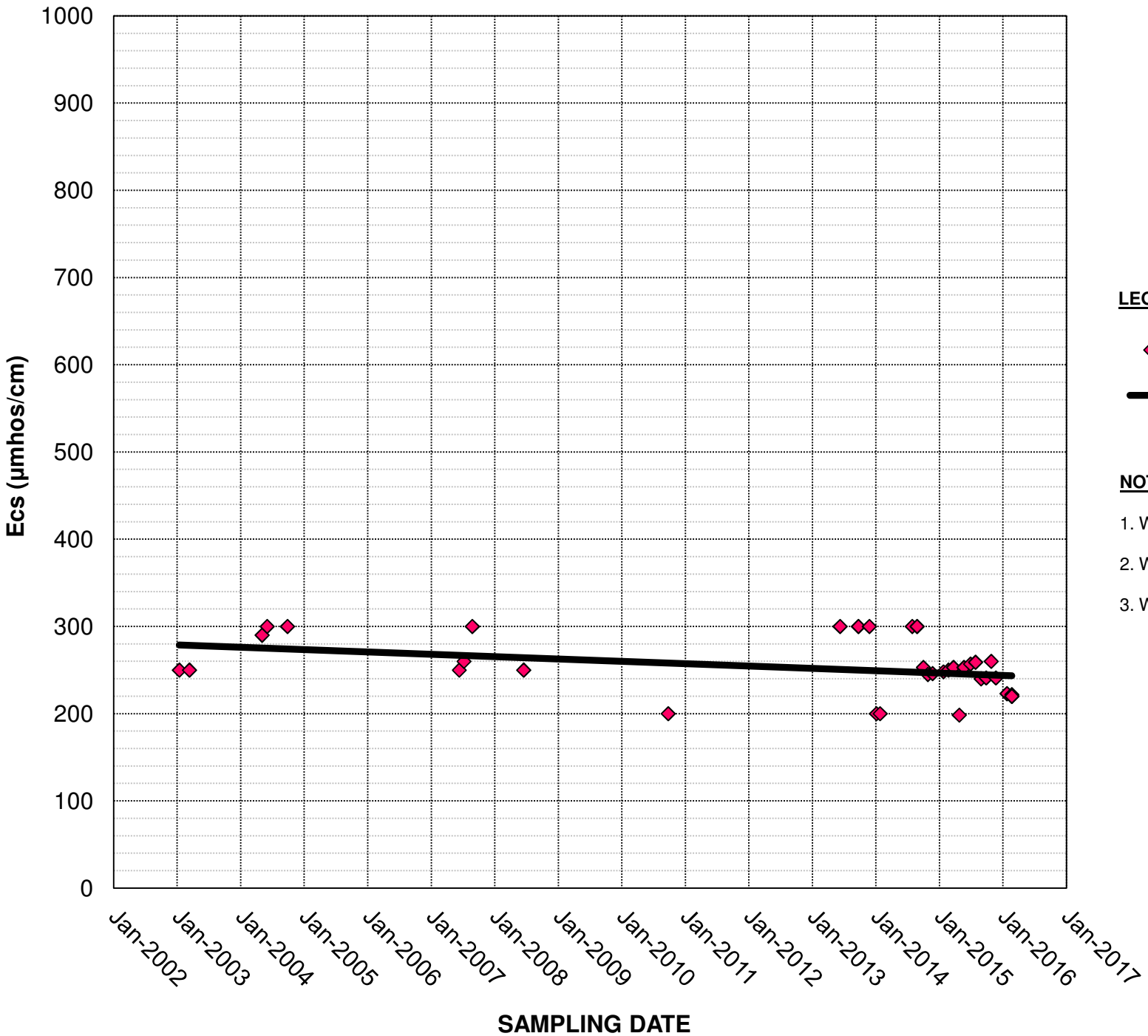


LOOKING DOWN FROM THE SOUTHEAST



LOOKING DOWN FROM THE NORTHWEST

FIGURE 2. TULARE LAKEBED WATER QUALITY DATA



LEGEND:

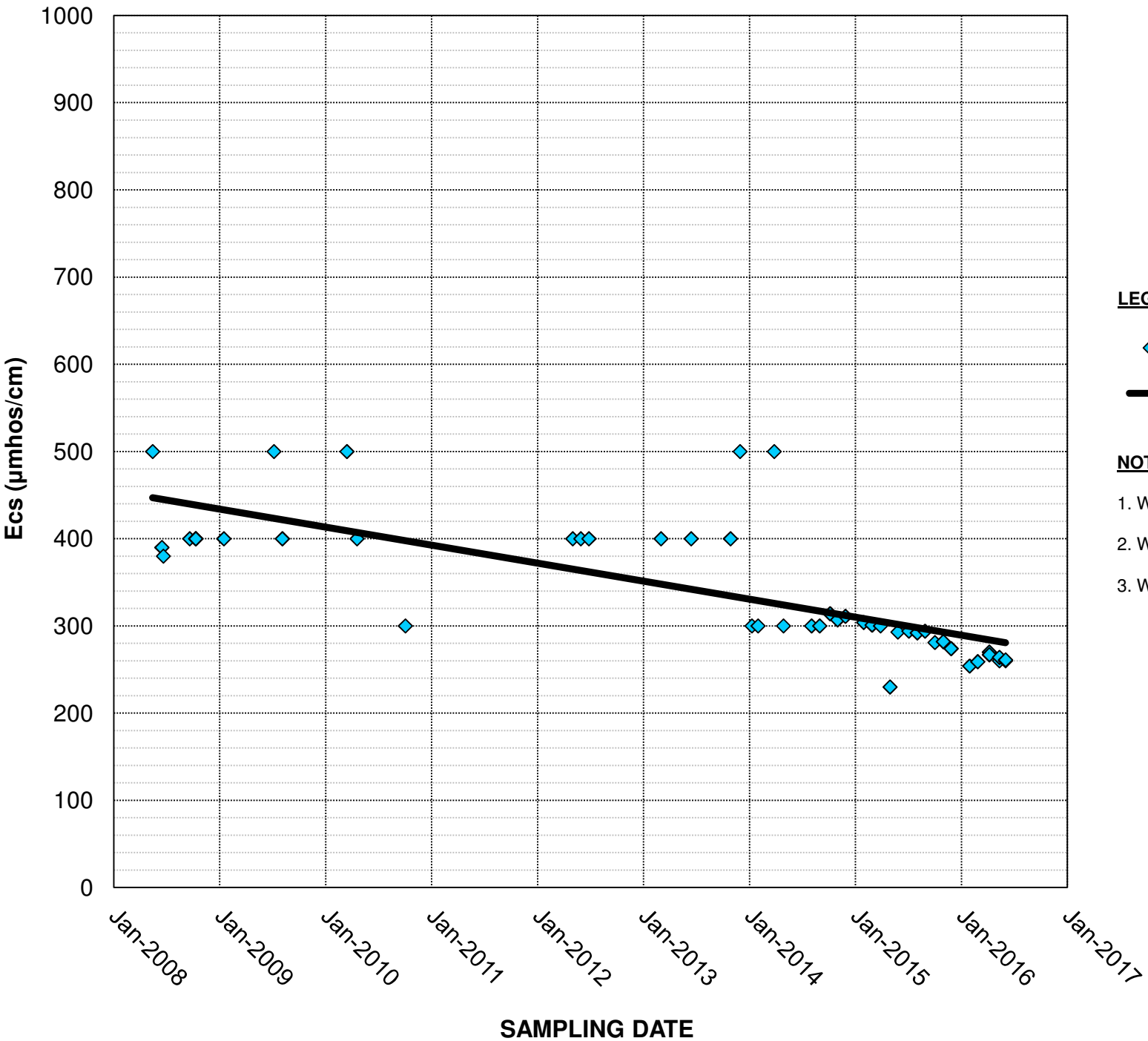
EC at Sampling Date

Linear Trend

NOTES:

1. Well Location: SEC. 35, T21S-R22E.
2. Well has a cement seal to a depth of 50 ft.
3. Well is perforated below the Corcoran Clay.

FIGURE 3. TULARE LAKEBED WATER QUALITY DATA



LEGEND:

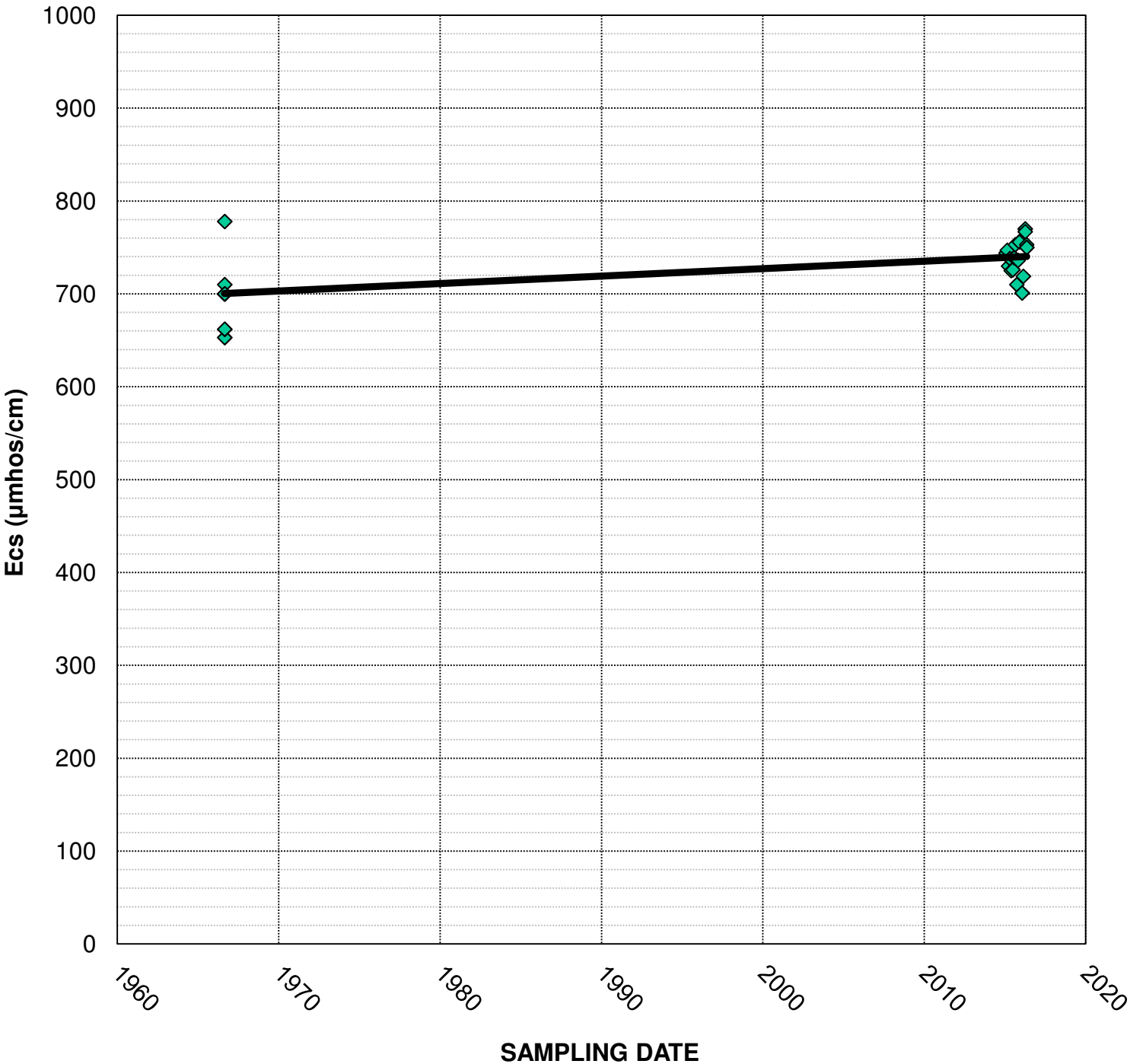
EC at Sampling Date

Linear Trend

NOTES:

1. Well Location: SEC. 3, T22S-R22E.
2. Well has a cement seal to a depth of 500 ft.
3. Well is perforated below the Corcoran Clay.

FIGURE 4. TULARE LAKEBED WATER QUALITY DATA



LEGEND:

EC at Sampling Date

Linear Trend

NOTES:

1. Well Location: SEC. 3, T21S-R20E.
2. Well has a cement seal to an unknown depth.
3. Well is perforated below the Corcoran Clay.
4. Well was drilled in 1966.