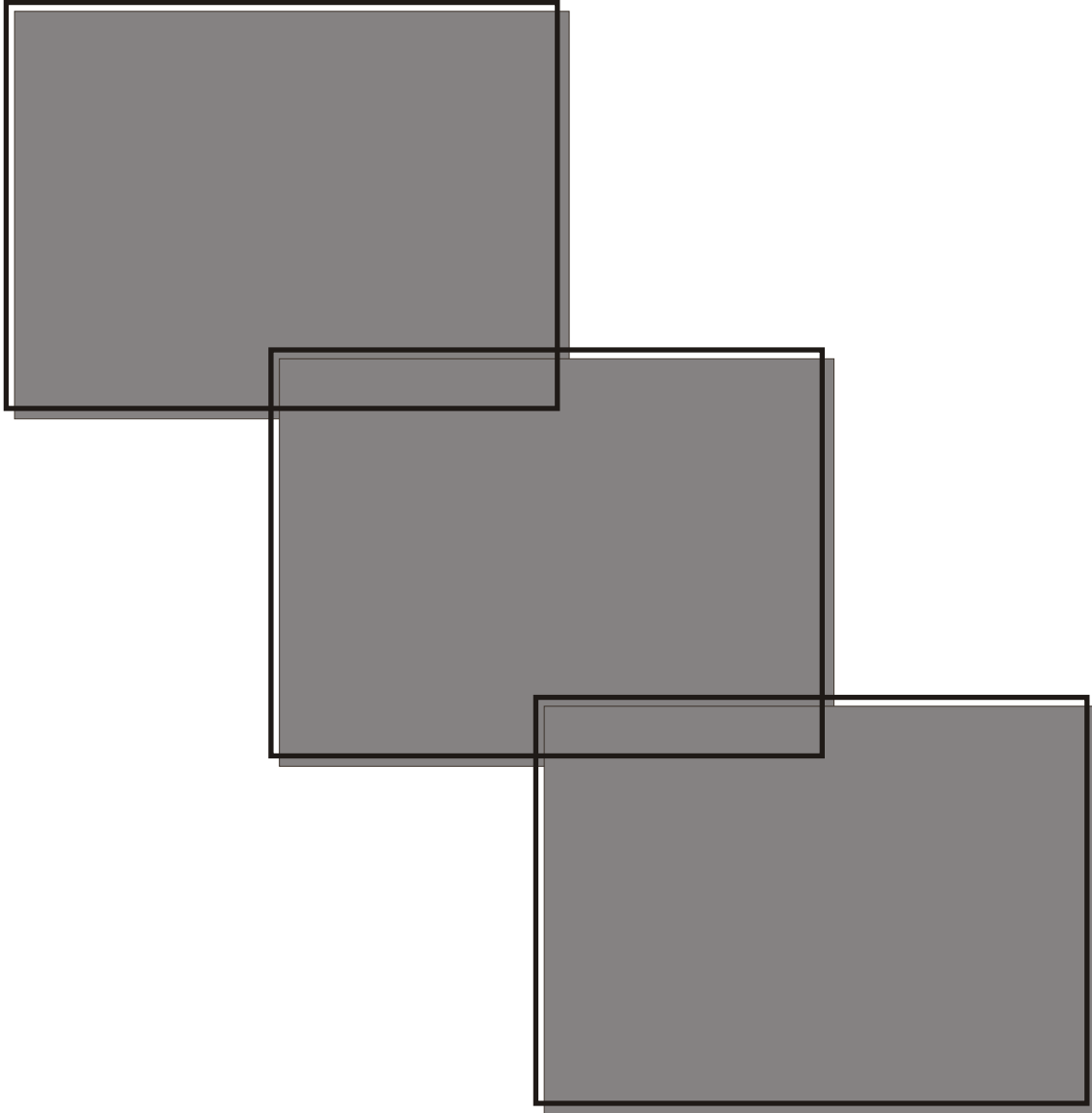


Historical Well Records Search and Field Survey  
for Production Wells W1-3, W1-4, and W1-6  
Lockheed Martin Corporation, Beaumont Site 1  
Beaumont, California



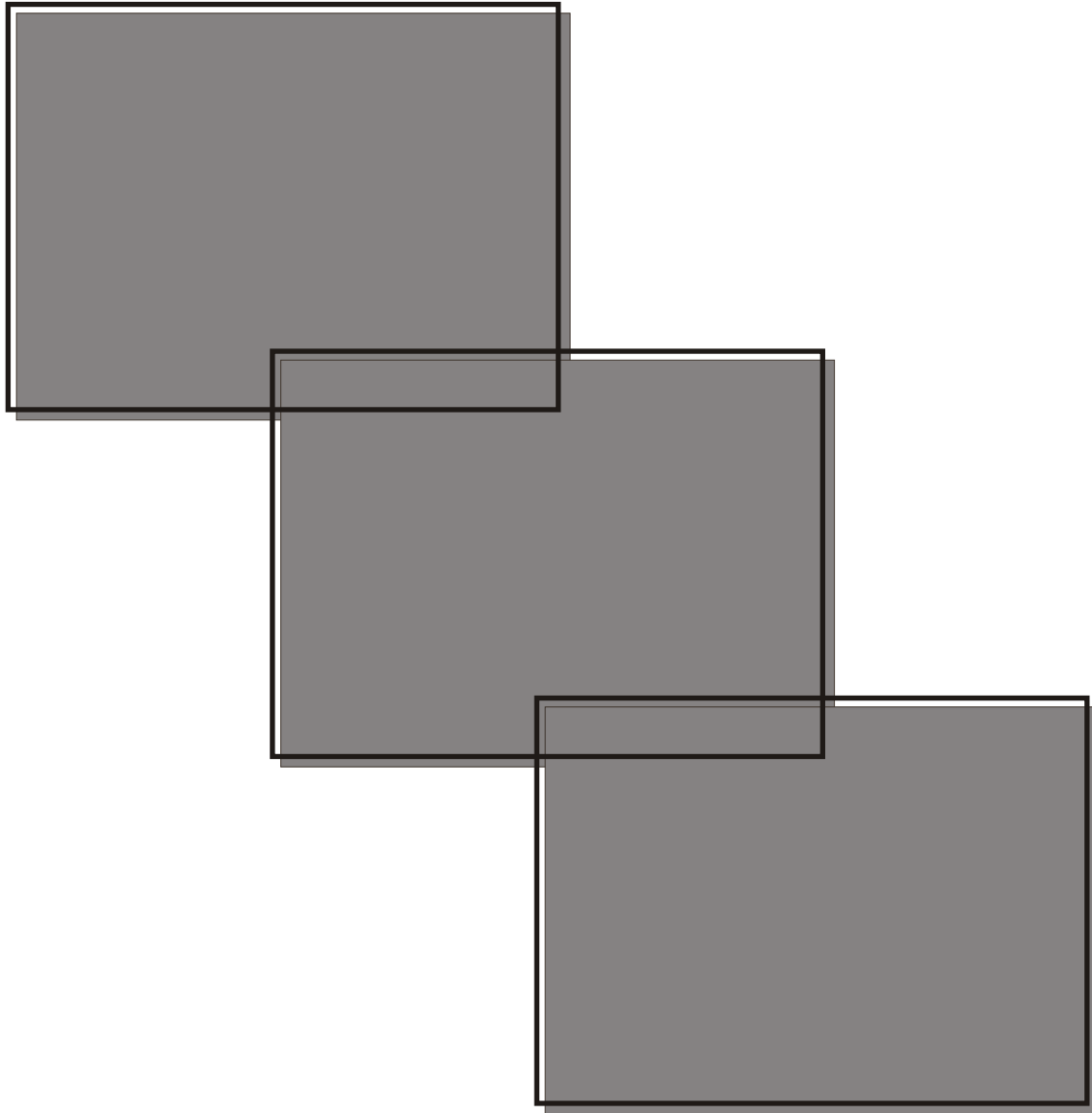
Prepared for:

**TETRA TECH**  
348 W. Hospitality Lane, Suite 100  
San Bernardino, California 92408  
TC# 21617-01 / April 2008





Historical Well Records Search and Field Survey  
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Prepared for:

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BEAUMONT SITE 1 HISTORICAL WELL RECORDS SEARCH AND FIELD SURVEY  
FOR PRODUCTION WELLS W1-3, W1-4, AND W1-6  
BEAUMONT SITE 1  
BEAUMONT, CALIFORNIA

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APPENDICES

- Appendix A Historic Aerial Photographs
- Appendix B Copies of Well Destruction Permits, W1-3 and W1-4
- Appendix C Copy of Department of Water Resources Well Completion Record
- Appendix D Site Reconnaissance Photographs

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## 1.0 INTRODUCTION

Historic information regarding Beaumont Site 1 (Site) indicated that six production wells were used at various times to provide water for ranching and farming activities and subsequent research and development activities associated with rocket propulsion systems and ballistics. Of these six wells, three (W1-1, W1-2 and W1-5) have been properly destroyed according to State of California standards (Tetra Tech 2006). The status of the remaining three wells (W1-3, W1-4 and W1-6) remains unknown. This report documents the review of historic records associated with the Site and field reconnaissance to determine the present status and location of W1-3, W1-4 and W1-6.

## 2.0 SITE DESCRIPTION

The Beaumont Site 1, located south of Beaumont, California, covers 9,100 acres (Figure 1). The Site was purchased from the Government and various private parties in 1960 by the Lockheed Aircraft Company (LAC). From 1960 to 1963, the site was used as a test facility for the development of the Lockheed A79 missile. The site is located on the south side of the Beaumont River, approximately 1.5 miles south of the intersection of State Route 99 and State Route 101. The site is bounded to the north by State Route 99, to the east by State Route 101, to the south by the Beaumont River, and to the west by the Beaumont River. The site is approximately 1.5 miles long and 0.5 miles wide. The site is currently owned by Tetra Tech, Inc.



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BEAUMONT SITE 1 HISTORICAL WELL RECORDS

BEAUMONT SITE 1 HISTORICAL WELL RECORDS SEARCH AND FIELD SURVEY  
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1980 Aerial Photograph It appears portions of the Site are being used for dry land agriculture again. All three wells can be observed in this photograph (Fig A-5 and A-6). A power pole system has been installed north of Bedsprings Creek and south of the main road that leads through the site (Figure A-5). The power poles trend from the east to the west and terminate at the site of W1-4 likely bringing power to W1-4 and subsequently across the unnamed drainage to W1-3.

1984 Aerial Photograph Little change to the site is observed in this aerial (Figure A-7). All three well locations are clearly observed.

1990 Aerial Photograph Potrero Creek has dramatically eroded the upland streambed associated with W1-6 and the area adjacent to this well (Figure A-8). W1-6 and associated features are no longer visible. Although the power pole line to W-4 is still visible, the location of W1-4 and W1-3 are not visible (Figure A-9).

1995 Aerial Photograph Potrero Creek is even more eroded as seen in this aerial photograph. As with the 1990 aerial photograph of the site, W1-3, W1-4 and W1-6 are not visible (Figures A-10 and A-11). The power pole line to the likely location of W1-4 is visible in this photograph.

2000 Aerial Photograph Little change at the site is observed in this 2000 aerial photograph (Figure A-12). Locations of W1-3, W1-4 and W1-6 are not visible.

2005 Aerial Photograph Little change at the site is observed in the 2005 aerial photograph (Figure A-13). Locations of W-3, W-4 and W-6 are not visible.

## 3.2 HISTORIC DOCUMENT REVIEW

The following section summarizes the documents reviewed as part of this evaluation.

### 3.2.1 Review of LMC-Provided Documents

As part of this task, database summaries of the documents that have been produced as part of the various actions at Site 1 were reviewed. These databases were provided to Tetra Tech from Lockheed Martin Corporation. In addition to the documents that Tetra Tech already had in their library, four other documents were identified as potentially relevant to the historic record review for W1-3, W1-4 and W1-6 (Table 1).

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These documents were requested from the Lockheed Martin Corporation repository. Of these four documents, the first two listed were received for review. A note was provided to Tetra Tech regarding the last two entries that indicated that these they had



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BEAUMONT SITE 1 HISTORICAL WELL RECORDS SEARCH AND FIELD SURVEY  
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In support of a 1990 investigation of the hydrogeologic conditions associated with Site 1, existing groundwater wells were sampled in November and December of 1989 and January 1990. During these rounds of sampling, only W1-3 was sampled (Table 2). It was reported in the 1990 report that W1-6 had a total depth of 155.2 feet bgs but could not be sampled due to its unsafe location on the steep edge of the stream channel of Potrero Creek.

Radian Corporation

1992 Lockheed Propulsion Company Beaumont Facility Hydrogeologic Report

By 1991, erosion of the streambed had completely undermined W1-6. After 1992, W1-3 was no longer included in the sampling strategy for subsequent investigations. Well construction information for MW-40, a nearby monitoring well, shows that it was drilled to a depth of 70 feet bgs and was screened from 46 feet to 66 feet bgs. Boring logs for MW-40 show that the Mount Eden 78.46 735.3 Tm (W)Tj -0



BEAUMONT SITE 1 HISTORICAL WELL RECORDS SEARCH AND FIELD SURVEY  
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Table 2 Summary of Results of Environmental Samples from MW40, W1-3, and W1-6 ( $\mu\text{g}/\text{L}$ )

	Well Identities		
	W1-3 (Radian 1986)	W1-3 (Radian 1989)	W1-3 (Radian 1990)

Notes: The Analytical data was validated using the EPA Analytical Services "Data Export System" using guidelines established by the American Chemical Society.

BEAUMONT SITE 1 HISTORICAL WELL

BEAUMONT SITE 1 HISTORICAL WELL RECORDS SEARCH AND FIELD SURVEY

FOR PRODU 36.82 T648 0p8Ddac8.460.001 0 0 102 279.66 7746.82 Tm (B)Tj 0.0002810.001 0 0 1.98S02 458.91

BEAUMONT SITE 1 HISTORICAL WELL RECORDS SEARCH AND FIELD SURVEY  
FOR PRODUCTION WELLS W1-3, W1-4, AND W1-6  
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## 4.0 RESULTS OF FIELD RECONNAISSANCE

Field reconnaissance was conducted to determine if three remaining production wells could be observed. An approximate location of the wells was obtained from reports documenting past activities. Photographs and notes were taken to document activities made during the field reconnaissance. The field reconnaissance of Site 1 was completed on November 2007. Photographic documentation of the site reconnaissance may be found in Appendix D of this document. A summary of activities and findings is presented below.

### 4.1.1 Well W1-3

Historic records for W1-3 place this well adjacent to an unnamed drainage just east of monitoring well MW-40 (Figure 2). A power pole and concrete apron were found in the presumed location of W1-3 (Photographs 1 and 2). No obvious wellhead or associated appurtenances are visible in this location. A wellhead, (concrete apron and approximately 5 feet of well casing) were found in the streambed approximately 100 feet to the southeast of the presumed location of W1-3 (Photograph 3). No markings identifying the well were observed but based on proximity; it is likely that these items were associated with W1-3. Photograph 4 documents the likely location of W1-3 and MW-40.

### 4.1.2 Well W1-4

Historically, W1-4 has been identified as located south of W1-3 on the opposite side of the unnamed drainage (Figure 2). No obvious wellhead or associated appurtenances are found in this area but some evidence exists to support this general location as the site for W1-4. Another power pole is located across the streambed from the power pole associated with W1-3 (Photograph 5). Review of historical aerial photographs indicates that at least by 1975, power poles had been placed parallel to the unnamed drainage with the terminal pole in the approximate location where W1-4 would have been located. This pole was destroyed in the 2006 Esperanza fire and the energized power line plus burnt debris subsequently removed. This power line likely brought electricity for the well pump to W1-4 and the remaining power poles likely brought electricity to the well pump associated with W1-3 to the north. As with W1-3, a wellhead (concrete apron, approximately 5 feet of well casing) and a likely safety bollard are found some distance to the south of the presumed well location (Photographs 6 and 7).

### 4.1.3 Well W1-6

Well W1-6 was located during the reconnaissance within the streambed of Potrero Creek (Figure 2). W1-6 and OW-4 were both located approximately 20 feet from the edge of the streambed bank. OW-4 is

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FOR PTW 10.001 0 7.9fH



BEAUMONT SITE 1 HISTORICAL WELL RECORDS SEARCH AND FIELD SURVEY  
FOR PRODUCTION WELLS

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## 5.2 RECOMMENDATIONS

### 5.2.1 Well W1-3

Records obtained from the County of Riverside indicate that W1-3 was destroyed as per State of California standards. No further action is recommended.

### 5.2.2 Well W1-4

Records obtained from the County of Riverside indicate that W1-4 was destroyed as per State of California standards. No further action is recommended.

### 5.2.3 Well W1-6

It does not appear either W1-6 or OW-04 have been properly destroyed according the State of California standards. Because of the proximity of the wells to the eroded stream bank neither of the wells can be safely worked on without excavating the face of the bank or shoring it up to protect the wells. BAPEA Tc 0.

## 6.0 REFERENCES

Leighton and Associates, Inc.

- 1984 Hydrogeologic Investigation for Water Resources Development, Potrero Creek, Riverside County, California

Lockheed Engineering and Management Services Company, Inc.

- 1986 Aerial Photographic Analysis of the Beaumont and Crafton-Redlands Sites. Riverside and San Bernardino Counties, California, Phase I Report.

Lockheed Martin Burbank Program Office

- 1995 December 1994 Water Level and Quality Report for Beaumont Test Site Facility Number 1, Beaumont California, Volume 1

Riverside County Flood Control, County of Riverside

Aerial Image of Site 1, Beaumont, California

- 1948 Photograph Number 45  
1962 Photograph Number 256  
1974 Photograph Number 247 and 319  
1980 Photograph Number 259 and 334  
1984 Photograph Number 1359  
1990 Photograph Number 46 and 48  
1995 Photograph Number 44  
2000 Photograph Number 45  
2005 Photograph Number 45

Radian Corporation

- 1986a Lockheed Propulsion Company Beaumont Test Facilities Historical Report  
1986b Lockheed Propulsion Company Beaumont Test Facilities Preliminary Remedial Investigation  
1989 Video Log of W1-3. Welenco, Inc.

Radian Corporation

- 1990 Lockheed Propulsion Company Beaumont Test Facilities Source and Hydrogeologic Investigation, Final

Radian Corporation

- 1992 Lockheed Propulsion Company Beaumont No. 1 Facility Hydrogeologic Report

Tetra Tech, Inc.

- 2006 Letter Report to Mr. Ju-tseng Liu, Department of Toxic Substance Control entitled Abandonment of Former Production Wells at Beaumont Site 1, Beaumont, California



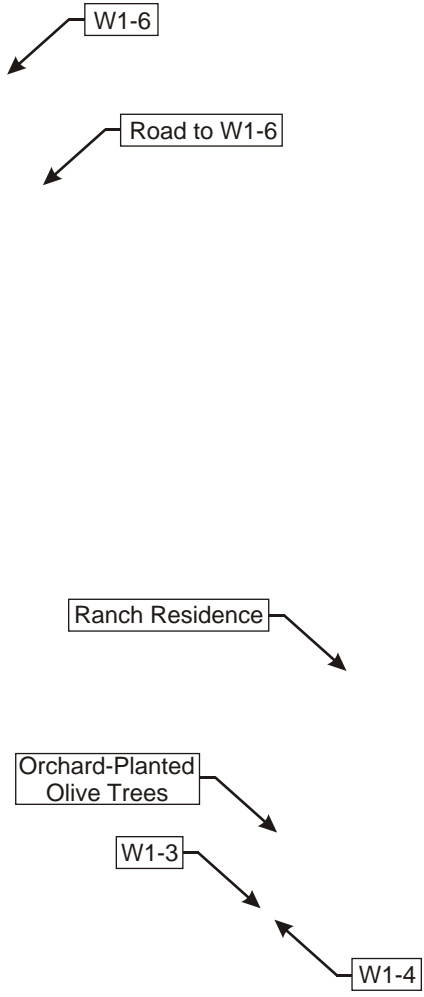


Beaumont Site 1

Figure A-1  
Historical 1948  
Aerial Photograph



November 2007



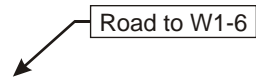
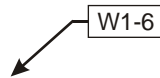
Beaumont Site 1

Figure A-2  
Historical 1962  
Aerial Photograph



November 2007





Beaumont Site 1

Figure A-4  
Historical 1974  
Aerial Photograph



November 2007



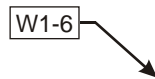


Beaumont Site 1

Figure A-5  
Historical 1980  
Aerial Photograph



November 2007



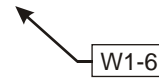
Beaumont Site 1

Figure A-6  
Historical 1980  
Aerial Photograph



November 2007





Beaumont Site 1

Figure A-8  
Historical 1990  
Aerial Photograph



November 2007



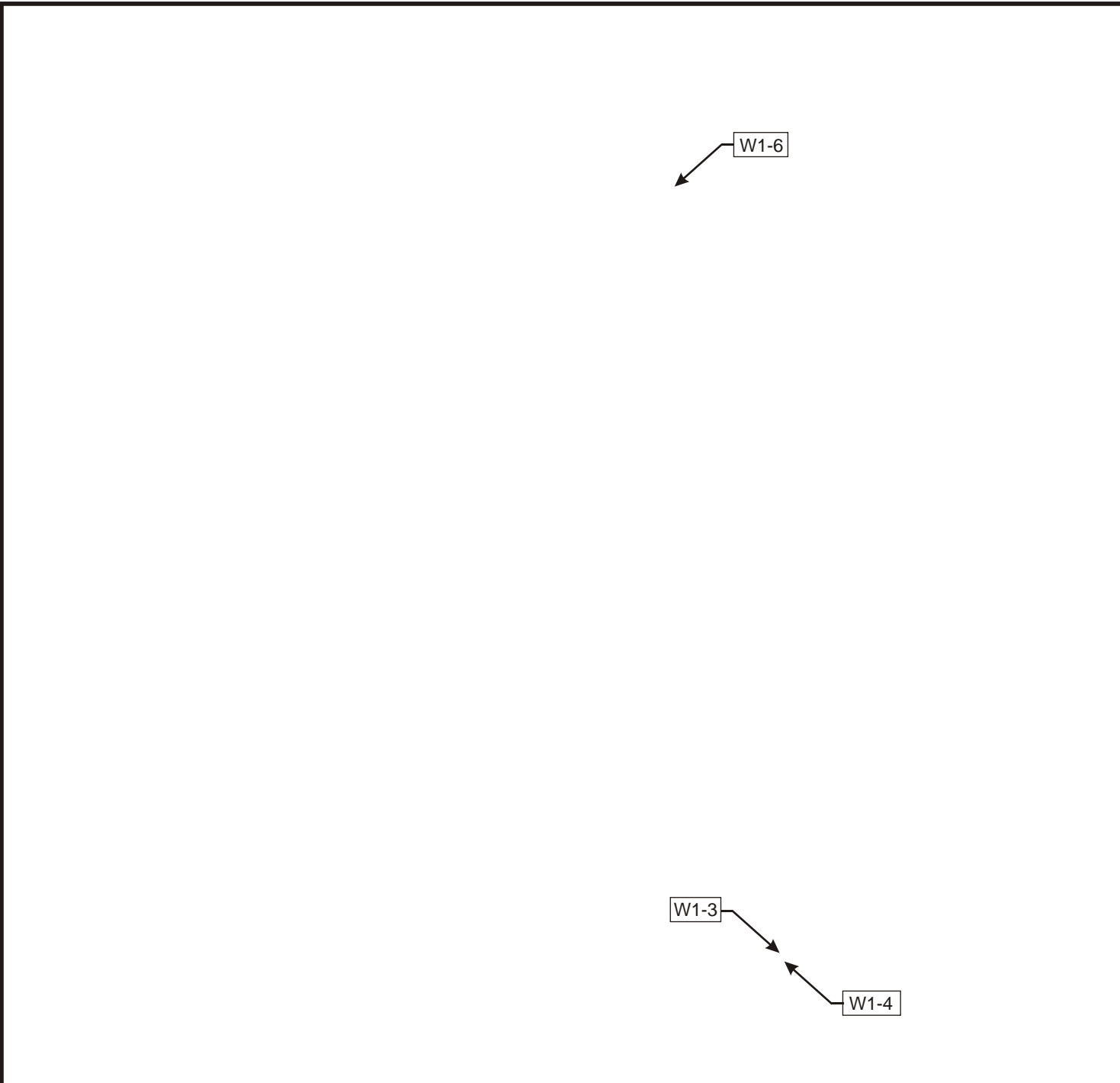



Beaumont Site 1

Figure A-10  
Historical 1995

November 2007





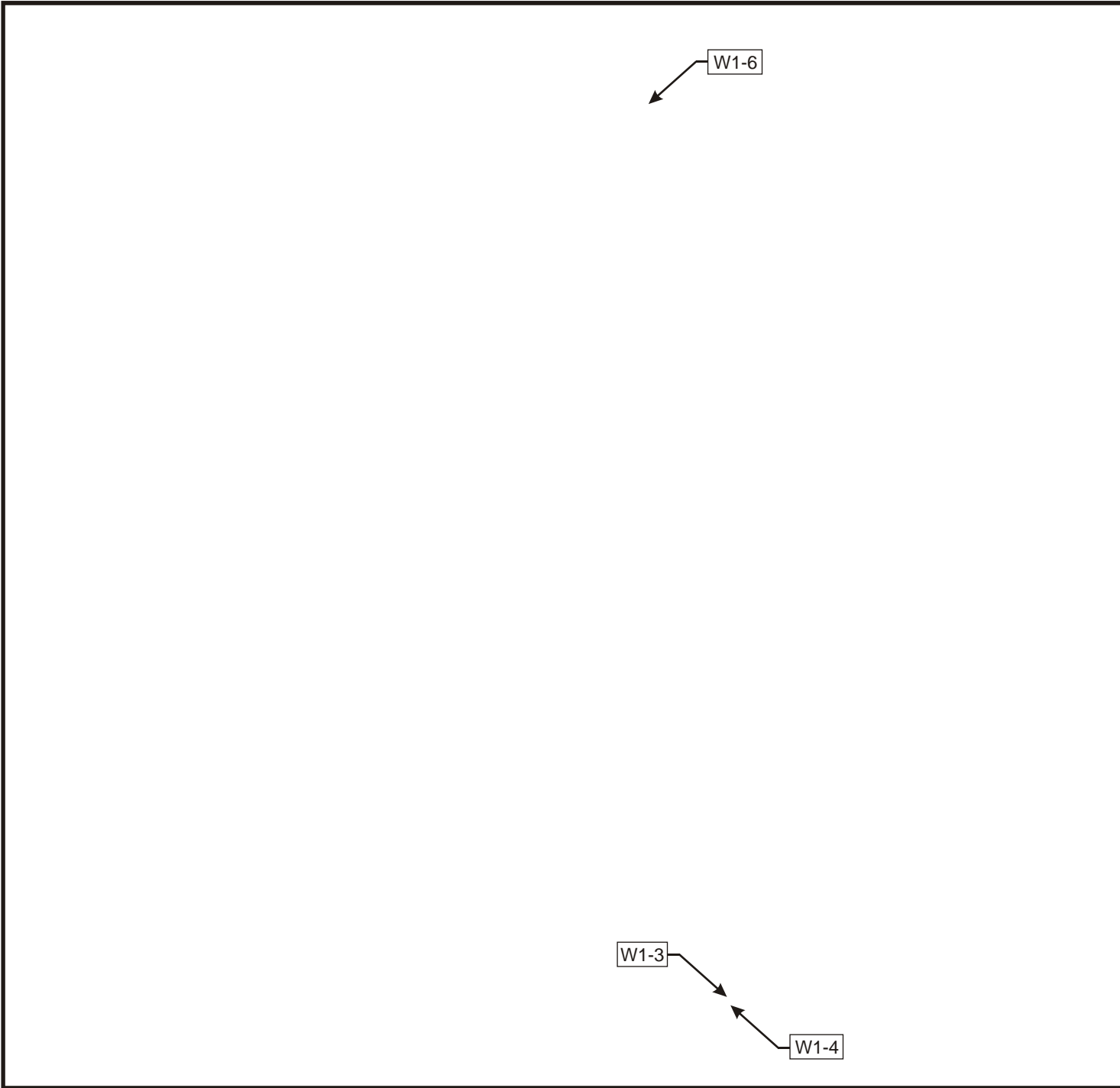
Beaumont Site 1

Figure A-12  
Historical 2000  
Aerial Photograph



November 2007





Beaumont Site 1

Figure A-13  
Historical 2005  
Aerial Photograph



November 2007



































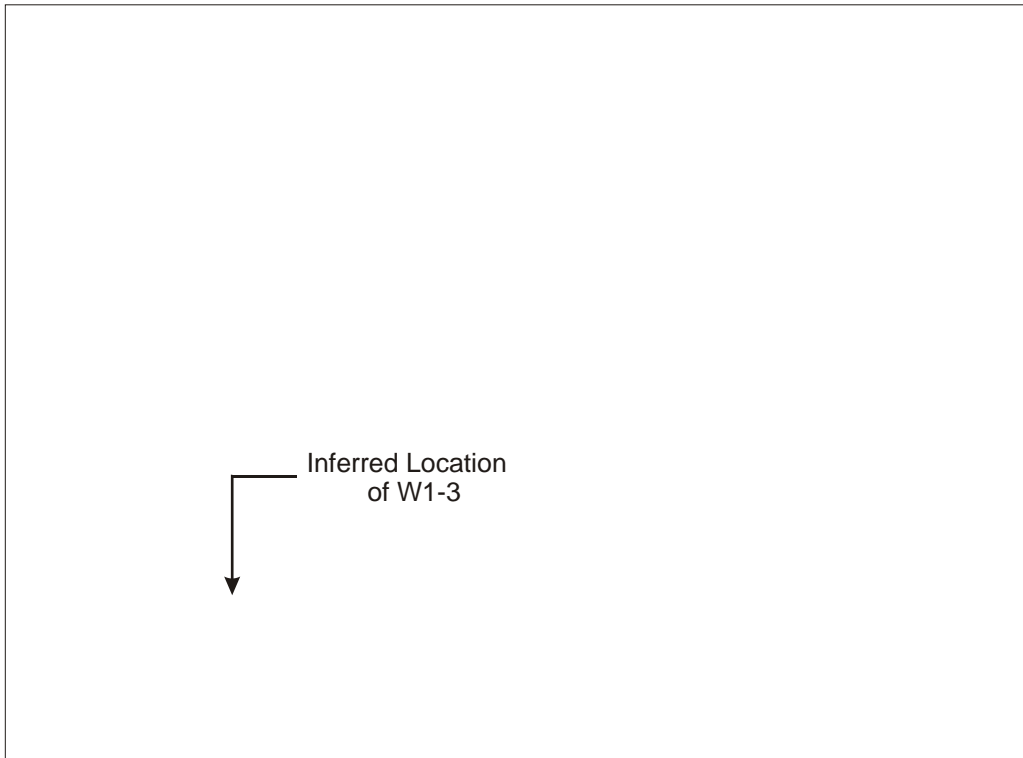


Photo 1 Likely location of W1-3. View to the southeast.

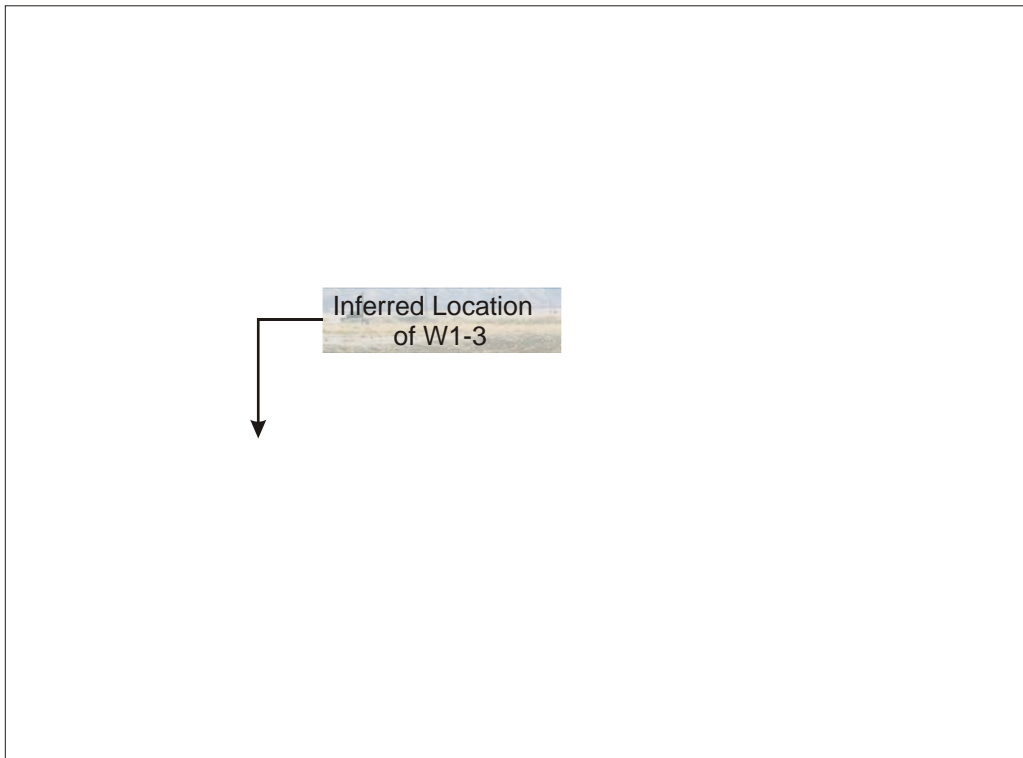


Photo 2 Likely location of W1-3. Note adjacent de-energized power pole that brought electricity to the pump for W1-3.

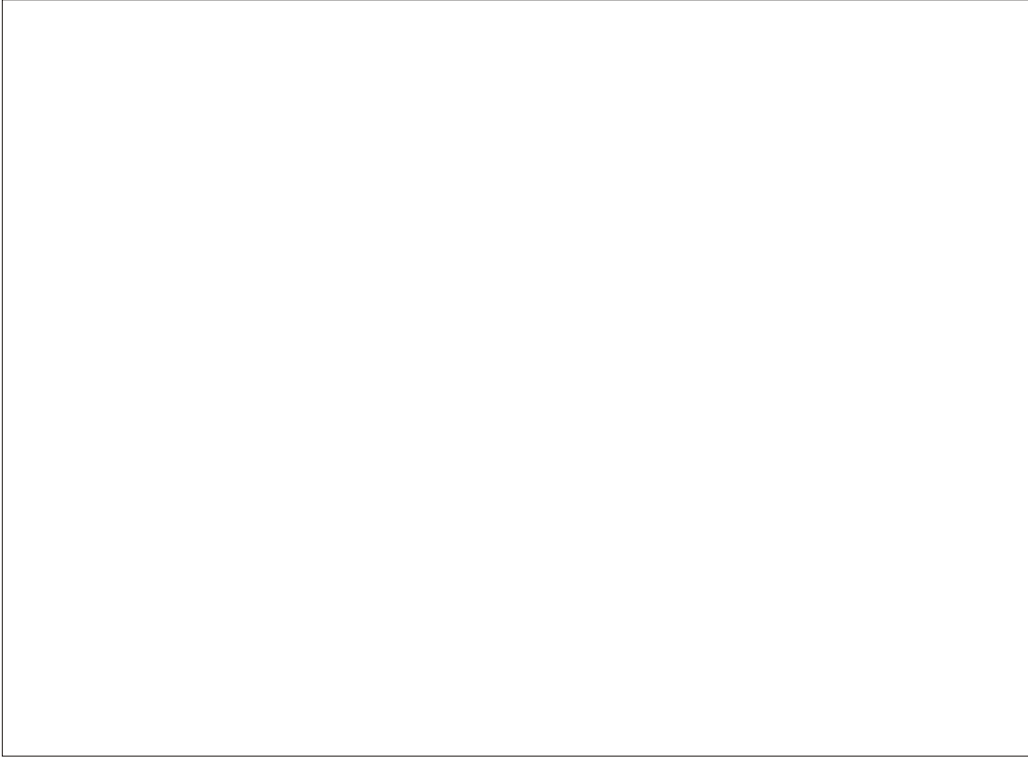
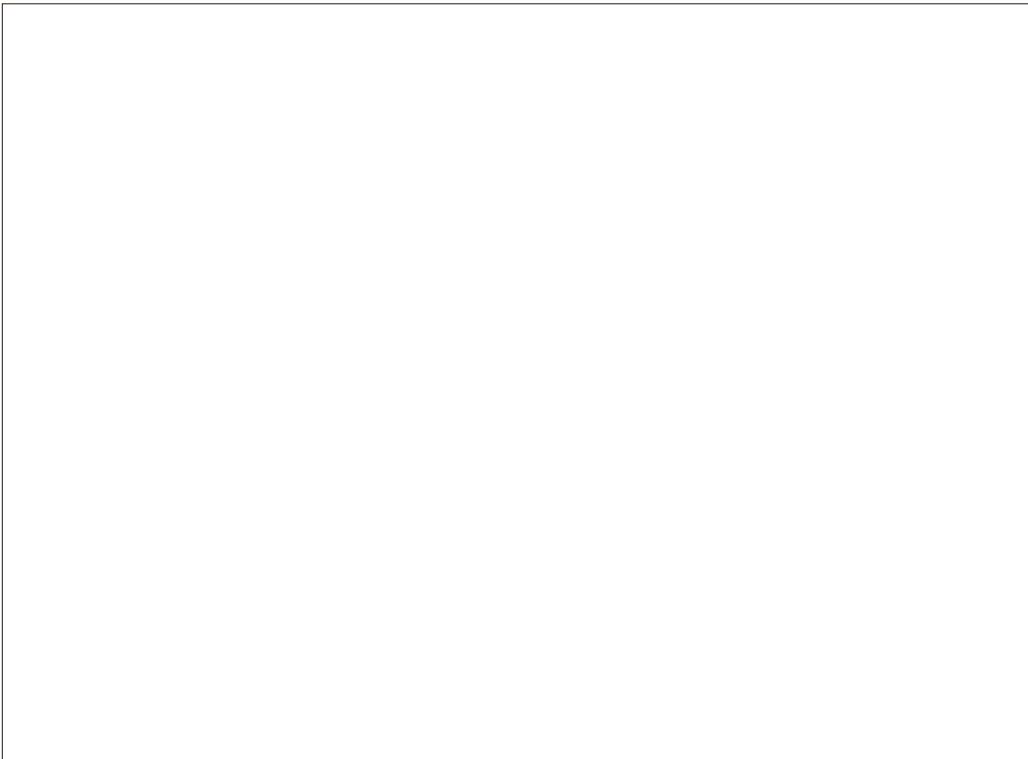


Photo 3



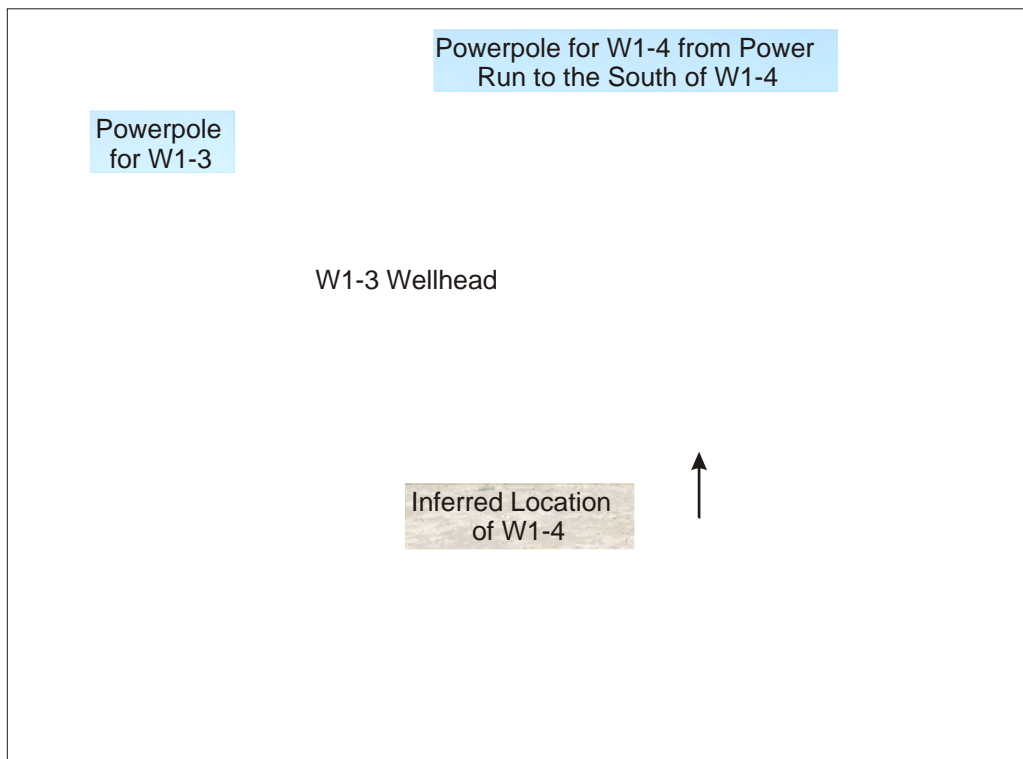


Photo 5 Likely location of W1-4. View to the northeast.

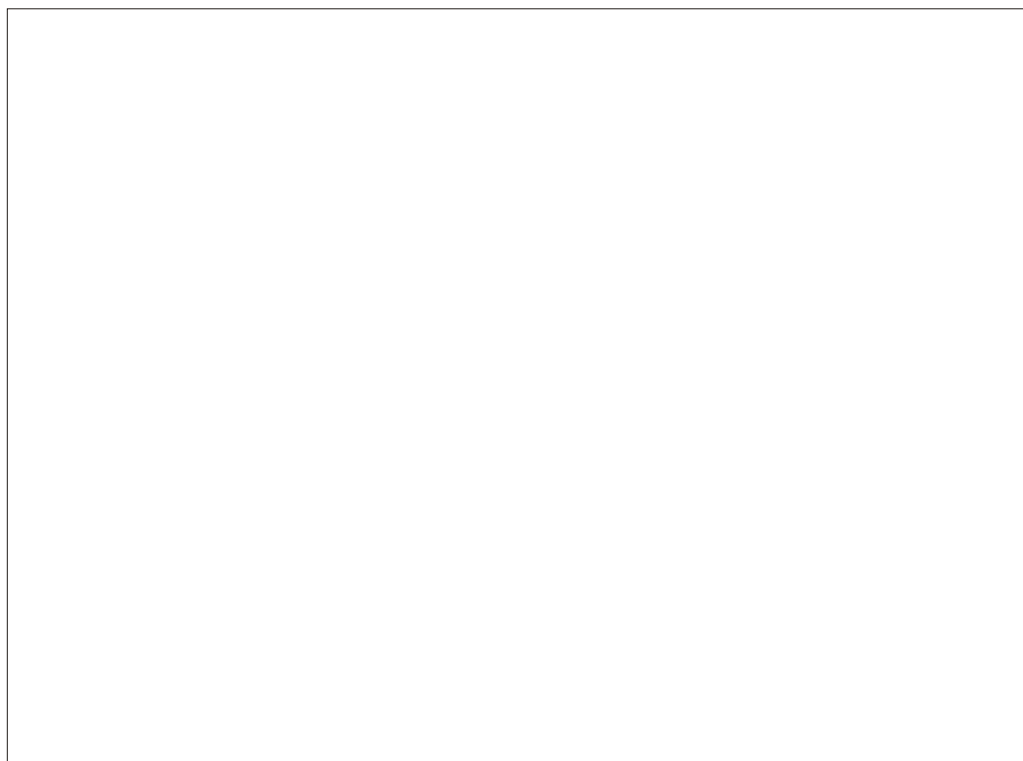


Photo 6 Likely wellhead and completion for W1-4 plus bollard.



Photo 7 W1-4 wellhead, completion plus about 5-feet of well casing. View to the southeast. Note power poles that likely supplied power to W1-4 and W1-3. Note adjacent pole to W1-4 destroyed in Esperanza Fire, 2006.

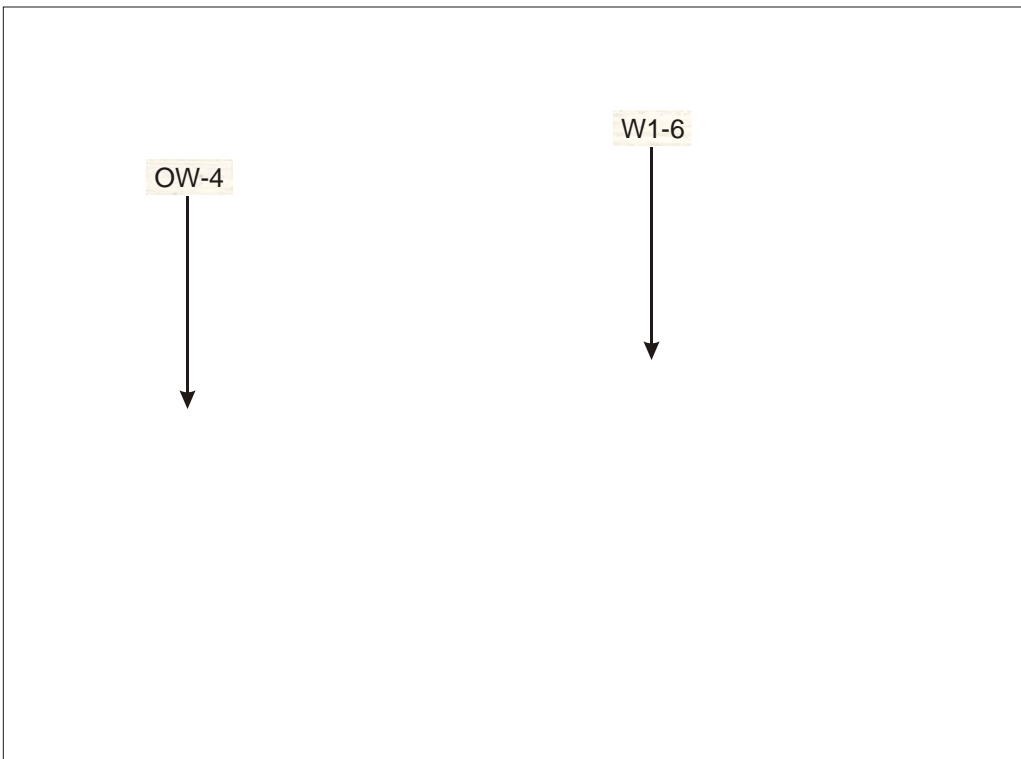


Photo 8 Location of W1-6 and OW-4. View from east side of Potrero Creek.





Photo 11 Wellhead and approximately 20-feet of well casing for W1-6 located in Potrero Creek, west of W1-6.

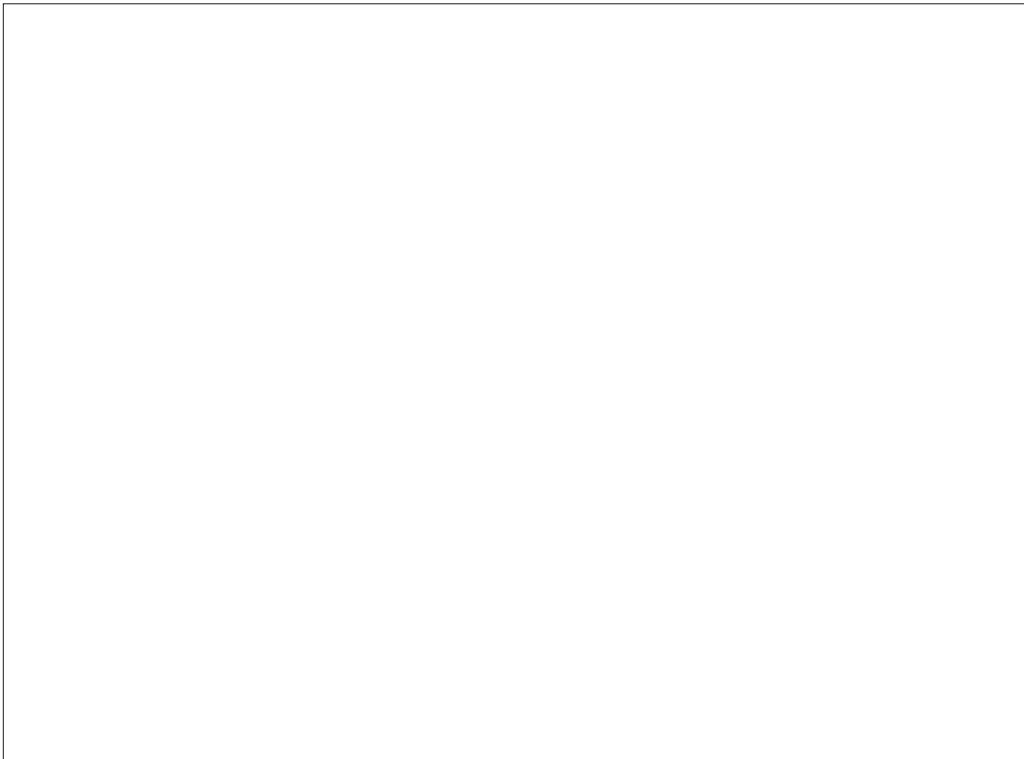


Photo 12 Concrete structure buried in Potrero Creek northwest of W1-6. Function unknown but likely associated with water distribution.



Photo 13 2-inch distribution pipe in Potrero Creek located west of W1-6.

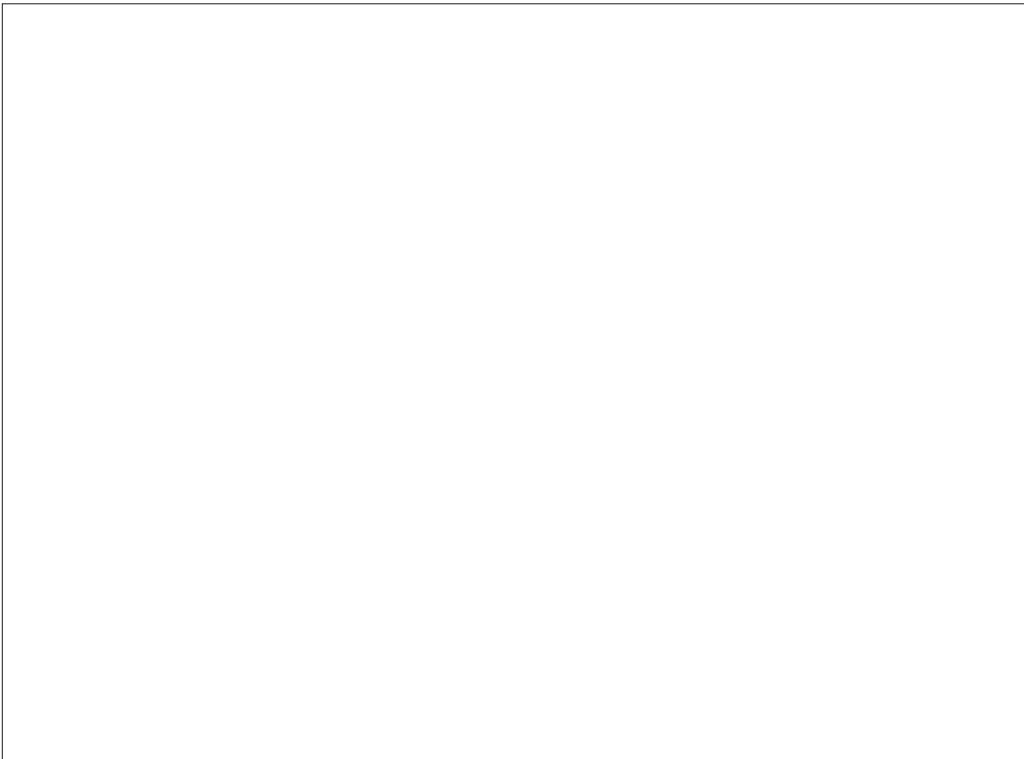


Photo 14 Potential well house located northwest of W1-6.

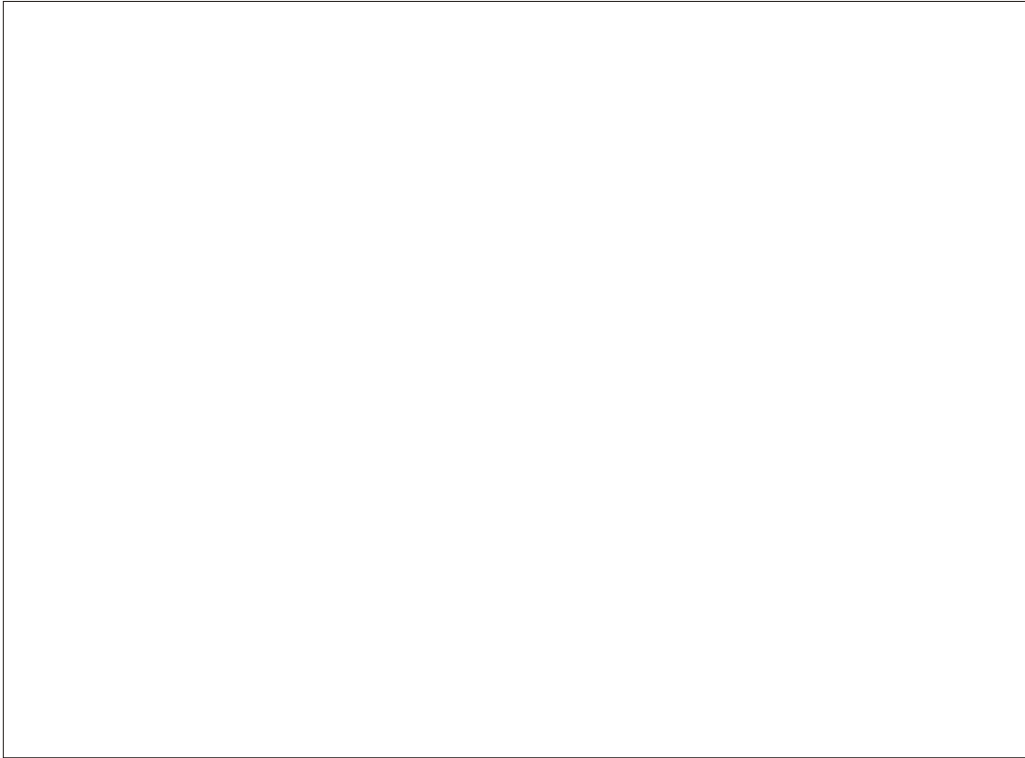


Photo 15 Potential stock tank located northwest of W1-6.











