

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
AD-A286 171		on is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, obtaining and reviewing the collection of information, sending comments regarding this burden estimate or any other aspect of this including this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503		
		2. REPORT DATE 08/00/85		3. REPORT TYPE AND DATES COVERED
4. TITLE AND SUBTITLE REPORT ON PRE 1942 WELLS, ROCKY MOUNTAIN ARSENAL			5. FUNDING NUMBERS	
6. AUTHOR(S)				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) MORRISON-KNUDSEN ENGINEERS, INC. DENVER, CO			8. PERFORMING ORGANIZATION REPORT NUMBER - 144P -	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) HOLME, ROBERTS & OWEN DENVER, CO			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) THE AREA ON WHICH THE ROCKY MOUNTAIN ARSENAL WAS ESTABLISHED WAS PREVIOUSLY DEVOTED TO AGRICULTURAL AND RESIDENTIAL USE. INFORMATION ON THE LOCATION AND CONDITION OF SOME OF THE WELLS IS AVAILABLE FROM SEVERAL SOURCES, AND ALL OF THESE SOURCES HAVE BEEN EXAMINED AND AN ATTEMPT MADE TO COMPILE THE INFORMATION INTO THIS DOCUMENT.				
14. SUBJECT TERMS HISTORICAL INFORMATION, WELL LOCATIONS			15. NUMBER OF PAGES	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT	

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REPORT ON
PRE-1942 WELLS
ROCKY MOUNTAIN ARSENAL

94-34838

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REPORT ON
PRE-1942 WELLS
ROCKY MOUNTAIN ARSENAL

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LIST OF ATTACHMENTS

Attachments

- 1 Location of Abandoned Farm
 Wells and Plume Patterns
 (Geraghty & Miller, 1981)
- 2 Real Estate Plat Map - 1942
- 3 1937 Cultural Map - Pre RMA
 Well Locations

1.0 INTRODUCTION

The area on which the Rocky Mountain Arsenal was established was previously devoted to agricultural and residential use. A large number -- perhaps as many as 300 -- water wells had been constructed for irrigation, stock watering and domestic use. Some of the wells are deep; as many as 40 may have been drilled to depths greater than 100 feet. Two of these wells are as deep as 1000 feet. Upon acquisition of the property early RMA plans indicated the intentions that some of the wells were to be "filled" by unspecified methods. Others were to be "covered," and others were to be left "as is."

Information on the location and condition of some of the wells is available from several sources, and all of these sources have been examined and an attempt made to compile the information into one document.

1.1 HISTORICAL WELL INFORMATION

The earliest information on the number and location of the wells is from a 1943 Army map (Drawing 7164-2105) showing the approximate location, and from the appraisal reports prepared during acquisition of the property. The map shows 218 wells in the present area of the RMA plus Section 10. Of the 496 property appraisal reports, 437 have been obtained and reviewed. These reports note the existence of 230 wells within RMA plus Section 10. Not all of the wells noted in the appraisal reports are shown on the Army map and not all of the wells shown on the Army map are noted in the appraisal reports. Combining this information indicates that there may have been as many as 300 pre-1942 wells on the RMA, of which, as many as 41 range in depth from 100

feet to 1000 feet. Thus wells on the Arsenal have penetrated at least into the Laramie Formation and possibly as deep as the Fox Hills Formation.

The Army map indicates that 33 of the wells were to be "filled," 156 were to be "covered," and 29 were to be left "as is." No details have been found of "filling" procedures; "covering" apparently meant placing wooden planks over the well, or installing a wooden plug.

Data dated 14 August 1946 received from the RMA lists 249 wells on the RMA plus Section 10, of which 39 are noted as "filled" and 35 are "dry." Water levels are also listed for 127 of the wells; most of the wells with no water level data are shown as either "filled, dry, not located, plugged, or covered." Some of the wells with no water level data probably were not located in 1946 and have the remark "Copied from Record of Nov. 26, 1942 - RMA - CWS." About half of the wells listed were hand-dug wells. Many of these may now be filled by wind-blown material.

In 1955, the USGS found and opened 34 wells during a groundwater study of the area. Location sketches, descriptions of the wells, depth of water, and depth of well are available for those wells. It is not known whether they attempted to find more, or whether they were only establishing a network over the area for monitoring purposes.

The Corps of Engineers (COE) sealed six wells in 1962 by blasting the casings at three intervals and pumping cement into the bore. Five others were searched-for and not found, and four wells reported as "deep" wells were found to be shallow and were not sealed.

The method of construction of the pre-Arsenal wells can only be inferred from the reported diameter of the wells. About one-half of the wells are from 30 to 60 inches in diameter and were presumably hand-dug. The others range from three inches up to eighteen inches, and must have been drilled. Some appear to have been originally hand dug, then deepened by drilling. From their age, one would assume that most were drilled by cable tool methods. No details are available on methods of completion; some may be cased throughout, others may have casing only down to competent rock.

In their report "Evaluation of the Hydrogeologic System and Contamination Migration Patterns, RMA" dated 1981 Geraghty and Miller present a map purporting to show the locations of old farm wells, those over 100 feet in depth, and those filled. Many discrepancies occur between the data presented on the map and the Army data. It appears that few, if any, of the wells were observed in the field. The map (Attachment 1) is attached to this report.

1.2 PRESENT STATUS OF WELL INFORMATION

The task of compiling all known information on the location, type, size, and condition of the pre-1942 wells is virtually completed. Of apparently 496 appraisal reports prepared for acquisition of the property, 437 have been examined. A map was prepared showing where wells were noted on the reports of each parcel. Army reports that the remaining appraisal reports are not available (letter to Ed McGrath from Gary Blair, Aug. 22, 1985).

Aerial photography taken in 1937 has been examined by photo interpretation personnel and a map prepared showing the location of homesteads and other buildings that might be indicative of the presence of wells (Attachment 3). Present day features are shown to assist in orientation in the field.

The well locations and corresponding numbers shown on the map were taken from the Army Drawing 7164-2105. The depths, construction method inferred from casing size, and "filling" data are from the RMA 1946 tabulation. Identification of those wells shown as "plugged" is from the COE report of plugging in 1962. A number of possible well locations interpreted from the 1937 photographs are shown. It should be noted that in several cases, "possible" well locations are shown close to and in similar orientations as Drawing 7164-2105 locations. This may indicate inaccurate original locations.

Attachment 2 is a plat map showing those parcels in which wells were reported during the appraisal but which do not appear on the Army Drawing 7164-2105. The plot map was constructed by interpretation of the appraisal reports.

Some of the discrepancies merit attention. For example, there are three old wells in Section 26. Number 1 is reported as 27 feet deep, Number 2 is reported as 700 feet deep and Number 3 (at the edge of Basin F) as 48 feet deep. Both Nos. 2 and 3 are on the same parcel, on which two wells were reported, one shallow and one deep.

The USGS sounded Number 2 in 1955 and reported a dug well with a depth of 30 feet. In 1962 the COE cleaned the well in preparation for sealing and found it to be only 30 feet

deep. They concluded that the 700 foot depth was in error, replaced the well cover, and moved to Number 1 which they assumed to be the deep well. They were unable to find a casing, and since "RMA records show (No. 1) to be razed and filled," inferred that it was in actuality the deep well site. It appears likely that Number 3 at Basin F is the 700-foot-deep well, and that it remains unsealed.

A compilation of all of the available data regarding the existence and condition of wells is included in Appendix E. The discrepancies in existing data can readily be seen. The 1946 RMA "Data of Wells on RMA," the 1955 USGS inventory sheets, and the 1962 COE "Report of Plugging Operations of Deep Wells on the Rocky Mountain Arsenal" are also appended. The appraisal reports have been already submitted to Mr. R. Turkletaub of the Army.

2.0 CONCLUSIONS

As many as 300 water wells predate the RMA. Some of these are shallow and probably present no cross contamination hazard. Some have apparently been properly plugged. Others, however, are sufficiently deep to penetrate into and below the Denver Formation, and their condition is not known. As many old wells as possible should be found and sampled and their physical condition be determined.

The ultimate goals of such an investigation and ensuing efforts would be to determine whether the deep aquifers are contaminated, to prevent future contamination, and to remedy any damage already done. The initial effort probably would be much less comprehensive. Several questions require answers before the total scope of investigation could be designed. Those questions are:

1. Do the wells still exist as open holes with communication to the aquifer(s), both vertically and laterally?
2. Do the wells presently contain contaminants? If so what?
3. What is the probability that the wells, even if presently clean, present a conduit for cross-contamination in the future?

The complete study could be separated into four phases:

- Phase 1. Office Well Location
- Phase 2. Field Well Location and Screening
- Phase 3. Hazard Evaluation
- Phase 4. Remedial Action

The results of each phase are prerequisite to planning and accomplishing the ensuing phase. Phase 1 is already virtually completed to the extent possible with the data available. Phase 2 should probably consist of a screen to determine whether further testing is required, and if so, in what wells or areas.

REFERENCES

1. Geraghty and Miller (1981), "Evaluation of the Hydrogeologic System and Contamination Migration Patterns, Rocky Mountain Arsenal"
2. U.S. Army, (1943), "Location of Farm Wells," Drawing 7164-2105
3. U.S. Army, (no date), "Report on Plugging Operations of Deep Wells on the Rocky Mountain Arsenal," COE, Omaha
4. U.S. Army, (1946), "Data of Wells on RMA," six pages of data, RMA files
5. U.S. Geological Survey (1935), Well inventory sheets, unpublished data

APPENDICES

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Pre-existing on the RMA |
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Inventory Sheets |
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APPENDIX A

APPRAISAL REPORTS OF PROPERTIES
PRE-EXISTING ON THE RMA

Previously transmitted to USATHAMA

WELLS

APPENDIX B
DATA OF WELLS ON RMA
1946

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APPENDIX C
U.S. GEOLOGICAL SURVEY
WELL INVENTORY SHEETS

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APPENDIX D
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OF DEEP WELLS ON THE
ROCKY MOUNTAIN ARSENAL

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APPENDIX E
PRE-1942 WELLS
SUMMARY OF AVAILABLE DATA

APPENDIX A

APPRAISAL REPORTS OF PROPERTIES
PRE-EXISTING ON THE RMA

Previously transmitted to USATHAMA

APPENDIX B
DATA OF WELLS ON RMA
1946

14 August, 1946

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DATA OF WELLS ON R M A

Dwg 7164-2105
Apr. 5-1943

Range 66 West - Township 2 South

SEC.	TRACT	WELL #	DEPTH TO WATER	DEPTH OF -WATER	SIZE CASING	DEPTH WELL	REMARKS
19	D-11	1			6"	14'	Dry
20	D-5	1			10"	24'	Dry
20	D-5	2				600'	Filled - Record Nov. 1942
20	D-6	3	69'		4"		
20	D-7	4	38'	14'	4"	200'	- Record Nov. 1942
30	D-20	1	12'	6"	6"	45'	- Record Nov. 1942
30	D-20	2			36"		Galv. casing; water at top of well, W/float
30	D-21	3					Filled
30	D-14	4					Capped; no data
30	D-13	5					Filled
30	D-20	6					Plugged at 8'; dry
31	D-30	1	22'	3'	36"	25'	Concrete
31	D-26	2	23.5'	2.5'	6"	26'	
31	D-26	3					Dry
31	D-25	4	21'	9'	12"	40'	- Record Nov. 1942
31	D-28	5	21'	24'	48"	45'	Steel Casing
31	D-28	6	19'	30'	30"	49'	Conc. Culvert; test on this well
31	D-28	7				50'	Filled; - Record Nov. 1942
31	D-28	8			6"	190'	Plug at 3'; - Record Nov. 1942
31	D-25	9					Filled
32	D-31	1	16'	22'	36"	100'	Concrete; - Record Nov. 1942
32	D-31	2				40'	36' dug well; dry. - Record Nov. 1942
32	D-32	3	29'	21'	20"	50'	Iron Casing
32	D-6	4					Filled
32	D-32	5					Filled
32	D-5	6	24'	6'	6"	30'	

Range 66 West - Township 3 South

5	E-8	1	21'	5'		26'	
5	E-9	2	118'		Inside 4"	700'	From Cont. - Record Nov. 1942
5	E-9	3					No data - nailed
5	E-1	4					Long Branch School House
6	E-3	1	5'	9'		14'	
6	E-3	2			6"		Dry - partly filled
6	E-3	3	6'	11'	6"	17'	
6	E-3	4					Filled
6	E-2-3	5				27'	Unable to locate - Record Nov. 1942
6	E-7	6			6"	50'	- Record Nov. 1942
8	E-32	1	7'	15'		22'	

Range 57 West - Township 2 South

22	A-49	1	55'		6"	500'	- Record Nov. 1942
22	A-49	2	32'	2'	36"	524'	Concrete

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Sheet #2 of 5

Range 67 West - Township 2 South (Cont'd)

SEC.	TRACT	WELL #	DEPTH TO WATER	DEPTH OF WATER	SIZE CASING	DEPTH WELL	REMARKS
22	A-1	3	60'		6"	500'	* Record Nov. 1942
23	A-54	1	51'	12'	6"x5"x5'	63'	Pit - cased below
23	A-54	2	51'	8'	36"	59'	Concrete
23	A-3	3	47'		48"		Concrete
23	A-2	4				460'	Filled - *Record Nov. 1942
23	A-3	5				520'	Windmill W/pump, covered-No data *Record Nov. 1942
23	A-4	6	54'		6"	480'	*Record Nov. 1942
23	A-4	7	27'	7'	48"	34'	Concrete
23	A-54	8	51'	8'	36"	59'	Concrete
24	D-10	1	74'				Hand pump in well; no data
24	D-9	2	24'	3'	8"	77'	
24	D-1	3	37'	7'	6"	44'	
24	D-1	4	24'	10'	24"	34'	Concrete
24	D-1	5	14'	6'	60"	20'	Concrete
24	D-1	6				450'	15 H.P. Allis Chalmers, W/8" pipe, REA being used for irrigation, no data.
25	D-10	1	69'	10'	6"	79'	
	D-10	2			6"	19'	Dry
	D-10	3					Filled
26	A-37	1			8"	27'	Dry
26	A-59	2			36"	700'	Dry; walled; * Record Nov. 1942
26	A-59	3			36"	48'	Dry; walled
27	A-53	1			8'	620'	Conc. Frame; well covered, No data; *Record Nov. 1942
27	A-55-B	2			8'		Conc. Frame, well covered, no data
27	A-55	3				46'	Filled; * Record Nov. 1942
27	A-55-C	4				23'	Dry
27	A-86	5	52'	6'	6"	58'	
27	A-57-B	6			36"		Dry; drilled below pit
28	A-56-A	1	46'	2'	4"	48'	
28	A-84	2	37'	10'	48"	47'	Conc.
33	A-74	1	41'	15'	30"	56'	Conc.
33	A-74	2					Filled
33	A-83	3					Filled
33	A-83	4	110'	5'	6"	115'	House #812 ✓
33	A-88	5			30"	60'	Dry - brick walled
33	A-88	6			3"	80'	21' to plug * Record Nov. 1942
33	A-79	7					Unable to locate
33	A-79-D	8	42'	9'	7"	50'	
33	A-78	9	70'	26'	48"	96'	Concrete
33	A-75	10	44'	13'	36"	57'	Concrete
33	A-75	11					Plug
	A-89				30"		Dry Brick Walled
35	A-91	1	87'	37'	4"	124'	

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Sheet #3 of 5

Range 67 West - Township 2 South (Cont'd)

SEC.	TRACT	WELL #	DEPTH TO WATER	DEPTH OF WATER	SIZE CASING	DEPTH WELL	REMARKS
35	A-90	2			36"	35'	Dry - Concrete wall
35	A-92	3					Dry
35	A-92	4	49'		6"	650'	* Record Nov. 1942
36	D-23	1					Filled
36	D-24	2					Filled

Range 67 West - Township 3 South

2	B-68	1			4"		Plug
2	B-65	2			6"		Capped - no data
2	B-63	3					Filled
2	B-63	4					Filled
2	B-12	5	170'			630'	Hldg. #573 - *Record Nov. 1942
3	B-62	1	29'	6'	40"	35'	Concrete
3	B-61	2	26'	18'	6"	44'	
3	B-60	3					Filled
3	B-65	4					Hand Pump - Water no data
3	B-12	5	63'	6'	3"	69'	
3	B-4	6	65'	2'	6"	67'	
3	B-6	7	52'	15'	8"	77'	Hldg. #644
3	B-37	8					Hldg. #645
3	B-42	9				700'	Filled; * Record Nov. 1942
3	B-43	10	54'	5'	18"	59'	Tile Casing - 4' Brick wall
3	B-44	11			6"	500'	Plugged * Record Nov. 1942
3	B-56	12	47'		48"		Hand Pump - Vertical Drive Shaft
3	B-51	13	56'	1'	6"	57'	
3	B-58	14				58'	*Record Nov. 1942. W/Motor #R5038A - 30 gal.-tank; school house #181
3	B-40	15					Hand pump, water, Cane. Cover No data
3	B-38	16	64'	4'	6"	68'	
3	B-52	17	45'	23'	48"	68'	Concrete
3	B-59	18					Hand pump-water, conc. cover, no data
3	B-54	19	34'	12'	30"	46'	6'x6'x6' Concrete
3	B-52-A	20					Hand Pump, water; covered; no data
3	B-53	21					Hand Pump, water, covered, no data
3	B-62	22					Unable to locate
3	B-39	23	65'	29'	6"	94'	
3	B-52	24	42'	1'	8"	43'	
4	B-33	1				71'	Dry
4	B-31	2					Filled
4	B-16	3	47'	7'	40"	54'	Hand Pump
4	B-21	4			48"	57'	Dry, Concrete
4	B-34	5			36"	51'	Dry, Concrete

Range 67 West - Township 3 South

4	B-13	6					Filled
4	B-17	7	60'	5'	40"	65'	Concrete
4	B-14	8				60'	Filled; * Record Nov. 1942
4	B-33-A	9	60'	18'	6"	78'	

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Range 67 West - Township 3 South (Cont'd)

SEC.	TRACT	WELL #	DEPTH TO WATER	DEPTH OF WATER	SIZE CASINGS	DEPTH WELL	REMARKS
4	B-35	10	46'	26'	6"	72'	
4	B-36	11					Filled
4	B-1	12					Derby Gate
4	B-2	13					Filled
4	B-1	14					Unable to locate
9	B-35	1				34'	Dry
9	B-35	2					Filled
9	B-35	3			4"	500'	* Recorded Nov. 1942, dropped 103' No water.
9	B-71	4	61'	14'	5"	75'	
9	B-124	5			30"	1000'	Brick Walled, cased below, * Record in Nov. 1942
9	B-37	6	51'	5'	6"	56'	
9	B-39	7				77'	Dry-Covered W/Concrete House * Record Nov. 1946
9	B-140	8	41'	3'	36"	44'	Brick walled, Bldg. #814
9	B-33	9	49'	6'	40"	56'	Concrete
	B-124	10				1000'	Filled *Record - Nov. 1942
	B-142	11				800'	Filled *Record - Nov. 1942
9	B-122	12✓				73'	Filled
9	B-122	13✓					Filled
9	B-79	14	46'	6'	36"	52'	Concrete
9	B-142	15					Filled
9	B-85	16	73'	3'	6"	76'	
9	B-123	17	53'	8'	6"	61'	
9	B-73	18	59'	13'	6"	72'	
9	B-76	19				54'	Dry
9	B-81	20	49'	9'	6"	58'	No Marker, no cover, no number
10	B-158	1	33'	1'	8"	34'	
10	B-154	2	35'	14'	48"	49'	Concrete
10	B-152	3			40"	555'	Cons. 42' to casing; water below * Record Nov. 1942
10	B-151	4			36"	45'	Dry, Concrete
10	B-153	5					Covered - no data
10	B-149	6					Filled
10	B-151	7				31'	Dry - brick walled 20' to casing
10	B-147	8	37'		6"		
10	B-150	9	35'	3'	48"	38'	Concrete
10	B-146	10	37'	3'		40'	
10	B-37	11					Filled
10	B-38	12	28'	11'	48"	39'	Concrete
10	B-39	13	36'	14'	36"	50'	Brick Walled
	B-38	14					4' 6" ^{5'} Brick walled 5', well filled
10	B-92	15				580'	5'x5'x6' Brick walled, Bldg. #183
10	B-89	16				535'	Hand pump, water, no data *Record Nov. 1942
10	B-163	17				30'	Filled *Record Nov. 1942
10	B-165	18					Hand pump, water, no data
10	B-162	19					Unable to locate

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Range 67 West - Township 3 South (Cont'd)

SEC.	TRACT	WELL #	DEPTH TO WATER	DEPTH OF WATER	SIZE CASING	DEPTH WELL	REMARKS
10	B-150	20				36'	Dry, Brick Walled
10	B-163	21				30'	Filled
10	B-36	22	42'	15'	5"	64'	
11	B-189	1	31'	2.5'	48"	33.5'	Concrete
11	B-187	2	27'	5'	48"	32'	Concrete
11	B-186	3	27'	5'	48"	32'	Concrete
11	B-185	4	32'	15'	48"	47'	Concrete
11	B-188	5	32'	6'	48"	38'	Concrete
11	B-184	6	31'	2.5'	48"	33.5'	Concrete
11	B-176	7			5"	12'	Filled
11	B-175	8	23'	6'	48"	35'	Concrete
11	B-170	9	23'	6'	48"	34'	Concrete
11	B-178	10	23'	11'	6"	39'	
11	B-172	11	30'	3'	36"	33'	Concrete
11	B-180	12	27'	6'	10"	33'	
11	B-120	13	35'	1'	48"	36'	Concrete
11	B-113	14			48"		Concrete, 16' to Cent. Pump - Cased below
11	B-112	15	23'	15'	9"	33'	
11	B-118	16	19'	5'	36"	24'	Concrete
11	B-107	17	21'	4'	6"	25'	
11	B-117	18					Dry, No cover
11	B-116	19					Cover fastened, no data
11	B-110	20	24'	3'	36"	27'	Concrete
11	B-109	21	19'	6'	40"	25'	Concrete
11	B-104	22	21'	14'	6"	35'	
11	B-105	23					
11	B-101	24					Not located
11	B-100	25	24'	30'	6"	54'	Bldg. 2-833
11	B-99	26	40'	2'	6"	42'	
11	B-95	27				40'	Dry, Brick walled
11	B-120	28	25'	20'	48"	45'	Concrete
11	B-168	29	32'	2'	36"	34'	Concrete - should be marked
12	B-34	1					Dry
12	B-15	2	15'	6'	6"	21'	
12	B-12	3	25'		48"	25'	Concrete
12	B-11	4	13'	12'	36"	25'	Concrete
12	B-10	5	18'	17'	48"	35'	Concrete
12	B-22	6	22'	1.5'	48"	23.5'	Concrete
12	B-24	7	17'	12'	40"	29'	Concrete
12	B-25	8	13'	2'	3"	20'	
12	B-25	9					Filled
12	B-27	10	13'	25'	6"	40'	
12	B-29	11	22'	8'	14"-10"	30'	Double Casing
12	B-43	12			48"	19'	Dry, Concrete
12	B-45	13			48"		Dry, Concrete, 25' to casing
12	B-54	14	23'	2'		30'	
12	B-55	15			6"	22'	Dry
12	B-46	16					Dry

14 August, 1946

Sheet #6 of 6

Range 67 West - Township 3 South (Cont'd)

<u>Sec.</u>	<u>TRACT</u>	<u>WELL #</u>	<u>DEPTH TO</u> <u>WATER</u>	<u>DEPTH OF</u> <u>WATER</u>	<u>SIZE</u> <u>CASING</u>	<u>DEPTH</u> <u>WELL</u>	<u>REMARKS</u>
12	E-58	17	21'	4'	10"	25'	
12	E-59	18	26'	21'	18"	47'	Old Boilers casing
12	E-37	19	15'	4'	6"	19'	
12	E-38	20	15'	11'	8"	26'	
12	E-89	21				14'	Dry
12	E-85	22	21'	14'	6"	35'	
15	C-14	1	43'		24"	800'	Galvanized - *Record Nov. 1942
15	C-14	2	37'	43'	4"		Hdg. Locked T-822
15	C-14	3			30"		Erick Walled 34' to casing
15	C-15	4	30'	10'	6"	40'	
15	C-15	5	30'	7'	6"	37'	
16	C-13-a	1					Hand Pump - No data
16	C-18	2			6"	29'	Dry
16	C-12	3			30"	31'	Dry - Concrete
16	C-11-C	4					
16	C-10	5	42'	8'	8"	50'	
16	C-9	6	38'	9'	6"	47'	
16	C-8	7				42'	Dry
16	C-7	8	37'	8'	8"	45'	
3	C-11	9			40"		Concrete - Drive shaft W/pulley 20' to case
16	C-5	10	47'	3'		50'	18' to casing - 4'x8'x6' Pit.
16	C-3	11			12"		32' to casing - 48" Concrete pit
16	C-9	12	44'		40"	44'	Concrete
22	C-26	1	14'	2'	8"	16'	
22	C-25	2			10"		
22	C-25	3	13.5'	.5'	6"	14'	Filled to 4' of top
22	C-22	4					
22	C-25	5	13'	15'	48"	28'	Hand Pump - Water - No data
22	C-25	6	14'	18'	48"	32'	Concrete
22	C-25	7	13'	12'	48"	25'	Concrete
22	C-25	8	13'	1'	6"	14'	Concrete
21	C-19	1					6'x8'x5' Vault W/12"x12" plug in casing
21	C-19	2					Filled

32

NOTES: * Copied from Record of Nov. 26, 1942 - RMA - CWS

Compiled by Morton Serres, 14 August, 1946

APPENDIX C
U.S. GEOLOGICAL SURVEY
WELL INVENTORY SHEETS

4467
4465C

TOWNSHIP

R/S

U. S. GEOLOGICAL SURVEY - GROUND WATER BRANCH

DATE 9/1/55

RECORD BY L.A. Hershey SOURCE RMR Files & Pers. Obs. FIELD NO.

1. LOCATION: STATE Colorado COUNTY Adams

SW 1/4 SE 1/4 SW 1/4 SEC 4 T 3 R 67 W
Derby 350 ft. N. 3,900 ft. W.
MAP RMR well location map (1942) No. 264-2105 & USDP Aerial Map

2. OWNER Rocky Mtn. Arsenal ADD Derby, Colo.

3. OWNER

4. OWNER

5. OWNER

6. OWNER

7. OWNER

8. OWNER

9. OWNER

10. OWNER

11. OWNER

12. OWNER

13. OWNER

14. OWNER

15. OWNER

16. OWNER

17. OWNER

18. OWNER

19. OWNER

20. OWNER

21. OWNER

22. OWNER

23. OWNER

24. OWNER

25. OWNER

26. OWNER

27. OWNER

28. OWNER

29. OWNER

30. OWNER

31. OWNER

32. OWNER

33. OWNER

34. OWNER

LAB

TEMP

COLOR

TDS (ppm)

HARDNESS

PERCENT NA

Beta-Gamma

SiO₂

Fe

Ca

Mg

Na

K

CO₂

HCO₃

SO₄

Cl

NO₃

B

F

ERROR:

REMARKS

USE BACK

- M U
- OR L
- TPI QP
- T.D TM
- TRW TE
- K T
- T J
- FP P
- D M
- O S
- Pg

- DIAMETER
- DEPTH
- WATER LEVEL
- DISCHARGE
- DRAWDOWN
- SPEC. CAP.
- TRANSMISS.
- SAT. THICKNESS
- PERMEABILITY
- STOR. COEFF.
- PARTIAL ANAL.
- COMPL. ANAL.
- MECH. ANAL.
- POROSITY
- PERMEABILITY
- SPEC. YIELD

FIELD TESTS

LABORATORY TESTS

1. ALTITUDE 465 5,200 DET. BY Interp Top
2. TYPE DUG DRILLED DRIVER JETTED
3. DEPTH: REP T 72 FT MEAS 72.5 LS
4. CASING: DIAM. 6 IN. TO IN. TYPE GL
5. DEPTH FT. FINISH
6. AQUIFER(S) AND DEPTHS
7. WATER LEVEL static 44.1 44.28 FT. MEAS. 9/1/55 BELOW H. edge
8. TOP OF CRY WHICH IS 0.25 FT ABOVE SURFACE
9. PUMP TYPE None CAPACITY GPM HP RPM
10. POWER KIND DRIVER HP RPM
11. YIELD FLOW GPM PUMP GPM (MEAS NEPT EST)
12. DRAWDOWN FT AFTER HRS PUMPING GPM (MEAS NEPT EST)
13. SPEC. CAP TRANS M FT PERM (FIELD LAB)
14. SPEC. CAP (FIELD LAB) FOR OTHER
15. USE DOM. STOCK. P.S. R.R. IND. IND. OBS NONE
16. SAMPLE (YES) P. C. H. TEMP. FIELD COND (EC IN M IN C)
17. REMARKS: TASTE. COLOR. ODOOR. ETC. No. in one of RMR Map

CATIONS

ANIONS

9-185-July 1926
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

CS-67-4 sds

WELL SCHEDULE

Date 9/1/55, 19 55 Field No. McBee

Record by L. A. Hecsher Office No.

Source of data R.M.A. files + field notes

1. Location: State California County Adams
Map R.M.A. well loc. map (1942) No. 7164-2195; 4 sec. 4
SE 1/4 SW 1/4 sec. 4 T. 3 N. R. 67 E.

2. Owner: Rack & M. Adams Address Reck, Cal.

Tenant None Address

Driller Kuhnman Address

3. Topography hilly rolling plain

4. Elevation ft. above below

5. Type: Dug, drilled driven, bored, jetted 10

6. Depth: Rept. 22 ft. Meas. 22.5 ft.

7. Casing: Diam. 6 in. to in. Type 6.5

Depth ft. Finish

8. Chief Aquifer From ft. to ft.

Others

9. Water level 24.28 ft. rept. 9/1 1955 above N. Edge

Top of 6.5 Csg. which is 25 ft. below surface

10. Pump: Type None Capacity G. M.

Power: Kind Horsepower

11. Yield: Flow G. M., Pump G. M., Meas., Rept. Est.

Drawdown ft. after hours pumping G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. Used

Adequacy, permanence Good. OK. well

13. Quality Temp. °F.

Taste, odor, color Sample Yes No

Unit for

14. Remarks: (Log, Analysis, etc.) No. 10 12 Sec. 4 - R. M. A. Map.

9 185-July 1935
Revision

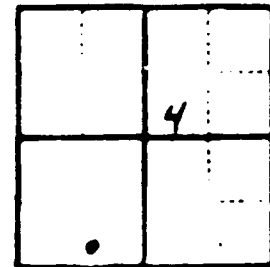
70.00
5.72
64.28

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY CS-67-46dai
WATER RESOURCES BRANCH

WELL SCHEDULE

Date 9/1/55 19 Field No.
Record by L A Hershey Office No.
Source of data RMA files + field notes

1. Location: State Colorado County Adams
Map R.M.A. well loc map (1943) No. 7164-2105; 4 Acres/Plat
SE 1/4 SW 1/4 sec 4 T 3 S R 67 E
2. Owner Rocky Mtn Arsenal Address Denver, Colo.
Tenant NONE Address
Driller Unknown Address
3. Topography level rolling plain
4. Elevation ft above
below
5. Type: Dug, Drilled, driven, bored, jetted 19
6. Depth: Rept 72 ft. Meas 72.5 ft
7. Casing: Diam 6 in. to in. Type 6T
Depth ft. Finish
8. Chief Aquifer From ft to ft
Others
9. Water level 64.28 ft. rept 2/1 1955 above N. edge
which is 25 ft. below surface
TAP at 6.5 ft. Csg.
10. Pump Type NONE Capacity G. M.
Power kind Horsepower
11. Yield Flow G. M. Pump G. M. Meas. Rept Est.
Drawdown ft after hours pumping G. M.
12. Use: Dom, Stock, IR, RR, Ind, Irr (X) Used
Adequacy, permanence Good Obs. well
13. Quality Temp
Taste, odor, color Sample Yes No
Unit for
14. Remarks (Log, Analysis, etc) No 10 10 Sec. 4 - R.M.A. Map.



Approx. N. 20° E. 1000 ft.
of Sec. 4, T. 3, S. 4

9-188-July 1935

Revised

66.00

1.12

65.88

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

C8-67-9622/

WELL SCHEDULE

Date 8/30/58

19

Field No.

Record by L.A.H.

Office No.

Source of data Per. Obs. & R.M.A. files

1. Location: State Colorado County Adams
Map R.M.A. & Aerial Photo

NE 1/4 NW 1/4 sec. 9 T 3 N R 67 E

2. Owner: Rocky Mtn. Arsenal Address Deeds, Colo.

Tenant None Address _____

Driller Unknown Address _____

3. Topography Rolling plain

4. Elevation 5200.4 ft. base MSK (VMS-ALD)
below

5. Type: Dug drilled driven, bored, jetted _____ 19 _____

6. Depth: Rept. — 72 ft. Meas. 76.3 ft.

7. Casing: Diam. 5 in., to _____ in., Type 6.5

Depth _____ ft., Finish _____

8. Chief Aquifer _____ From _____ ft. to _____ ft.

Others _____

9. Water level 65.88 ft. rept. 9/1/1955 above S. Side

of G.I. Csg. in Conc. Slab which is 33 ft. below surface

10. Pump: Type None Capacity _____ G.M. _____

Power: Kind _____ Horsepower _____

11. Yield: Flow _____ G.M., Pump _____ G.M., Meas., Rept. Est. _____

Drawdown _____ ft. after _____ hours pumping _____ G.M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. Obs. Unused

Adequacy, permanence Good Obs. Well

13. Quality _____ Temp _____ °F.

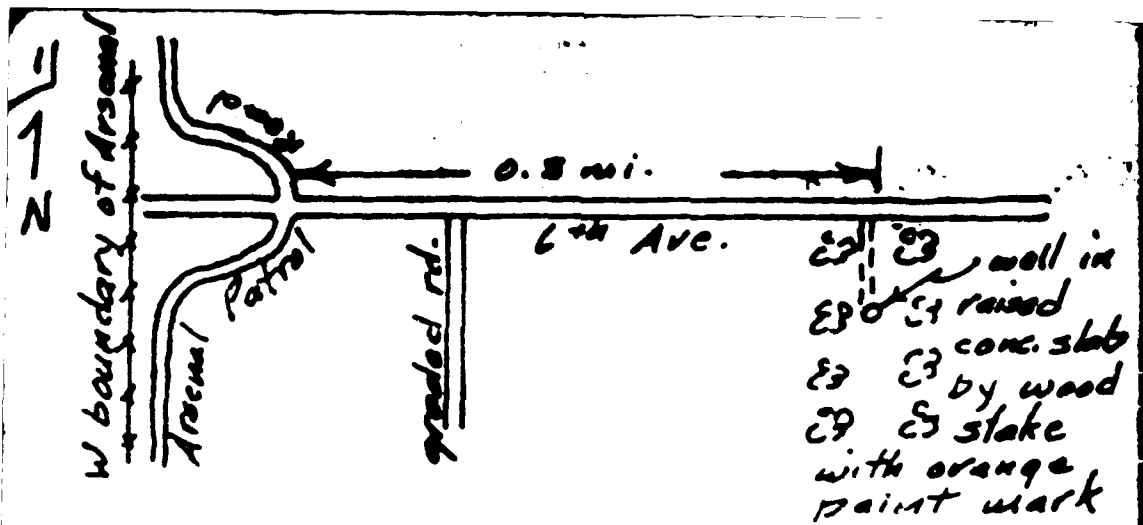
Taste, odor, color _____ Sample Yes _____ No _____

Unit for _____

14. Remarks: (Log, Analysis, etc.) Well No. 18/304 9/1 RMA-Res. Rep.

(April 1953), No. 7164-2195

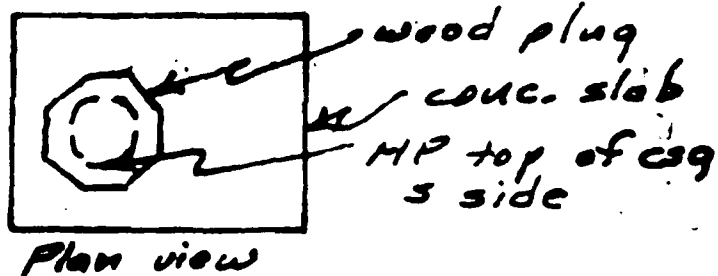
2/10/57 - 64.55' below MP - RS



9/

1

N



7. K 67

9467 cbc

LOG

LOG

LOG

LOG

LOG

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LOG

LOG

LOG

LOG

LOG

LOG

LOG

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LOG

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LOG

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LOG

M U

UR

TP

TM

TH

TI

TO

TP

DM

US

PS

SYSTEM

DEPTH

WATER LEVEL

DISCHARGE

DRAWDOWN

SPC CAP

TRANSMISS

SAT THICKNESS

PERMEABILITY

LABORATORY TESTS

PANEL ANAL

CLUMP ANAL

MOIST ANAL

WATER

PERMEABILITY

SPC YIELD

SCHEDULE

DATE **B/30/55**

U S GEOLOGICAL SURVEY GROUND WATER DIVISION

RECORDED BY **L.A. Hershey** SOURCE **RMA Files & Pers. Data**

LOCATION STATE **Colorado** COUNTY **Adams**

SW NW SW 9 3 K 67

WATER RMA ~~well~~ location near No. 7164-2105 & Aerial Photo

TOWN **Rocky Mtn, Arsenal - Derby, Colo**

1910' N - 4922' W

TENANT

DRILLER

ALTITUDE, MP

5210.9

WHD (WMS)

TYPE

DRILLED DRIVEN TEST

DEPTH, FEET

61.0

FEET

60.3

CASING, IN

6

IN

IN TYPE

DEPTH

AQUIFERS AND DEPTHS

Static
L. WATER LEVEL

57.41

FEET

9/11/55 BELOW **Surf. top**

of esp. S. side

WHICH IS

0.6

ABOVE SURFACE

PUMP TYPE

CAPACITY

HP

RPM

POWER, KW

DRIVER

RPM

SIO

Fe

Ca

Mg

Na

K

CO

HCO

SO

Cl

NO

ERRON

REMARKS

(W/ BACK)

STORAGE ULD

12 USE (W/ STOCK P. R. R. NO. 100) **NONE** NO USERS

13 SAMPLE NO. P. C. & TEMP

TEMP

COND. (W/ R. T. H. C. T.)

14 REMARKS TASTE COLOR ODOR ETC **Dist 5809' near 11/6/55 below M.P.**

9-185-July 1936
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

McBee
MM-55457
cbc
C3-67-9-abc

WELL SCHEDULE

Date 8/30/55, 19 57 Field No. 57
Record by L. A. Hershner Office No. 57
Source of data R. M. A. files & field obs.

1) Location: State Colorado County Adams
Map R. M. A. well loc. map No. 7164-2105 & Aerial Photo
NW 1/4 SW 1/4 sec. 9 T. 3 N. R. 67 E.

2. Owner: Racke Men. Assoc. Address Deer, Colo
Tenant None Address —
Driller Unknown Address —

3. Topography Nearly level plain

4. Elevation 5810.9 ft. above M.S.L. (V.M.B. - A10)
below

5. Type: Dug, drilled driven, bored, jetted — 10 —

6. Depth: Rept. 61.0 ft. Meas. 60.3 ft.

7. Casing: Diam. 6 in., to — in., Type E.E.
Depth — ft., Finish —

8. Chief Aquifer — From — ft. to — ft.
Others —

9. Water level 57.41 ft. rept. 9/1 10.55 above Seam
as S. Side Top of Cg. which is 6 ft. above surface
below

10. Pump: Type None Capacity — G. M. —
Power: Kind — Horsepower —

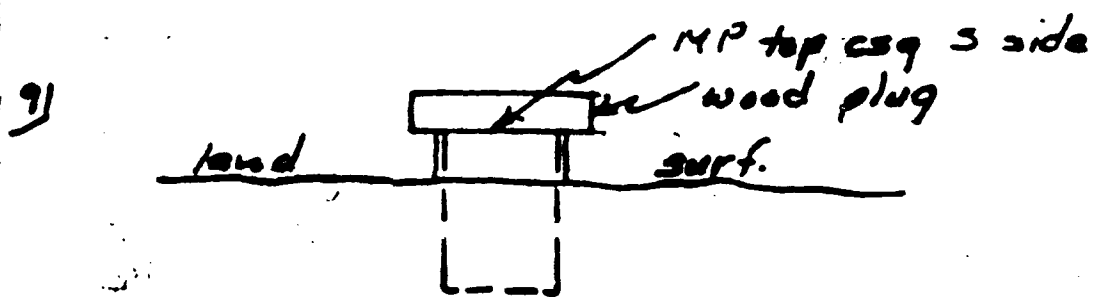
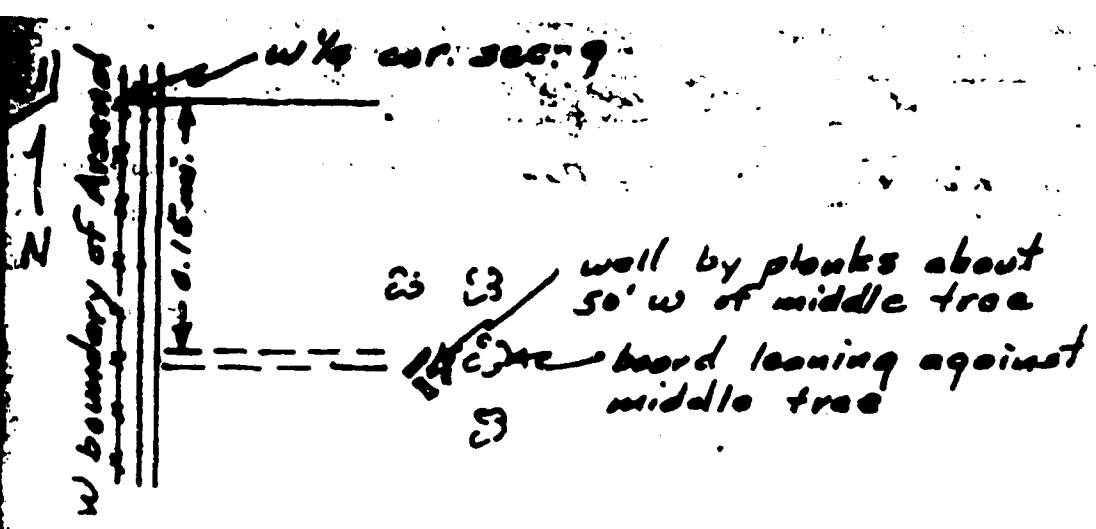
11. Yield: Flow — G. M., Pump — G. M., Meas., Rept. —
Drawdown — ft. after — hours pumping — G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr., Other Unused
Adequacy, permanence Good obs. well

13. Quality — Temp — °F.
Taste, odor, color — Sample Yes USGS
No —
Unit for —

14. Remarks: (Log, Analysis, etc.) Well #17, Sec. 9 - R. M. A. Map.

Obs - 11/6/57 - 58.09' below MP - DC



3 9 67

10abb

10-4-55

Petri

Owner & Pers. Obs.

Qual. Water

286

Colorado

County Adams

8.3

NW NW NE 10 3 9 67 6

171

5030 ft N, 2,060 ft W of SE cor p. 10
RMA well location map no. 7164-2405 aerial photos

10

RMA

Derby, Colorado

93

8.7

1 ALT. OF 5220

4 TYPE

5 DEPTH 580

300+

6 CASING 5

Iron

7 ADDITIONAL DEPTHS

Static 51.0
L. WATER LEVEL 47.04

8/30 5200 ft top of

CSG. E. Side

44

9 PUMP None

CAPACITY

LPM

10 PUMP AND

DRIVES

LPM

11 VIS.

12 PUMP

LPM

13 USE 14 STONE 15 WIRE 16 JEN 17 NONE 18 UNUSP

19 4383

20 SAMPLE 21 P. 22 TEMP

23 TEMP

24 REMARKS

About 550' E / 150'
S of N. 4. Per Sec
10

SiO	12
Fe	
Total	30x
Ca	4.0
Mg	.0
N	6
K	.6
CO	4
HCO	151
SO	6.0
Cl	2.5
NO	.6
H	.08
	.4

9-188-July 1938
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

McBee

63-67-106661

WELL SCHEDULE

Date 8/30/55, 19____ Field No. _____
Record by L. H. & R. S. Office No. _____
Source of data Owner & Pers. Obs.

1. Location: State Colorado County Adams
Map PA well loc. map no. 7164-2105 & aerial photos
NW 1/4 NE 1/4 sec. 10 T. 3 S. R. 67
2. Owner Rocky Mtn. Assoc. Address Perby, Colo.
Tenant Col. Address _____
Driller unknown Address _____
3. Topography nearly flat plain
4. Elevation _____ ft. above
below
5. Type: Dug drilled, driven, bored, jetted _____ 19____
6. Depth: Rept. 580 ft. Meas. 300 ft.
7. Casing: Diam. 5 in., to _____ in., Type steel
Depth _____ ft. Finish _____
8. Chief Aquifer _____ From _____ ft. to _____
Others _____
9. Water level 420.4 ft. rept. 8/30 1955 above face of
lig. E. side which is 4.4 ft. above surface
10. Pump: Type None Capacity _____ G. M. _____
Power: Kind _____ Horsepower _____
11. Yield: Flow _____ G. M., Pump _____ G. M., Meas., Rept. Est. _____
Drawdown _____ ft. after _____ hours pumping _____ G. M.
12. Use: Dom., Stock, P.M., R.R., Ind., Irr., Other Unused
Adequacy, permanence good ok well
13. Quality _____ Temp _____
Taste, odor, color _____ Sample Yes 4565
Unit for _____
14. Remarks: (Log, Analysis, etc.) Well No. 15 - See 10 - RMA No. 100
Well in covered pit with in wire enclosure
5 ft. gauge. Replace of soil cover after use?

About 350' E of 250' S of NW cor sec. 10

3 67
126686d

ELECTRIC LOG
EMERSON LOG
SAMPLE LOG
WATER METER LOG

2 1 7 4 2 1 4 2 5

TOWNSHIP

RANGE

U. S. GEOLOGICAL SURVEY (GEOLOGICAL WATER BRANCH)

DATE 9/9/55

DRILLER R.O. Smith SOURCE RMA Files & Pers. Obs.

2550

COUNTY Adams

NE NW NW 12 3 67

4980 ft N; 4380 ft W of SE corner 12

LOWER Rocky Mtn. Arsenal and Derby, Colo.

TENANT

ADD

DRILLER

AGE

1. ALTITUDE 5746

SET BY Topo

2. TYPE (DUL) DRILLED DRIVEN SETTED

3. DEPTH 23

FT MEAS 23.0

4. LASING DIAM 42 IN 10

IN TYPE CONC.

DEPTH

FT FINISH

5. AQUIFER(S) AND DEPTHS

6. DISCHARGE

7. ORANGE

8. SPEC CAP

9. TRANSMISS

10. PUMP TYPE

11. CAPACITY

12. PERMEABILITY

13. LITHO

14. LITHO

15. LITHO

16. LITHO

17. LITHO

18. LITHO

19. LITHO

20. LITHO

21. LITHO

22. LITHO

23. LITHO

24. LITHO

25. LITHO

26. LITHO

27. LITHO

28. LITHO

29. LITHO

30. LITHO

31. LITHO

32. LITHO

33. LITHO

34. LITHO

35. LITHO

36. LITHO

37. LITHO

38. LITHO

39. LITHO

40. LITHO

41. LITHO

42. LITHO

43. LITHO

44. LITHO

45. LITHO

46. LITHO

47. LITHO

48. LITHO

49. LITHO

50. LITHO

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50

CATIONS	ppm	mg
Ca		
Mg		
Na		
K		
CO		
HCO		
SO		
Cl		
Fe		
H		
F		

121

LETTERS - ENDS

LETTERS - ENDS

LETTERS - ENDS

LETTERS - ENDS

LETTERS - ENDS

LETTERS - ENDS

LETTERS - ENDS

LETTERS - ENDS

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LETTERS - ENDS

9-188-July 1938
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

McBee

WELL SCHEDULE

23-67-12 bba1

Date 9/9/55, 19... Field No.

Record by Rex O. Smith Office No.

Source of data RMA files & field obs.

1. Location: State Colorado County Adams

Map NW 1/4 NW 1/4 sec. 12 T 3 R 67

2. Owner: Rocky Mtn. Arsenal Address Perby, Colo.

Tenant Address

Driller Address

3. Topography

4. Elevation ft. above
below

5. Type: Dug, drilled, driven, bored, jetted 19...

6. Depth: Rept. ft. Meas. ft.

7. Casing: Diam. 7 1/2 in., to in., Type

Depth ft., Finish

8. Chief Aquifer From ft. to

Others

9. Water level ft. rept. 19... above
meas. below

which is ft. above
below surface

10. Pump: Type Capacity G. M.

Power: Kind Horsepower

11. Yield: Flow G. M., Pump G. M., Meas., Rept. Let.

Drawdown ft. after hours pumping G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr., Obs.

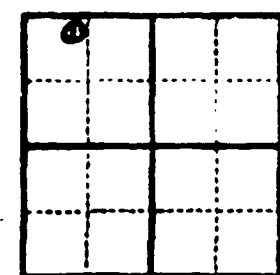
Adequacy, permanence

13. Quality Temp. °F.

Taste, odor, color Sample Yes
No

Unit for

14. Remarks: (Log, Analysis, etc.)



about 900' E & 500' S of
NW cor. sec. 12

1. DATE	WELL NO		
2. BY	CO	ACC'T	
3. WELL DICH	DE	SPEC CAP	
4. DISCHARGE LEVEL ABOVE M.P.	TEMP		
PUMP TYPE	SIZE	MAKE	
MOTOR NO	HP	MAKE	
METER NO		AMPS	
READING IN	TIME		
DIFFERENCE			
8. INPUT TO MOTOR	TIME		
9. KW.		1.36	
10. HP		1.34	
11. HP ₀	1.09	HP ₀	1.960
12. OVER ALL EFF	MP ₀		
PUMP EFF	$\frac{HP_0}{HP}$		
14. RPM PUMP	DRIVER		
15. FUEL CONSUMPTION	GPH	UP	TYPE
16. OPERATION HRS	OTHER		
17. ACRE FEET PUMPED	5.430 833		

18. REMARKS Well no. 1 in sec 5 on Arsonal well loc. map. Poor obs well but fills blank space on map. Plotted on base map

9-188-July 1955
Revised

19.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

7/1/55

CR Keyser
C3-66-5ccdi

WELL SCHEDULE

Date 8/30/55

19

Field No.

Record by Rex O. Smith

Office No.

Source of data RMA files & field obs

1. Location: State Colorado County Adams
Map RMA well loc. map 2164-2165 aerial photos
SW 1/4 SW 1/4 sec 5 T 3 S R 66 W

2. Owner: Rocky Mtn. Arsenal Address Derby, Colo.
Tenant None Address —
Driller Unknown Address —

3. Topography gently rolling plain

4. Elevation 5255.3 ft above 1154-4718 ft below

5. Type: Dug/drilled, driven, bored, jetted 10

6. Depth: Rept. 30 ft. Meas. 19.0 ft

7. Casing: Diam. 3/4 in. to 1 in. Type brick
Depth 20 ft. Finish —

8. Chief Aquifer — From — ft. to — ft.

Others —

9. Water level 12.68 ft. 7/2/55 above top of
conc. curb & side which is 0.5 ft. above surface

10. Pump: Type None Capacity — G. M.

Power: Kind — Horsepower —

11. Yield: Flow — G. M., Pump — G. M., Meas., Rept. Est. —

Drawdown — ft. after — hours pumping — G. M.

12. Use: Dom., Stock, PN, RR., Ind., Irr. Obs. Unused

Adequacy, permanence —

13. Quality bad Temp. — °F.

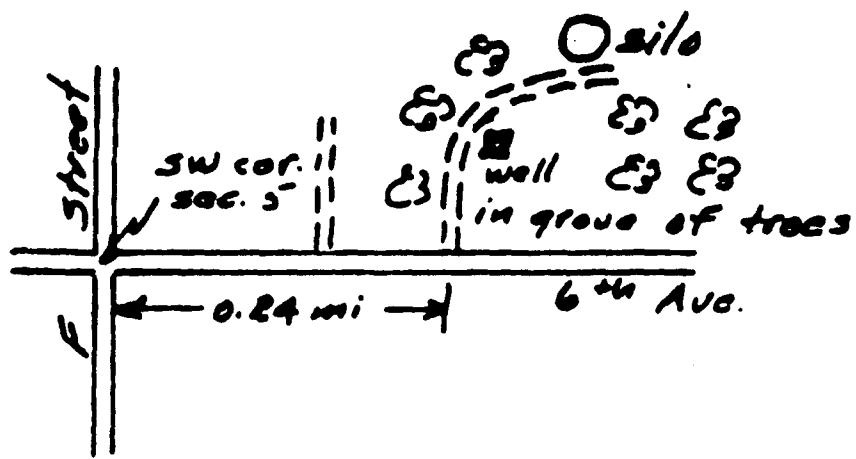
Taste, odor, color foul odor Sample No. VSGS

Unit for —

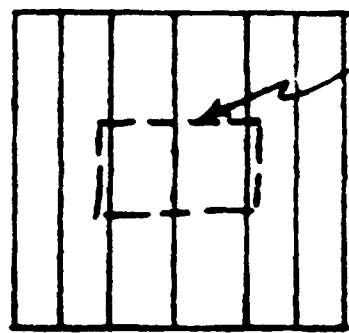
14. Remarks: (Log, Analysis, etc.) Well no. 1 in sec. 5 on
Aerial well loc. map. For obs. well
but fills blank space on map.

About 120 ft. 4.50 ft. of
water sec. 5

11
N



9/
N



MP top of conc.
curbing S side:
Lift center part
of board cover
to reveal MP

Plan view

3 * 66
5 ddadw

TOWNSHIP

RANGE

DATE
ANAL

8/30/55

U.S. GEOLOGICAL SURVEY GROUND WATER DIVISION

Rex O. Smith RMA & field obs

Colorado Adams

NE SE SE 5 3 * 66 *

RMA well loc. map no. 7164-2105 & aerial photos

Rocky Mtn. Arsenal Derby, Colo

54

1. LOCATION

2. TIME

3. DEPTH 700

4. ANALYSIS 3 1/4 ID

iron

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

About 100' N of
950' N of
SE corner

5. ACQUISITION AND DEPTH

12-3
131.30

iron csg.

6. PUMP TYPE None

7. ANALYSIS 9/2/55 top of

2.0

SiO

Ca

Mg

Na

K

CO

HCO

SO

Cl

I

B

F

Br

J

K

L

M

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O

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Q

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W

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AA

AB

AC

AD

1 DATE	WELL NO		
2 BY	CO	ACCT	
3 WELL DISCH	DIS	SPEC CAP	
4 DISCHARGE LEVEL ABOVE M.P.		TIME	
5 PUMP TYPE	SIZE	MAKE	
6 MOTOR NO	HP	MAKE	
7 MOTOR NO		HP	
READINGS		TIME	
DIFFERENCE			
8 INPUT TO MOTOR DISCH. REL.			
9 KW			
10 HP			
11 HP	4.09	HP	1.960
12 OVER ALL EFF	MP		
	MP		
PUMP EFF	MP		
	MP		
14 RPM PUMP		DRIVER	
15 FUEL CONSUMPTION	GPH	TYPE	
		VELOCITY	
16 OPERATION HRS		OTHER	
		POWER	
17 FEET PUMPED			

REMARKS 5/ Deeper than 300 ft 14/ Fits
descript. of well no. 2 in sec. 5 on
Arsenal well loc. map. Plotted on base map

9-100-July 1936
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

C3-66-5 dda1

Date 8/30/55

19

Field No.

Record by Rex O. Smith

Office No.

Source of data RMA files & pers. obs

1 Location: State Colorado County Adams
Map RMA well loc map no. 7164-2105 & aerial photos
SE 4 SE 4 sec 5 T. 3 N. R. 66

2 Owner Rocky Mtn Arsenal Address Derby, Colo.

Tenant None

Address

Driller Unknown

Address

3 Topography nearly flat plain

4 Elevation ft above
below

5 Type: Dug/Drilled/Driven, bored, jetted 19

6 Depth: Rept. 700 ft Meas. ft

7 Casing: Diameter 3 3/4 in. in. Type iron

Depth ft, Finish

8 Chief Aquifer

From ft to

(Where)

9 Water level 151.30 ft. Rept. 10/2/1055

iron casing

9/2/1055 above top of
which is 2.0 ft above surface

10 Pump Type None

Capacity ft. M

Power Kind

Horsepower

11 Yield Flow G M, Pump G M, Meas, Rept Est

Drawdown ft. after hours pumping

G M

12 Use Dom, Stock, PS, RR, Ind, Irr. ☒ Housed

Adequacy, permanence good obs. well

13 Quality

Temp

Taste, odor, color

Sample Yes
No

Unit for

14 Remarks: (Log, Analysis, etc.) Fits descript. of well
no. 2 in sec. 5 on stream well loc
map. Deeper than 300 ft

About 130' W & 950' N of
SE cor. sec. 5

... 600000

8/30, 55

Rex C. Smith ... KMA & field obs

LOCATION ... Colorado ... Adams

NE, SE, NE, 6, 3, 66

...RNA well loc. map 7164-2105 & aerial photos

Lower Rocky Mtn. Arsenal. Derby, Colo.

36° 0' N - 120° 10' W

5254.7

011 01 YMB & PLS

4 1491 1111 1111 1111 1111

DEPTH 17 ... 15.9

1140 7 1/2 LD iron

ACQUISITION OF OTHERS

6.95 9/25 stop of
board well cover at center 1.0

PUMP 1991 None

10 JUL 10 1964

WFF (AM)

Mass margin't well

11 USC

very foul odor

1 DATE _____ WELL NO _____

2 BY _____ CO _____ ALL I _____

3 WELL DISCH _____ DIS _____ MFS: GAP _____

4 DISCHARGE LEVEL ABOVE M.P. _____ 10 MP _____

5 PUMP TYPE _____ MFS _____ MAKE _____

6 MOTOR NO _____ HP _____ MAKE _____

7 METER NO _____ V _____ AMP _____

8 INPUT TO MOTOR DISC REV _____ TIME _____

9 KW. _____ 23.4 _____

10 HP. _____ 31.34 _____

11 HP₁ _____ 48.9 _____ HP₂ _____ 1.760 _____

12 OVER ALL EFF. $\frac{HP_2}{HP_1}$ _____

13 PUMP EFF. $\frac{HP_2}{HP_1}$ _____

14 RPM PUMP _____ DRIVER _____

15 FUEL CONSUMPTION _____ G.P.H. _____ C.P. TYPE _____
SEASON FUEL _____

16 OPERATION HRS _____ OTHER POWER _____

17 AC FEET PUMPED _____

18 REMARKS *W. Well no. 3 in sec 6 on Arsenal well*
loc. map. D/W - 11/6/57 5:21 below M.P. 5.6m

9-108-July 1938

Revised

8 00

1 50

6.95

UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES BRANCH

WELL SCHEDULE

Date 8/30/55

10

Field No.

Record by Rex O. Smith

Office No.

Source of data RMA files & field obs.1. Location: State Colorado County AdamsMap RMA well loc. map no. 264-2105 & aerial photosSE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6 T. 3 R. 662. Owner: Rocky Mtn Arsenal Address Derby, Colo.tenant None

Address

Driller Unknown

Address

3. Topography nearly flat plain4. Elevation 5254.7 ft. below MSL (UMB-Ald)5. Type: Dug drilled/driven, bored, jetted

10

6. Depth: Rept. 17 ft. Meas. 15.9 ft.7. Casing: Diam. 2 1/2 in., to

Depth

8. Chief Aquifer

From

ft. to

Others

9. Water level 6.95 ft. rept. 9/2/55 above top ofboard well cover at center which is 1.0 ft. below surface10. Pump: Type None Capacity

G. M.

Power: Kind

Horsepower

11. Yield: Flow

G. M., Pump

G. M., Meas.

Rept. Est.

Drawdown

ft. after

hours pumping

G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. Other UNUSED

Adequacy, permanence

13. Quality very bad Temp

°F.

Taste, odor, color extremely foul odor

Sample

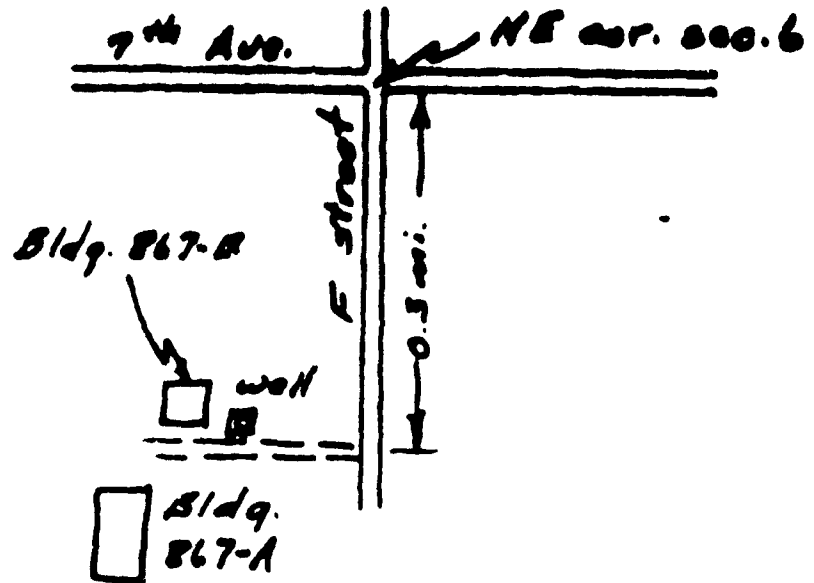
NO

USGS

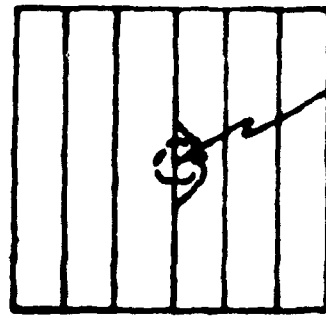
Unit for human consumption14. Remarks: (Log, Analysis, etc.) Well no. 3 in sec. 6 onArsonal well loc. mapD/W - 11/4/57 - 5.21' below M.P. - 25

About 150' W of 1630'S of

11
↑
N



91
↑
N



MP top of board
well cover at
hole - tape
must drop into
small run eq.

Plan view

3 5 66
6666bw

DATE 10-4-50

WELL NO. 7042

LOCALITY

Color

COUNTY Adams

SW SW SW 6 3 T 67

500 ft. N; 5,040 ft. W. of SE corner

RMA

TEST

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TOWNSHIP

U.S. GEOLOGICAL SURVEY GROUND WATER

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Qual water

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REMARKS

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9-185-July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

Obs.

C 9-66-6 ccccl

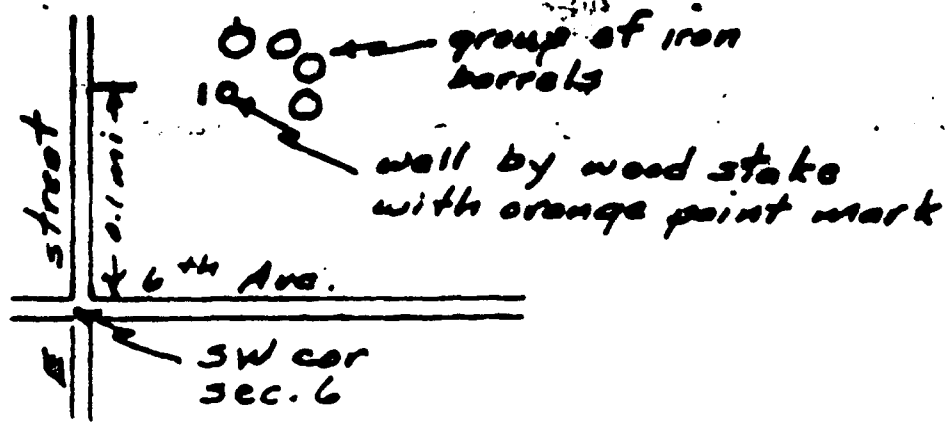
WELL SCHEDULE

Date 8/31/55, 10 Field No. _____
Record by LAH & RAS Office No. _____
Source of data RMA files & field obs.

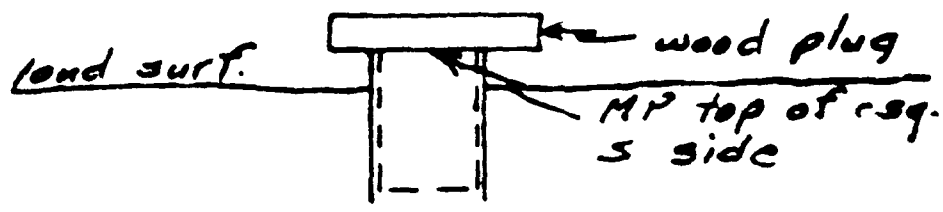
1. Location: State Colorado County Adams
Map RMA well loc map no 714-2105 & aerial photos
SW 1/4 SW 1/4 sec 6 T 3 S R 66 E
2. Owner Ricky McDonald Address Deerby, Colo.
Tenant NONE Address _____
Driller Unknown Address _____
3. Topography gently rolling plain
4. Elevation 5278 ft. above _____ below _____
5. Type: Dug drilled driven, bored, jetted. 10
6. Depth: Rept. 50 ft. Meas. 45.5 ft.
7. Casing: Diam. 2 in. to _____ in. Type 3" pipe
Depth _____ ft. Finish _____
8. Chief Aquifer _____ From _____ ft. to _____ ft.
Others _____
9. Water level 31.64 ft. rept. 8/31/1955 above top
of metal cas. S side which is 2 ft. below surface
10. Pump: Type NONE Capacity _____ G. M. _____
Power: Kind _____ Horsepower _____
11. Yield: Flow _____ G. M., Pump _____ G. M., Meas., Rept. Est. _____
Drawdown _____ ft. after _____ hours pumping _____ G. M.
12. Use: Dom., Stock, PS., RR., Ind., Irr. Obs. Unused
Adequacy, permanence good obs. well
13. Quality _____ Temp. _____ °F.
Taste, odor, color _____ Sample 10 VEAS
Date for _____
14. Remarks (Log, Analysis, etc.) Well no. 6 in sec. 6 on
aerial well loc map

About 50' N & 110' E of SW cor. Sec. 6

11
2



91



3 7 66
8daa0C

- M
- ON
- THE
- TE
- TR
- P
- D
- O
- W
- DIAMETER
- DEPTH
- WATER LEVEL
- DISCHARGE
- DRAINAGE
- SPEC CAP
- TRANSMISSION
- SAT THICKNESS
- PERMEABILITY
- STOP
- LABORATORY TESTS
- PROPERTIES
- PERMEABILITY
- SPEC FIELD

DATE 10-4-55
WELL NO. 10-4-55
LOCATION Peter RMA files & field obs.
ELEVATION 5302
NE 1/4 Sec 8, T. 12 N., R. 6 E., S. 4
R.M.A. Well Location Map & aerial photos
OWNER R.M.A. Water Mgmt. Derby, Colorado
TYPE 5" DRILLED
DEPTH 22
MEAN 14.5
CASING 30
ACCOMPLISH AND DEPTHS
Static 11.62
PUMP TYPE Lift (plunger) capacity
PUMP RND None
YIELD 11.62
PUMP MEAS REPT EST
REMARKS Stagnant

About 170' W. & 100' N. of SE Cor. Sec. 8.

U.S. GEOLOGICAL SURVEY GROUND WATER BRANCH

WATER ANALYSIS

TEMP 72
HARDNESS 351
SILICA 31
IRON 22
CALCIUM 100
MAGNESIUM 25
SODIUM + POTASSIUM 75
CHLORIDE 6
COBALT 0
MANGANESE 364
SULFATE 146
COPPER 39
NITRATE 16
BORON 25

ANIONS

CATIONS

REMARKS C3-51

1. DATE _____ WELL NO. _____
2. BY _____ CO. _____ ACCT. _____
3. WELL DIAL. _____ DI. _____ SPEC. CAP. _____
4. DISCHARGE LEVEL ABOVE M.P. _____ TEMP. _____ °F

PUMP TYPE _____ SIZE _____ MAKE _____
MOTOR NO. _____ H.P. _____ MAKE _____
METER NO. _____ V. _____ AMPS _____

READINGS (IN) _____ TIME (H) _____
(IN) _____ (H) _____
(IN) _____ (H) _____
DIFFERENCE _____

5. INPUT TO MOTOR DISC REV _____ TIME _____
6. KW. - _____ x 30 - _____
10. HP. - _____ x 1.34 - _____
11. HP. - _____ x 0.9 - _____ HP. - _____ x 1.34 - _____

12. OVER ALL EFF. - $\frac{HP_2}{HP_1}$ - _____ %
PUMP EFF. - $\frac{HP_2}{HP_1}$ - _____ %

14. RPM. PUMP _____ DRIVER _____
15. FUEL CONSUMPTION _____ G.P.H. _____ G.P. TYPE
SEASON FUEL _____
16. OPERATION: NRS. _____ OTHER POWER _____

17. ACRE FEET PUMPED _____
5 430 033

18. REMARKS *This is well No. 1 in Sec. 8 on RMA map*
No. 2169-2185. D/W 11/8/35-11.6"
11/1/54-11.97

9-189-July 1938

Revised

13.00

1.38

11.62

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES BRANCH

C3-66-8d22.1

WELL SCHEDULE

Date 8/30/55, 19____ Field No. _____Record by ROSEMAN Office No. _____Source of data RMA files & field obs.

1. Location: State Colorado County Adams
Map R.M.A. well loc. map & aerial photos
NE 1/4 SE 1/4 sec. 8 T. 3 N. R. 66

2. Owner: Rocky Mtn. Arsenal Address Derby, Colo.

Tenant None Address _____

Driller Unknown Address _____

3. Topography gently rolling plain

4. Elevation _____ ft. above _____ ft. below

5. Type: Aug drilled, driven, bored, jetted _____ 10 _____

6. Depth: Rept. 22 ft. Meas. 14.5 ft.

7. Casing: Diam. 30.50 in., to _____ in., Type black

Depth _____ ft., Finish _____

8. Chief Aquifer _____ From _____ ft. to _____

Others _____

9. Water level 11.62 ft. rept. 9/2 1955 above top of

CONC. well cap S. side of batch which is 0.4 ft. above surface

10. Pump: Type low (Cylinder) Capacity _____ G. M.

Power: Kind None Horsepower _____

11. Yield: Flow _____ G. M., Pump _____ G. M., Meas., Rept. Est. _____

Drawdown _____ ft. after _____ hours pumping _____ G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr., Obs. unused

Adequacy, permanence fair obs. well

13. Quality stagnant Temp _____ °F.

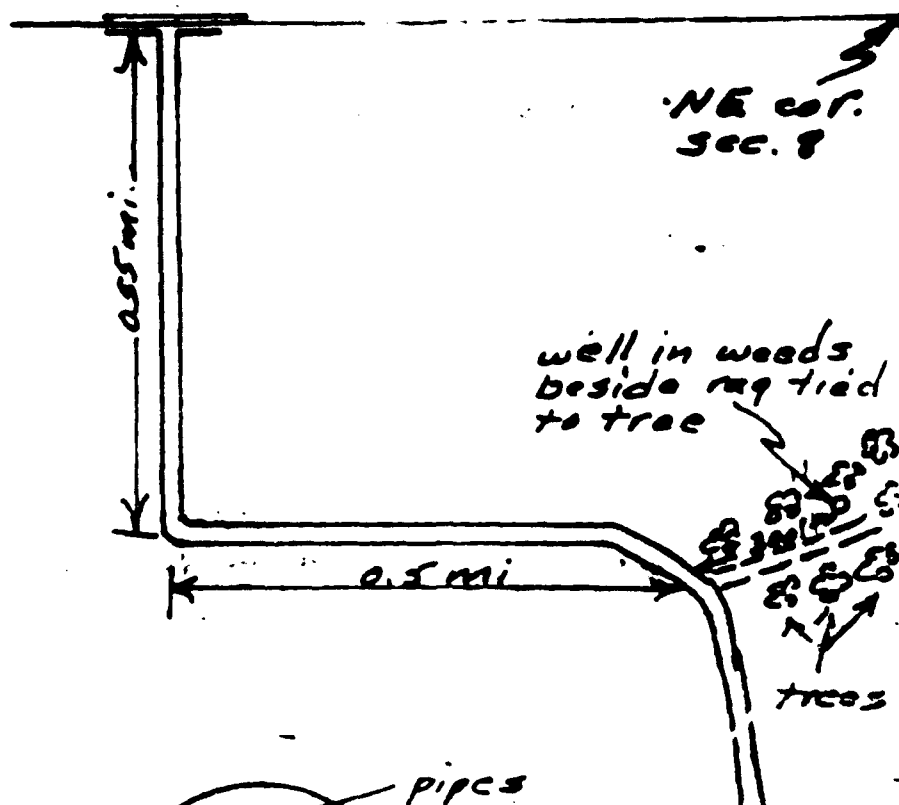
Taste, odor, color _____ Sample No. 4565

Unit for _____

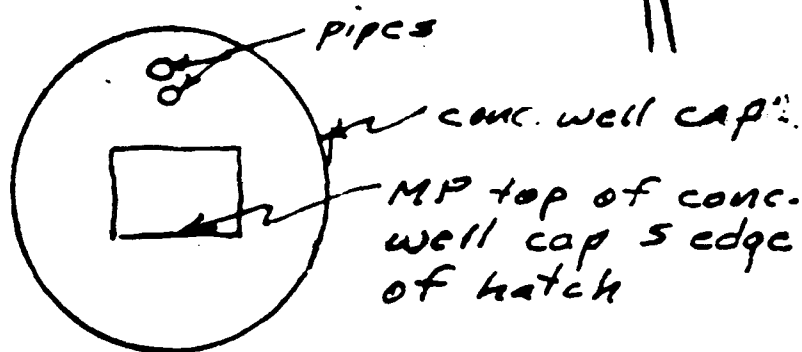
14. Remarks: (Log, Analysis, etc.) #1-sec. 8 R.M.A. map no.

7164-2105

1
N



9/
1
N



D/W on 11/30/55 - 11.60
D/W on 4/3/56 - 11.47

3 66
19 ccdcc

- M U
- QH L
- TPI QP
- TS TM
- TR TE
- T L
- T S
- T P
- D M
- D S
- P
- DIAMETER
- DEPTH
- WATER LEVEL
- DISCHARGE
- DRAWDOWN
- SPEC CAP
- TRANSMISS
- SAT TENSNESS
- PERMEABILITY
- PERMEABILITY
- PERMEABILITY
- SPEC YIELD

DATE 8/26 55 U S GEOLOGICAL SURVEY GROUND WATER BRANCH

RECORDED BY R.A.S.

SOURCE R.M.A. first observation

LAB Quality of Water

DATE ANAL

2570

LOCATION Colorado

COUNTY Adams

7.7

SW SW SW SEC 17 2 46
R.M.A. Loc. map no. 7164-2105 & Aerial Photos (150A)

1,300

SUM 2

OWNER Rocky Mtn. Arsenal ADD Derby, Colo.

48

5.5

TENANT None

DRILLED Unknown

1 ALTITUDE 5179.4

Altid-VMB

About 1 mi. E & 1200 ft. S of
Loc. Sec 19

SiO₂

14

2 TYPE DUC (PULLED) DRIVEN JETTED

old LS

3 DEPTH REPT 14

14.5

4 CASING DIA 6

TYPE PIPE

DEPTH

AQUIFERS AND DEPTHS Gal (FCL)

STATIC 13.7

WATER LEVEL 13.78

9/8

8/26

Top of

metal casing, N. side

0.3

TO BELL SURFACE

5 PUMP TYPE None

CAPACITY

GPM

POWER RING None

DRIVER

GPM

10 YIELD 1100

GPM PUMP

GPM INCREAS REPT EST

CATIONS

ANIONS

ANIONS

R

F

Ca

Mg

Na

K

CO₃

HCO₃

SO₄

Cl

NO₃

.8

.42

1.6

200

83

365

5.7

0

222

4270

119

12 USE DOM STOCK PS AND IRR (NINE) formerly domestic

13 SAMPLE (NINE) P.C. TEMP

14 REMARKS (NINE) FOLLOW OTHER ETC

REMARKS

(NINE) BACK

LATIONS ANIONS

LATIONS ANIONS

Classification C4-S2 10/3/65

9-188-July 1938
Revised

ON KEYSORT
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

McEae
MAR-55
MAR-57

WELL SCHEDULE

CR-66-19CCC1

Date 8/26/55, 19... Field No.

Record by R.O.S. Office No.

Source of data RMA files & pers. obs.

1. Location: State Colorado County Adams
Map RMA well loc. map & aerial photos of Adams Co.
SW 1/4 SW 1/4 sec. 19 T. 2 R. 66 W

2. Owner: Rocky Mtn. Arsenal Address Derby, Colo.

Tenant None Address

Driller Unknown Address

3. Topography gently rolling plain

4. Elevation 5179.4 ft. above MSL-VMO-Ald.

5. Type: Dug drilled driven, bored, jetted old 19...

6. Depth: Rept. 14 ft. Meas. 14.5 ft.

7. Casing: Diam. 6 in., to 6 in., Type stave pipe

Depth ft., Finish

8. Chief Aquifer From ft. to ft.

Others

9. Water level 13.78 ft. rept. 9/2/1955 above top of

metal cap N side which is 0.3 ft. below surface

10. Pump: Type None Capacity G. M.

Power: Kind Horsepower

11. Yield: Flow G. M., Pump G. M., Meas. Rept. Est.

Drawdown ft. after hours pumping G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. Obs. unused

Adequacy, permanence

13. Quality Temp. °F.

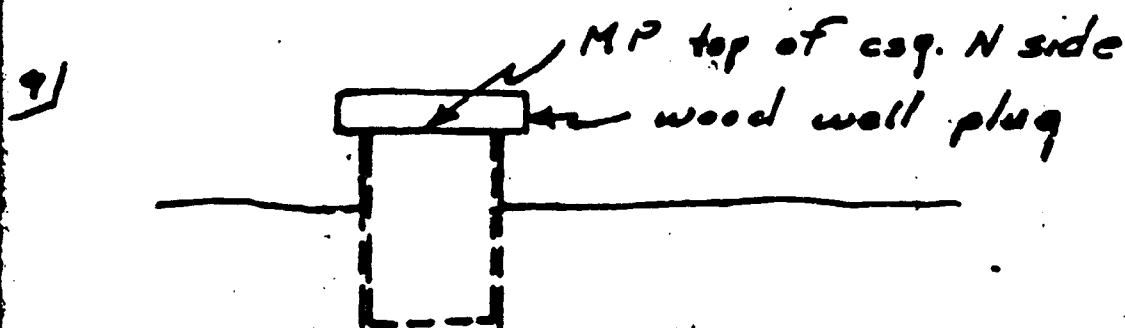
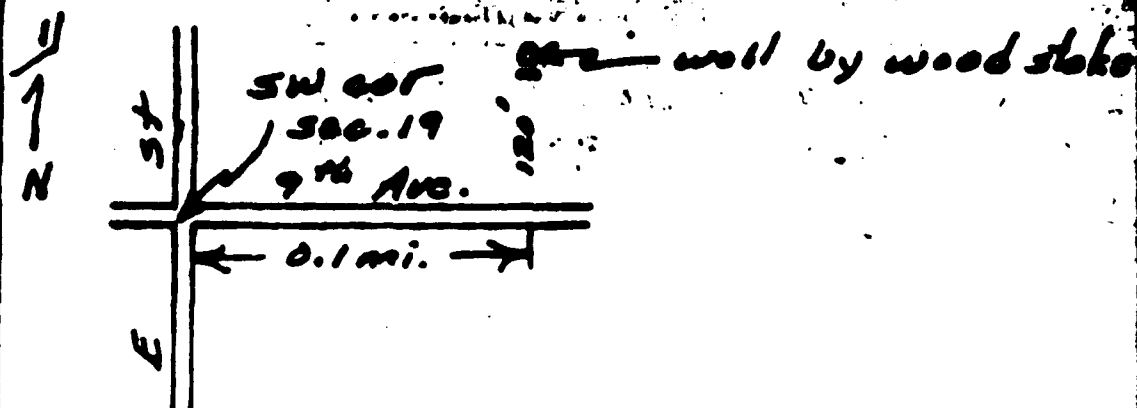
Taste, odor, color Sample No. 4363

Unit for

14. Remarks (Log, Analysis, etc.) Well no. 1 in sec. 19 on

Arsenal well loc. map no. 7164-2105

R/W - 11/6/57 & 12/24/57 when MP-PS



Elev. view

D/W on 11/30/55 — 13.43
D/W on 4/3/56 — 12.50

W 6/82 SEAL OF THE STATE
OF TEXAS

[illegible]

LAB _____		DATE _____	
LAB _____		DATE _____	
TEMP _____		TEMP _____	
ETHANOL _____		PH _____	
TDS (ppm) _____		S (mg/L) _____	
HARDNESS _____		T (mg/L) _____	
Al, Ca, CO ₃ , Cl, Mg _____		Fe (mg/L) _____	
PERMIT NO. _____		SAR _____	
Beta Gamma (dpm/L) _____		U (dpm/g) _____	
		ppm	
SiO ₂			
Fe			
CATIONS	Ca		
	Mg		
	Na		
	K		
	CO ₃		
ANIONS	HCO ₃		
	SO ₄		
	Cl		
	NO ₃		
	B		
ERROR _____		CATIONS - ANIONS _____	
REMARKS _____		CATIONS - ANIONS _____	

[illegible]

9-183
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL SCHEDULE

C2-66-20 aabi

Date 8/26/50

19

Field No.

Record by Rex O. Smith

Office No.

Source of data L.R. Crawford & pers. obs.

1. Location: State Colorado County Adams
Map RMA well loc. map no 7164-2105 & aerial photos
NE 1/4 NE 1/4 sec. 20 T. 2 R. 66
2. Owner: Rocky Mtn. Arsenal Address Derby, Colo.
Tenant None Address _____
Driller Kruger Address deceased
3. Topography gently rolling plain
4. Elevation _____ ft. above
below
5. Type: Dug drilled driven, bored, jetted _____ 1918
6. Depth: Rept. 350 ft. Mean 32.9 ft.
7. Casing: Diam 4 1/2 in. to _____ in., Type iron
Depth 100 ft. Finish open hole
8. Chief Aquifer _____ From _____ ft. to _____
Others _____
9. Water level 37.76 ft. rept. 9/2/1945 above below at
iron 5.5 ft. E side which is 0.4 ft. below surface
10. Pump: Type None Capacity _____ G. M. _____
Power: Kind _____ Horsepower _____
11. Yield: Flow _____ G. M., Pump _____ G. M., Meas. Rept. Est. _____
Drawdown _____ ft. after _____ hours pumping _____ G. M.
12. Use: Dom. Stock, PS, RR, Ind. Irr Other Unused
Adequacy, permanence poor obs. well
13. Quality _____ Temp. _____ °F.
Taste, odor, color reported alkaline Sample Yes _____ No _____
Unit for _____
14. Remarks: (Log, Analysis, etc.) Well no. 4 in sec. 20 on
Arsenal well loc. map, Well plugged
at 32.3 ft.

About 1000' W of 150' S of
NE cor. sec. 20

2/ 66
20 0660

U. S. GEOLOGICAL SURVEY - GROUND WATER BRANCH

DATE 8/26
BY R.O.S.
SOURCE RMA files & observation
LOCATION STATE Colorado COUNTY Adams
NW NW NW SEC 20 T 46 N R 4 E
RMA loc map no. 7144-21051 USDA Aerial Photo
OWNER Rocky Mtn. Arsenal DERBY, Colo.
TENANT None
DRILLER UNKNOWN
ALTITUDE 5,200
TYPE DRUG (WELLED) OPEN JETTED
DEPTH 173.3
CASING diam 3 1/2 in TO Iron
DEPTH
AQUIFER(S) AND DEPTHS
WATER LEVEL 64.11
IRON CASING, N. side
PUMP TYPE None
POWER RING None
YIELD 10 GPM PUMP
USE DOM STOCK PS WR 100 100 100 (NONE) formerly domestic
SAMPLE YES
REMARKS (TASTE COLOR ODOOR ETC) RMA mail # 3

LAB Qual. water
DATE ANAL 1570
TEMP 8.8
COLOR 1020
TDS 1000 1570
ADDRESS 44
PERCENT 34 21

CATIONS		ppm	ppm
SiO ₂		3.8	
Fe			
PO ₄		.1	
Ca		9.6	
Mg		3.9	
Na		322.0	
K		3.6	
CO ₃		10	
HCO ₃		148	
SO ₄		539	
Cl		43	
NO ₃		1.7	
R		.05	
		.2	

REMARKS (TASTE COLOR ODOOR ETC) 11-9-54

ON KAYSER

9-183
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL SCHEDULE

C2-66-20 bbb1

Date 8/26/55

19

Field No.

Record by Rex O. Smith

Office No.

Source of data RMA files & pers. obs.

1. Location State Colorado County Adams
Map RMA well loc. map no. 7164-2105 & aerial photos
NW 1/4 NW 1/4 sec. 20 T. 2 R. 66 W.

2. Owner Rocky Mtn Arsenal Address Derby, Colo.
Tenant None Address —
Driller Unknown Address —

3. Topography gently rolling plain

4. Elevation ft. above
below

5. Type Dug/drilled/Driven, bored, jetted. 19

6. Depth Rept. ft. Meas. 173.3 ft.

7. Casing Diam. 3 1/2 in. to in., Type iron
Depth ft., Finish —

8. Chief Aquifer From ft. to ft.
Others —

9. Water level 64.11 ft. Rept. 9/2/1955 above
below top of
iron csg N side which is at above
below surface

10. Pump Type None Capacity G. M.
Power Kind Horsepower

11. Yield Flow G. M., Pump G. M., Meas., Rept. Est.
Draw ft. after hours pumping G. M.

12. Use Stock P., RR, Ind., Irr Unusec
Adequacy, permanence good obs. well

13. Quality Temp °F.
Taste, odor, color Sample Yes
No
Unfit for

14. Remarks: (Log, Analysis, etc.) Well no. 3 in sec. 20 on
Arsenal well location map

2 in 66
✓ 30
26663

- ☐ M U
- ☐ DR L
- ☐ TM CP
- ☐ TE TM
- ☐ TR TE
- ☐ R TO
- ☐ V I
- ☐ MP P
- ☐ D M
- ☐ O S
- ☐ W
- ☐ DISCHARGE
- ☐ DRAWDOWN
- ☐ SPEC CAP
- ☐ TRANSMISS
- ☐ SAT THICKNESS
- ☐ PERMEABILITY
- ☐ STOP TEST
- ☐ FATH. ANAL
- ☐ CLIMPI ANAL
- ☐ SECH ANAL
- ☐ POROSITY
- ☐ PERMEABILITY
- ☐ SPEC YIELD

U S GEOLOGICAL SURVEY - GROUND WATER BRANCH

DATE 8/26 55

RECORD BY R.O.S.

SOURCE RMA files observation

LOCATION STATE Colorado COUNTY Adams

NW SW SW Sec 30 T 2 R 66

RMA loc. map no. 7164-2105 & USDA. Aerial Photos

OWNER Rocky Mtn. Arsenal - Derby, Colo.

TENANT None

DRILLER

1 ALTITUDE IMP. 5199.8 DET BY Alid.-KMB.

2 TYPE DUG (WELLED) UNWELLED

3 DEPTH FEET 12.1

4 CASING DIA. 6 ID. IN TO IN TYPE Iron

5 ACQUISITION AND DEPTHS 9al (For)

6 WATER LEVEL 10.42

7 PUMP TYPE None

8 YIELD FEET

9 USE DUM STOK PS IN AND IRR OPS (NONE)

10 SAMPLE NO. 10-3-55

11 REMARKS RMA well # 6

120.62	6
229 mi N of	
SW cor. sec. 30	

Quality of Water

LAB TEMP 1380

PERCENTAGE 83

CATIONS	Ca	8.0
	Mg	20
	Na	251
	K	7.1
ANIONS	CO	18
	HCO	236
	SO	228
	Cl	150
	NO	.1
	B	.31

10-3-55

ON REEDED

9-183
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

cc 61
C2-66-30 ccb 1

WELL SCHEDULE

Date 8/26/55

Field No.

Record by Rex O. Smith

Office No.

Source of data RMA files & pers. obs.

1. Location: State Colorado Adams
Map RMA well loc. map 714-2105 & aerial photos

2. Owner Rocky Mtn Arsenal Address Derby, Colo.

Tenant

Address

Driller

Address

3. Topography gently rolling plain

4. Elevation 5199.5 ft. above G.S.

5. Type: Dug/drilled/driven, bored, jetted

6. Depth: Rept. ft. Meas. 12.1 ft.

7. Casing Diam. 6 in. to in. Type iron

Depth ft., Finish

8. Chief Aquifer From ft. to

Others

9. Water level 10.42 ft. 9/2/1955 above top of
iron casing N side which is 0.3 ft. below surface

10. Pump: Type NRC Capacity G. M.

Power: Kind

Horsepower

11. Yield: Flow G. M., Pump G. M., Meas., Rept. Est.

Drawdown ft. after

hours pumping

G. M.

12. Use: Dom. Stock, P. RR, Ind. Ir, Unused

Adequacy, permanence poor obs. well

13. Quality

Temp.

°F.

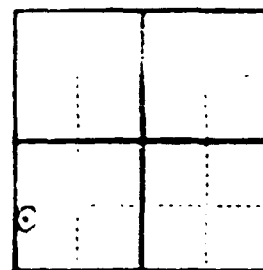
Taste, odor, color

Sample No. 1865

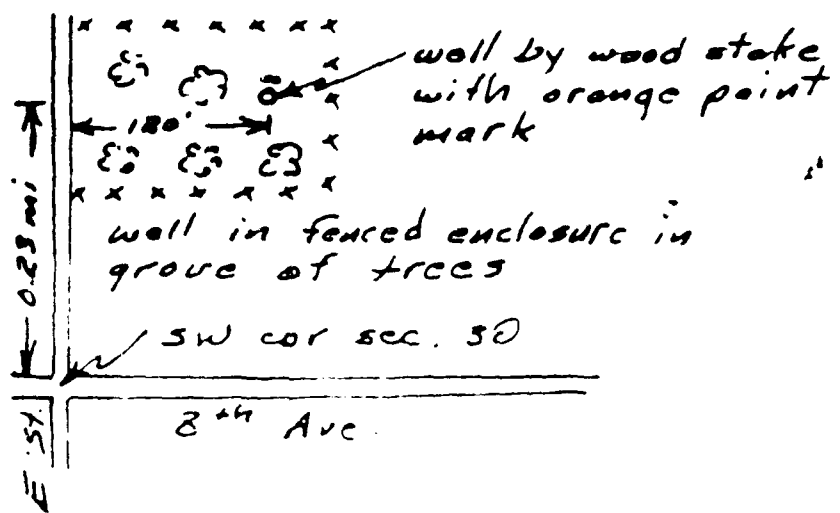
Unfit for

14. Remarks: (Log, Analyers, etc.) Well no. 1 in sec 30 on
Ars. well loc. map

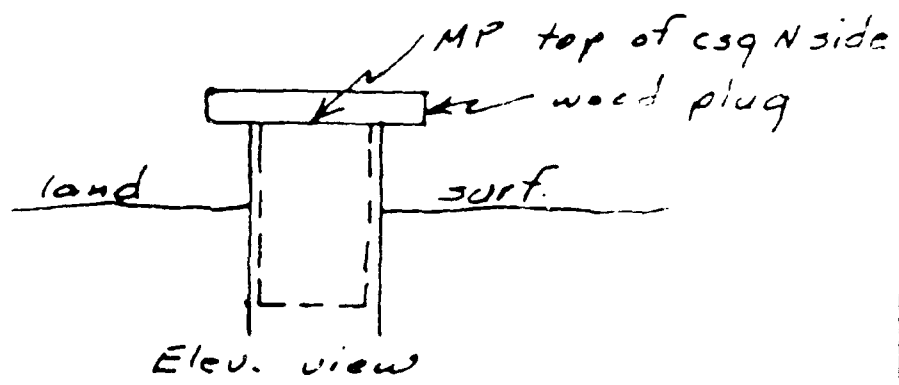
About 120' & 0.23 mi. N of
Sec 30, T30N, R30E



11
1
N



9



2 in 66
31 aab1

M U
OR L
TPI OP
T₁ TM
T₂ TE
K T
T J
MP P
D M
U
P

DIAMETER
DEPTH
WATER
LEVEL
CHANGEABLE
ORIGIN
SPEC CAP
THICKNESS
AT
THICKNESS
PERMEABILITY
AT
DEPTH
VERTICAL
ANAL
TEMP
ANAL
MEAN
ANAL
PERMEABILITY
SPEC
FIELD

U S GEOLOGICAL SURVEY GROUND WATER BRANCH

DATE 9/9/55
RECORDED BY RGS
SOURCE RMA files & observation
LOCATION STATE Colorado COUNTY Adams
NW 1/4 NE 1/4 NE 1/4 SEC 31 T 2 N 66 E
MAP RMA loc. map no. 7164-2105
OWNER Rocky Mtn Arsenal and Derby, Colo
TENANT None

5249.6 ALIQUOT - VME

4 TYPE WELL

5 DEPTH REPT
6 CASING DIAM 6 IN TYPE Iron

7 ACQUISITION AND DEPTHS

Static 17.7
WATER LEVEL 14.69
1/2" access pipe in well 3.0
Top of

8 PUMP TYPE Jet
ELECTRIC

10 FIELD PUMP

11 SAMPLE

12 USE DUM STUCK PS BR IND AND ORS

13 REMARKS TASTE COLOR ODOR ETC

LAB	DATE	ANAL
LAB	TEMP	
LAB	PH	
LAB	TDS (ppm)	
LAB	HARDNESS	
LAB	As Ca CO ₃	
LAB	Ca Mg	
LAB	PERCENT NA	
LAB	Beta-Gamma (uCi/L)	
LAB	U (10 ⁶ gr/L)	
LAB	SiO ₂	
LAB	Fe	
LAB	Ca	
LAB	Mg	
LAB	Na	
LAB	K	
LAB	CO	
LAB	HCO ₃	
LAB	SO ₄	
LAB	Cl	
LAB	NO ₃	
LAB	B	
LAB	F	
LAB	REMARKS	

CN KAYSOL

9-185-July 1938
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

C2-66-31aab1

Date 9/9/55, 19 Field No.

Record by Rex O. Smith Office

Source of data RMA files & field obs

1. Location: State Colorado County Adams

Map RMA well loc. map no. 7164-2105

NE 1/4 NE 1/4 sec. 31 T. 2 R. 66 W.

2. Owner: Rocky Mtn. Arsenal Address Derby, Colo

Tenant None Address

Driller Address

3. Topography gently rolling plain

4. Elevation ft. above below

5. Type: Dug/drilled/driven, bored, jetted 19

6. Depth: Rept. ft. Meas. ft.

7. Casing: Diam. 6 in., to in., Type iron

Depth ft., Finish

8. Chief Aquifer From ft. to ft.

Others

9. Water level 14.69 ft. rept. 9/9/1955 above top of

1/2 access pipe in well seal which is 3.0 ft. above surface

10. Pump: Type Jet Capacity G. M.

Power: Kind Elec. Horsepower

Unit: Elec. G. M. Pump. G. M. 100 ft. lift

Draw-down ft. after hours pumping G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. (Obs) unused

Adequacy, permanence rept. to be inadequate

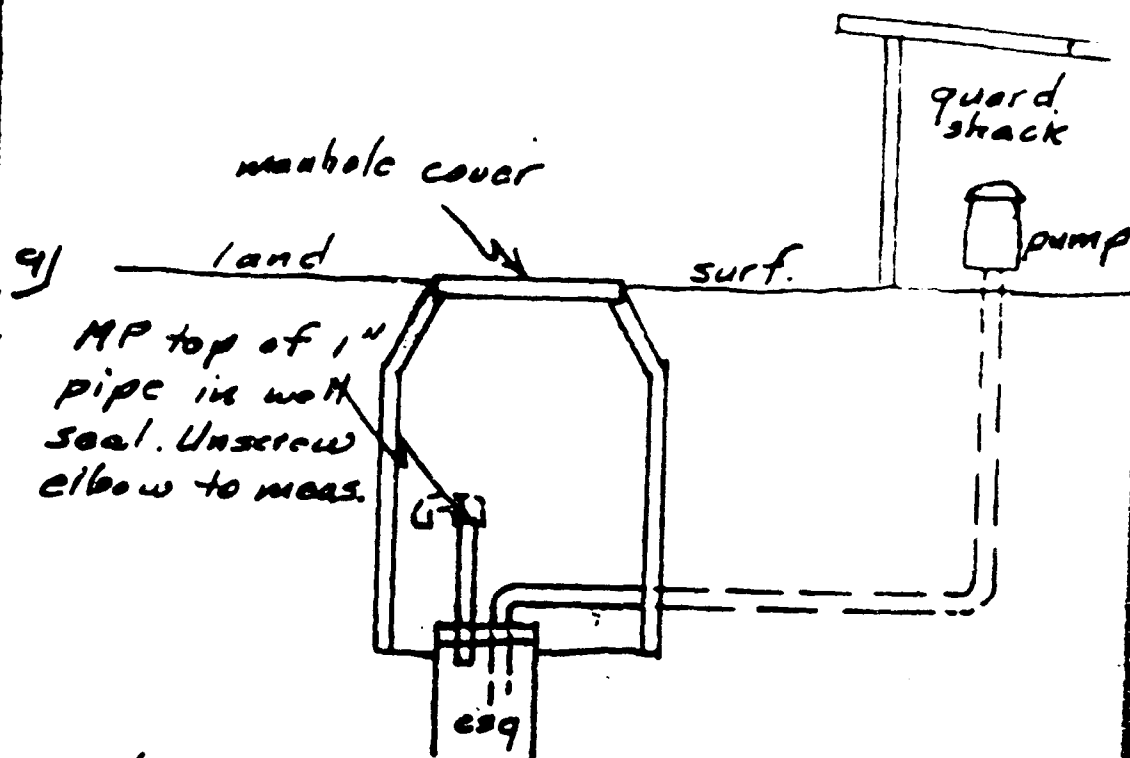
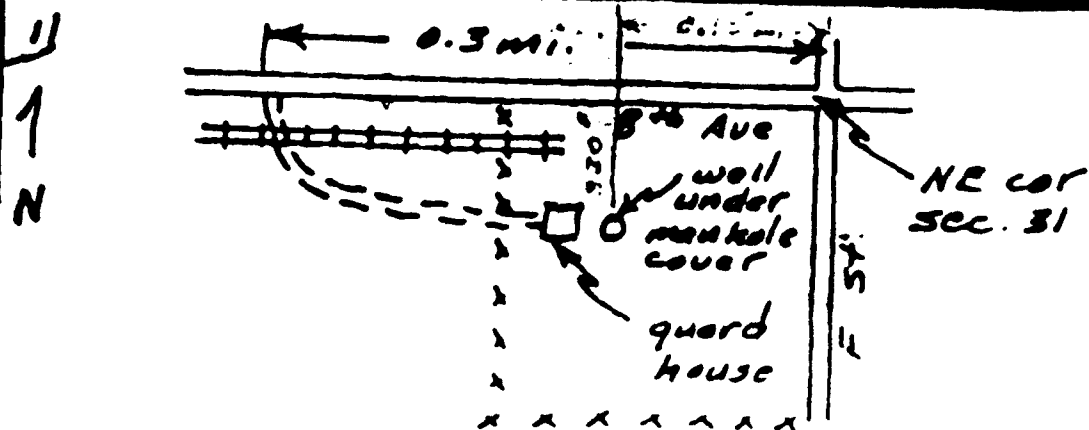
13. Quality Temp. °F.

Taste, odor, color Sample Yes No

Unit for

14. Remarks: (Log, Analysis, etc.)

Crowbar needed to pry up manhole cover over well



Not pumping when piw meas 9/9/55

D/W on 11/30/55 - 14.80'

D/W on 4/3/56 - 14.84'

2 31 66
 31 008
 TOWNSHIP 21 S RANGE 17 E

U. S. GEOLOGICAL SURVEY - GROUND WATER BRANCH

DATE 8/26/55

WELL NO. 1505 SOURCE RMA files & observation

LOCATION STATE Colorado COUNTY Adams

NW 1/4 NW 1/4 Sec 31 T 21 S R 17 E

MAP RMA loc. map no. 1164-2105 & USDA Aerial Photos

OWNER Rocky Mtn. Arsenal Derby, Colo.

TENANT None

DRIER Taberna

1 ALTITUDE (ft) 5223.6 DET BY NW (UMB)

2 TYPE DUG (MILLED) DRIVEN JETTED

3 DEPTH (ft) 12 FT MEAS. 28.7

4 CASING DIAM 12 IN TO IN TYPE 0.5

5 DEPTH (ft) 12 FT FINISH

7 AQUIFER(S) AND DEPTHS Gal (FCK)

Static 23.7

WATER LEVEL 23.87

100% CASING, E. SIDE WHICH IS 12 FT BELOW SURFACE

8 PUMP TYPE None CAPACITY GPM

POWER AND None DRIVER HP

10 YIELD FLOW GPM PUMP GPM (MEAS. REPT. EST)

11 USE GPM STIM. P. R. AND IRR (OBS. ONLY)

12 SAMPLE NO. P. & TEMP

13 REMARKS (TASTE COLOR ODOR ETC) RMA well 1505

LAB Quality of water DATE ANAL

LAB TEMP 17.70

COLOR pH 7.6 SUSP SOLIDS 1,040

HARDNESS 465

PERCENT Na 45

Beta Gamma U.S.C. L U.S.C. L

	ppm	cpm
SiO	24	
Fe		
Ca	115	
Mg	43	
Na	170	
K	7	
CO	0	
HCO	576	
SO	345	
Cl	89	
NO	.3	
B	.3	
F	1.2	

ERROR

REMARKS (THIS SPACE) 1st classification C: 10-3-55

9-185
(October 1950)

ON KEYSTONE
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

McDoe

MM-57

CR-66-316661

WELL SCHEDULE

Date 8/26/55

19

Field No.

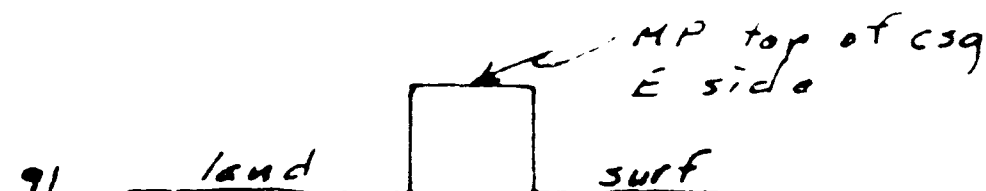
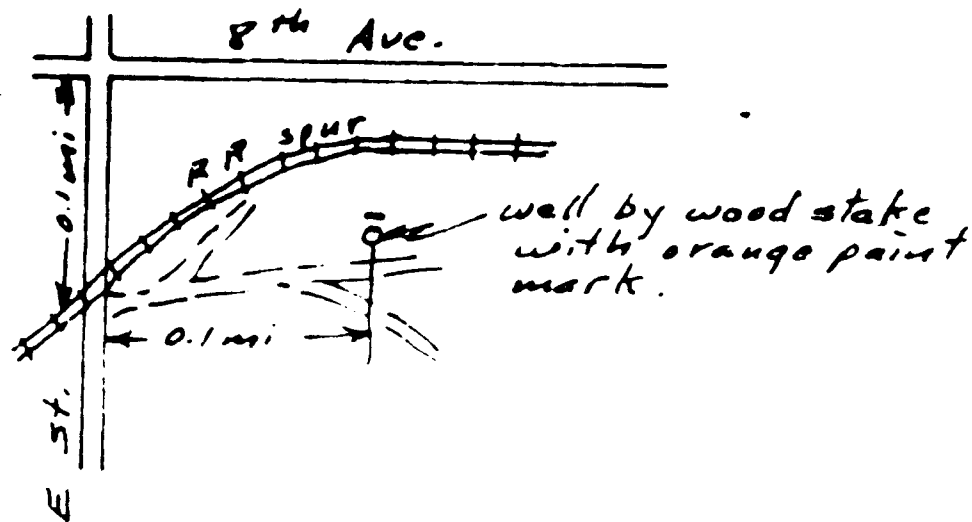
Record by Rex O. Smith

Office No.

Source of data RMA files & pers obs

1. Location: State Colorado County Adams
Map RMA well loc. map no. 7164-2105 & aerial photos
NW 1/4 NW 1/4 sec. 31 T. 2 R. 66 W. 66
2. Owner: Rocky Mtn. Arsenal Address Derby, Colo.
Tenant None Address —
Driller Unknown Address —
3. Topography: gently rolling plain
4. Elevation 5223.6 ft. above MP-1MB-Alid.
below
5. Type: Dug/drilled/driven, bored, jetted 19
6. Depth: Rept. — ft. Meas. 28.7 ft. 90%
7. Casing: Diam. 1.2 in. to — in. Type iron
Depth — ft. Flush —
8. Chief Aquifer — From — ft. to — ft.
Others —
9. Water level 23.87 ft. rept. 7/1/55 above top of
iron casing E side which is 1.2 ft. above surface
below
10. Pump: Type None Capacity — G. M. —
Power: Kind — Horsepower —
11. Yield: Flow — G. M. Pump — G. M. Meas. Rept. Est. —
Drawdown — ft. after — hours pumping — G. M.
12. Use: Dom. Stock, PS, RR, Ind. Irr. (Other) Unused
Adequacy, permanence good obs well
12. Quality: — Temp. — °F.
Taste, odor, color — Sample No. VSGS
Unit for —
14. Remarks: (Log, Analysis, etc.) Well no. 4 in sec. 31 on
Arsenal well loc. map.
D/W - 11/6/57 - 22.92' below MP-DC

11
1
N



31 dec 20

U.S. GEOLOGICAL SURVEY - GROUND WATER BRANCH

TOWNSHIP RANGE

DATE 8/29/53

QUALITY OF WATER

SOURCE RMA files & observation

LOCATION STATE Colorado COUNTY Adams

SW NE SE 31 2 N 66 E

RMA loc. map no 7164-2105 & USDA Aerial Photos

CURRY Rocky Mtn Arsenal and Derby, Colo.

TENANT None

ALTITUDE 5254.6

TYPE DRILLED OPEN SETTED

DEPTH 41.2

CASING DIAM 30 IN TO TYPE CONC.

AQUIFERS AND DEPTHS Qal(FCK)

Static 16.5

WATER LEVEL 18.32

CONC CASING, E. SIDE WHICH IS 1.8

PUMP TYPE None

POWER KIND None

USE GUM STICKS NO GLUB USE (with)

SAMPLE NO P C & TEMP

REMARKS TASTE COLOR ODOR ETC. RMA WEN #6 test pumped

LABORATORY TESTS

PERMEABILITY

SPEL FIELD

ANIONS

CATIONS

CO. 0

HCO. 300

SO. 91

CL 43

NO. 25

H. 22

F. 1.4

CLASSIFICATION C3-

10-3-55

9-185
(October 1950)

C. M. KERRY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL SCHEDULE

C2-66-31 daci

Date 8/29/55

19

Field No.

Record by Rex O. Smith

Office No.

Source of data RMA files & pers obs

1) Location: State Colorado County Adams
Map/RMA well loc. map no. 7164-2105 & aerial photos
NE 1/4 SE 1/4 sec 31 T 2 S R 66 W

2. Owner: Rocky Mtn. Arsenal Address Derby, Colo.

Tenant None

Address

Driller Unknown

Address

3. Topography nearly flat plain

4. Elevation _____ ft. above
below

5. Type: Dug drilled, driven, bored, jetted _____ 19

6. Depth: Rept. _____ ft. Meas. 41.2 ft

7. Casing: Diam. 30 in. to _____ in. Type Conc

Depth _____ ft. Finish _____

8. Chief Aquifer _____

From _____

ft. to _____

Others _____

9. Water level 18.32 ft. rept
concrete csg. E side

8/1/55 above top of
derby which is 1.8 ft. above
below surface

10. Pump: Type None

Capacity _____

G. M. _____

Power: Kind _____

Horsepower _____

11. Yield: Flow _____ G. M. Pump

G. M. Meas. Rept. Est

Drawdown _____ ft. after _____

hours pumping

G. M. _____

12. Use: Dom., Stock, PS, RR, Ind., Irr U.S. Unused

Adequacy, permanence good obs. well

13. Quality _____

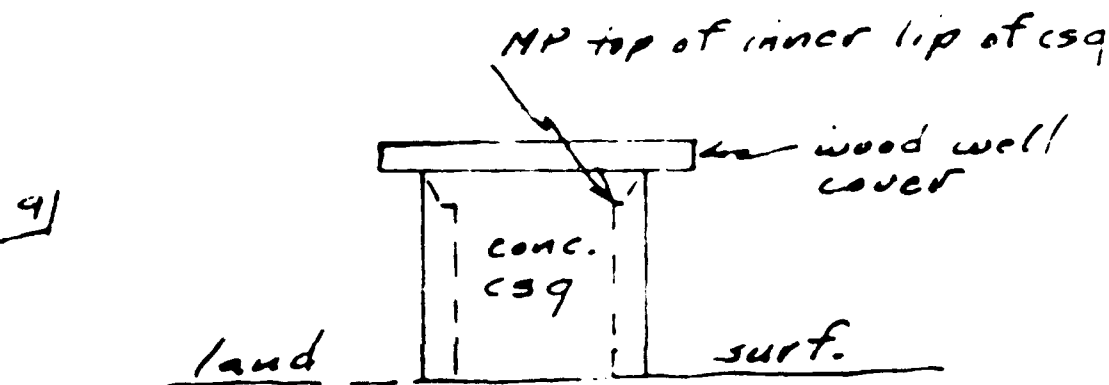
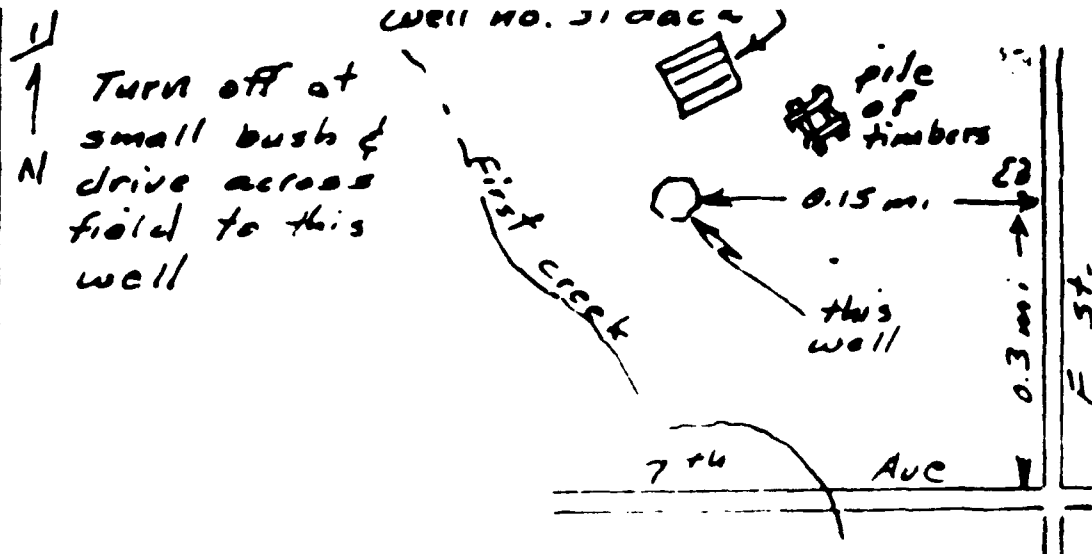
Temp _____

Taste, odor, color _____

Sample U.S.G.S.

Unfit for _____

14. Remarks: (Log, Analysis, etc.) Well no. 6 in sec. 31 on
Arsenal well loc. map. This well and
nearby well were first pumped by Arsenal.



2 11 66
32 dcdal

U. S. GEOLOGICAL SURVEY - GROUND WATER BRANCH									
DATE <u>8/29/55</u>					TOWNSHIP <u>32 1 2</u> RANGE <u>66</u>				
RECORD BY <u>R.A.S.</u> SOURCE <u>BMA files to observer</u>					LAB <u>Quality of water</u> DATE ANAL <u>916</u>				
LOCATION STATE <u>Colorado</u> COUNTY <u>Adams</u>					LAB TEMP <u>7.8</u> SUSP <u>568</u>				
SE SW SE 32 1 2 66					HARDNESS <u>326</u> TOTAL <u>49</u>				
MAP <u>BMA loc map no. 7164-2105 & USDA Aerial Photos</u>					PERCENT <u>32</u> SAR <u>1.7</u>				
OWNER <u>Rocky Mtn. Arsenal, Derby, Colo.</u>					Beta Gamma <u>UCL</u> U 10 <u>gr L</u>				
TENANT <u>None</u>					ppm ed m				
ELEVATION <u>5295.1</u> DXT BY <u>Alid - UMB</u>					SiO ₂ <u>28</u>				
4 TYPE <u>DRILL</u> DRIVEN JETTED					Fe				
5 DEPTH REPT <u>49.2</u> FT MEAS <u>49.2</u>					Ca <u>60</u>				
6 CASING DIAM <u>24</u> IN TO <u>Iron</u>					Mg <u>43</u>				
7 AQUIFER(S) AND DEPTHS <u>Gal (FCK)</u>					Na <u>72</u>				
8 WATER LEVEL <u>Static</u> <u>31.20</u> <u>9/1/55</u> <u>Top of</u>					K <u>0.5</u>				
9 PUMP TYPE <u>None</u> CAPACITY <u>None</u> GPM <u>None</u>					CO ₂ <u>0</u>				
10 YIELD FLOW <u>None</u> GPM PUMP <u>None</u> GPM MEAS. DEPT <u>None</u>					HCO ₃ <u>338</u>				
11 SPEC CAP <u>None</u> TRANS <u>None</u> FT PERM <u>None</u>					SO ₄ <u>116</u>				
12 USE <u>None</u> STOCK <u>None</u> IND <u>None</u> <u>None</u>					Cl <u>50</u>				
13 SAMPLE <u>None</u> P.C. & TEMP <u>None</u>					NO ₃ <u>21</u>				
14 REMARKS <u>Static</u> <u>31.20</u> <u>9/1/55</u> <u>Top of</u>					B <u>.20</u>				
15 REMARKS <u>Static</u> <u>31.20</u> <u>9/1/55</u> <u>Top of</u>					F <u>1.0</u>				
16 REMARKS <u>Static</u> <u>31.20</u> <u>9/1/55</u> <u>Top of</u>					Classification <u>C3-5</u>				
17 REMARKS <u>Static</u> <u>31.20</u> <u>9/1/55</u> <u>Top of</u>					10-3-55				

ON KEYSTONE

9 185
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

it's see

HM-57

CR-66-32 dgr.

WELL SCHEDULE

Date 8/29/55

19

Field No.

Record by Rox C Smith

Office No.

Source of data RMA files & pers. obs

1) Location State Colorado County Adams
Map RMA well loc. map no 7164-2105 & aerial photos
SW 1/4 SE 1/4 32 R 66 X

2) Rock Mtn Arsenal Derby, Colo.

Tenant None

Address

Driller Unknown

Address

3. Topography gently rolling plain

4. Elevation 5295.1 ft. above below M.P.-VMB-Alid

5. Type: Dug/drilled, driven, bored, jetted 19

6. Depth: Rept. ft. Meas. 49.2 ft

7. Casing: Diam. 2 1/2 in. to in. Type iron

Depth ft. Finish

8. Conf. Aquifer

From ft. to

Others

9) Water level 31.20 ft. rept. iron casing S side

9/1/55 above top of iron casing at surface

10. Pump: Type None Capacity G. M.

Power: Kind

Horsepower

11. Yield: Flow G. M. Pump G. M. Meas. Rept. Est

Drawdown ft. after hours pumping G. M.

12. Use: Dom., Stock, PS, RR, Ind., Irr. Unused
Adequacy, permanence good obs well

13. Quantity

Taste, odor, color

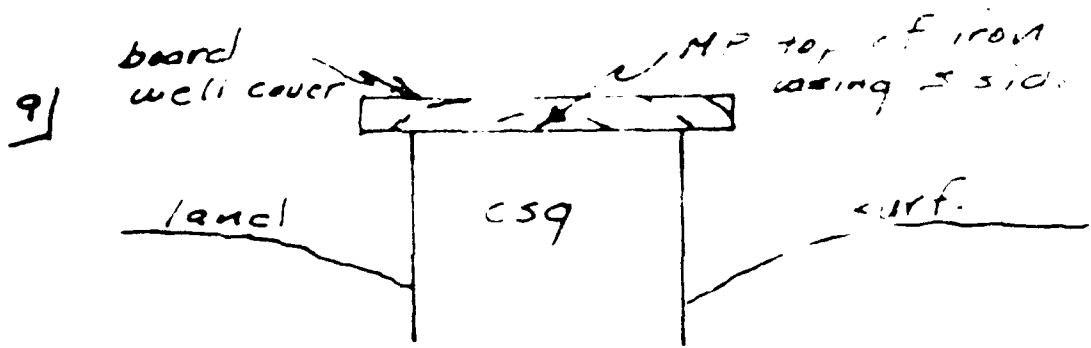
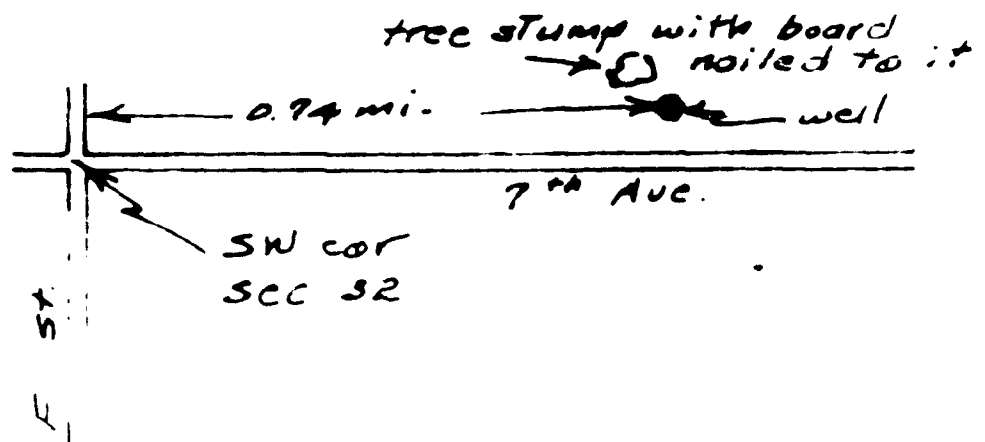
Sample USGS

Unfit for

14. Remarks: (Log, Analysis, etc.) Well no. 3 in sec. 32 on Arsenal well loc. map. About 8 ft. SE of bored nailed to tree stump

About 1450 W & 50' N of SE cor. sec. 32

11
1
2



9-165-July 1935
Revised

On Keyfont
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

CR-67-22 accd1

Date *8/31/55*

19

Field No.

Record by *ROS & LAH*

Office No.

Source of data *R.M.A. file & Pers. Obs.*

1. Location. State *Colorado* County *Adams*

Map *R.M.A. well-loc. Map No. 7164-2105*

SW 1/4 NE 1/4 sec. 22 T. 2 N. R. 67

2. Owner *Rocky Mtn. Arsenal* Address *Perks, Colo.*

Tenant *None*

Driller *Unknown*

3. Topography *gently rolling plain*

4. Elevation *ft. above*

5. Type *Dug/drilled/driven, bored, jetted* 19

6. Depth. Rept *500* ft. Mean *178.5* ft

7. Casing. Diam. *4 1/2 in.* to *10 in.* Type *iron*

Depth *ft.* Finish *---*

8. Chief Aquifer *---*

From *---* ft. to *---*

Others *---*

9. Water level *82.08* ft. *rept* *iron*
iron. casing W side

8/31/55 *above* *below* *TOP of*
which is 4-2 *ft. above* *below* *surface*

10. Pump: Type *NONE*

Capacity *---* G. M. *---*

Power: Kind *---*

Horsepower *---*

11. Field: Flow *---* G. M. Pump *---*

G. M. Mean, Rept Est. *---*

Drawdown *---* ft. after *---*

hours pumping *---*

G. M. *---*

12. Use *Dom.* Stock, PS., RR., Ind., Irr. *Obs.* *unused*

Adequacy, permanence *---*

13. Quality *---*

Temp. *---* °F.

Taste, odor, color *---*

Sample *---* *USGS*

Unit for *---*

14. Remarks: (Log, Analysis, etc.) *Well No. 3 in Sec. 22 on*
Arsenal Map. Near westernmost of two
trees on S. edge of clump of trees

22 67 0
22 acci

ELECTRIC LOG
DRILLER'S LOG
SAMPLE LOG
PUMP LOG

2 1 7 4 2 1 3 4 2 1 5 1 1 7 4 2 1 7 4 2 1 5 1

TOWNSHIP

RANGE

U. S. GEOLOGICAL SURVEY - GROUND WATER BRANCH

DATE 8/31/55

RECORD BY RDS. & LAH SOURCE RMA File & Pers. Data

LOCATION STATE Colorado COUNTY Adams

SE & SW & NE 1/4 Sec 20 T. 2 S. R. 67 E. S. 20
340 ft N. of R.C.C. 11 W. of S.E. 1/4 Sec 20
RMA Well-log map No. 7164-2105

OWNER Rocky Mtn. Arsenal, Derby, Colo

TENANT NONE

DRILLER Unknown

ALTITUDE 5000

TYPE DRILLER DRIVEN BITTED

DEPTH 500 FT MEAS 178.5

CASING DIAM 4 1/2 IN TYPE IRON

DEPTH FT FINISH

AQUIFER(S) AND DEPTHS

Static
WATER LEVEL 82.02 FT 8/31/55 TOP OF
IRON CS9. W side WHICH IS 4.2 FT BELOW SURFACE

PUMP TYPE CAPACITY GPM HP
POWER LINE DRIVER HP RPM

YIELD PUMP GPM PUMP GPM MEAS REPT EST

SPEC CAP TRANS - FT PUMP

USGS STOCK PS HP AND IRR NONE UNUSED

SAMPLE NO P C R TEMP FIELD COND (EC - M² M² C)

REMARKS (TASTE COLOR ODOR ETC)

SiO₂
Fe
Ca
Mg
Na
K
CO
HCO₃
SO₄
Cl
NO₃
B
F

CATIONS
ANIONS

ppm
epm

REMARKS (TASTE COLOR ODOR ETC)

ALTITUDE

1 DATE _____ WELL NO. _____
2 BY _____ CO. _____ ALL I _____
3 WELL DICH _____ DE _____ SPEC CAP _____
4 DISCHARGE LEVEL ABOVE M.P. _____ TEMP _____
5 PUMP TYPE _____ SIZE _____ NAME _____
6 MOTOR NO. _____ HP _____ NAME _____
7 METER NO. _____ V _____ AMPS _____ R₀ _____

DESCRIPTION (ft) _____ TIME (hr) _____
IN _____ IN _____
DIFFERENCE _____

8 INPUT TO MOTOR (ELECT. REL.) _____ TIME _____
9 KW _____ 1.25 _____
10 HP _____ 1.34 _____
11 HP₀ _____ 1.08 _____ HP₀ _____ 1.060 _____

12 OVER ALL EFF. $\frac{HP_0}{HP}$ _____

13 PUMP EFF. $\frac{HP_0}{HP}$ _____

14 RPM PUMP _____ DRIVER _____
G.P. TYPE
SEASON FUEL

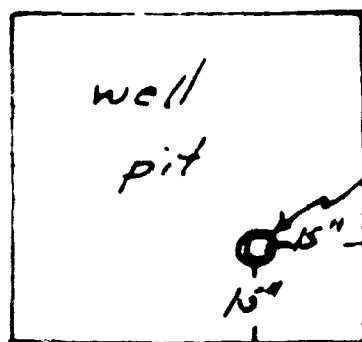
15 FUEL CONSUMPTION _____ GPH _____
OTHER POWER _____

16 OPERATION HRS _____

17 ACRE-FEET PUMPED _____
1.420 833

18 _____ 19 _____ 20 _____
REMARKS *Well #3 in Sec 22 on RMA map*

91
1
N



Remove wood
plug

Plan view

D/W BR. 35 on 9/6/55 - LAH

2nd 67
22 dddo

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

- M
- UM
- TPE OP
- TE TM
- TR TE
- R T U
- S I
- P P
- D M
- O S
- P S
- WATER LEVEL
- EXCHANGE
- THROUGH
- SPEC CAP
- TRANSMISS
- TEST
- THICKNESS
- PERMEABILITY
- SPEC YIELD
- LABORATORY TESTS
- PARTIAL ANAL
- COMPI ANAL
- MECH ANAL
- OTHER
- PERMEABILITY
- SPEC YIELD

U.S. GEOLOGICAL SURVEY GROUND WATER BRANCH

DATE 8/24/55

REPORT BY L.H.F. RDS. R.M.F. HKS & R.S. CAS.

LOCATION STATE Colorado COUNTY Adams

SE SE T 22 S 2 E 67

MAP R.M.F. well location map # 764-205

OWNER Rocky Mtn. Arsenal, Derby, Colo

TENANT None

DRILLER Unknown

1 ALTITUDE 5177.1

2 TYPE Drilled

3 DEPTH 36 FT

4 CASING DIA 36 IN TO 36 IN TYPE Cone

5 DEPTH 36 FT

6 WATER LEVEL 24.36 FT BEAS 9/6/55 Top of

7 AQUIFER(S) AND DEPTHS 2216' approx 1161' below MP. DE

8 PUMP TYPE None CAPACITY 1.0 GPM

9 USE None Unused

10 SAMPLE For human consumption

11 REMARKS Stagnant, foul odor

100	2	1	4	W
80	2	1	4	N
50	2	1	4	C
20	2	1	4	C

ANALYSIS

SiO ₂	
Fe	
Ca	
Mg	
Na	
K	
CO ₂	
HCO ₃	
SO ₄	
Cl	
NO ₃	
B	
F	

LABORATORY TESTS

ANALYSIS

ANALYSIS

LOG (S)	
1 DATE	WELL NO
2 BY	CO ACCT
3 WELL DWN	SPEC CAP
4 DISCHARGE LEV	TEMP
5 PUMP TYPE	MAKE
6 MOTOR HP	MAKE
7 METER NO	AMPS
8 READINGS	TIME
9 DIFFERENCE	TIME
10 INPUT TO MOTOR	TIME
11 KW	HP
12 OVER ALL EFF	HP
13 PUMP EFF	HP
14 RPM PUMP	DRIVER
15 FUEL CONSUMPTION	G.P.H. TYPE
16 OPERATION	OTHER POWER
17 REMARKS	

17 REMARKS Well no. 2 in sec. 22 on Ardenel well
Location map.

9-185
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR *MM-57*
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL SCHEDULE

CR-67-22 dda1

Date *8/24/55*

Field No.

Record by *ROS & LAH*

Loc. No.

Source of data *RMA files & pers obs*

1. Location: State *Colorado* County *Adams*

Map *RMA well loc. map no. 7164-2105*

SE $\frac{1}{4}$ *SE* $\frac{1}{4}$ *Sec 22* T. *2* N. R. *67* W.

2. Owner *Rocky Mtn. Arsenal* Address *Derby, Colo.*

Tenant *None*

Address

Driller *Unknown*

Address

3. Topography *gently rolling plain*

4. Elevation *5177.1* ft. above *MP-VMB-A/d*
below

5. Type *Dug* drilled, driven, bored, jetted

6. Depth: Rept. *—* ft. Meas. *32.3* ft.

7. Casing: Diam. *36* in. to *—* in., Type *CONC.*

Depth *33* ft., Finish *—*

8. Chief Aquifer *—* From *—* ft. to *—* ft.

Others *—*

9. Water level *24.36* ft. *rept.* *9/6/1955* above *top of*
concrete casg. N side *below* *100 ft. below*
which is *100* ft. *below* surface

10. Pump: Type *None* Capacity *—* G. M.

Power *—*

11. Yield: Flow *—* G. M.

Drawdown *—* ft. after *—* min. *—* G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. *(Obs.)* *Unused*

Adequacy, permanence *good obs well*

13. Quality *poor* Temp *—* °F.

Taste, odor, color *stagnant, foul odor* Sample Yes No

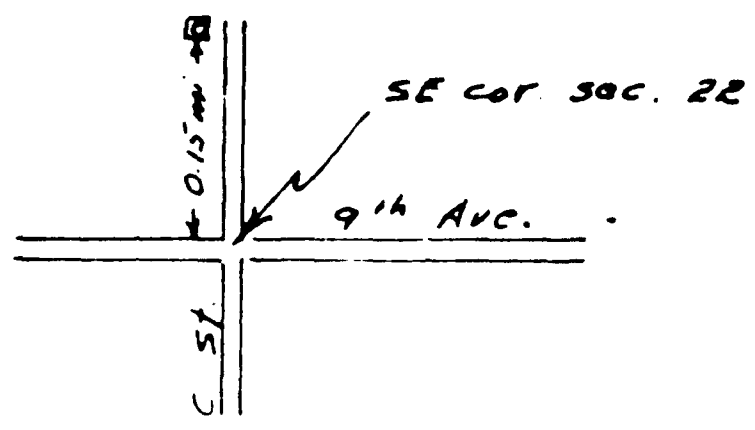
Unfit for *human consumption*

14. Remarks: (Log, Analyses, etc.) *Well no. 2 in sec. 22 on*

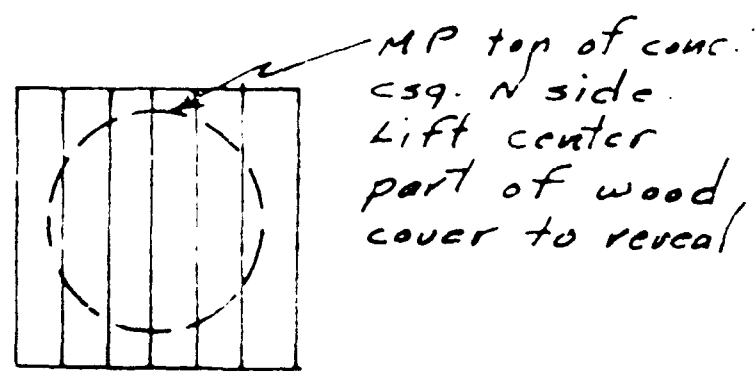
Arsenal well loc map

Dist. - 11.6/57 - 27.16 below MP - DC

11
1
N



9/
1
N



Plan view

2 12 67
Vic 23 Area (2)
b100

ELECTRIC LOG
DRILLER'S LOG
SAMPLE LOG
BAGGAGE LOG

U.S. GEOLOGICAL SURVEY
TOWNSHIP

RANGE

DATE 8/24/67 U.S. GEOLOGICAL SURVEY GROUND-WATER DIVISION

RECORD BY R.O.S. & L.H. SOURCE RMA, first pen. obs.

LOCATION STATE Colo. COUNTY Adams

SW SW NE 23 2 67 3300

RMA # 7164-2105 0.5 mi. N, 0.45 mi. W

OWNER Rocky Mtn Arsenal AND Derby, Colo.

TENANT none

DRILLER unknown

ALTITUDE 5186.2

TYPE DRILLED DRIVEN JETTED

DEPTH REPT 47.0

CASING DIAM 48

DEPTH

AQUIFER(S) AND DEPTHS

Static 35.7

WATER LEVEL 37.95

at E edge CONC 239

PUMP TYPE

POWER KIND

YIELD FLOW

DRAWDOWN

SPEC CAP

USE DOM STOCK PS WA IND IND

SAMPLE YES

REMARKS

1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6

Ca
Mg
Na
K
CO
S
Cl
NO
F

AMETER
DEPTH
WATER LEVEL
DISCHARGE
DRAWDOWN
SPEC CAP
TRANSMISS
NET PERMEABILITY
STOP LOSS
PARTIAL ANAL
COMPL ANAL
MECH ANAL
PERMEABILITY
SPEC YIELD

FIELD TESTS
LABORATORY TESTS

L C G (S)

1 DATE _____ WELL NO. _____

2 V _____ CO _____ ACCT. _____

3 WELL DISCH _____ DTH _____ SPEC CAP _____

4 ISCHANGE LEVEL ABOVE M P _____ TEMP _____

5 PUMP TYPE _____ SIZE _____ MAKE _____

6 MOTOR _____ HP _____ MAKE _____

7 METER NO _____ V _____ AMPS _____

READINGS (RH) _____ TIME (TH) _____

(RW) _____ (TH) _____

(RH) _____ (TH) _____

DIFFERENCE _____

8 INPUT TO MOTOR DISC REV _____ TIME _____

9 RW. _____

10 M _____

11 _____

HP. _____

12 _____

OVER ALL EFF. $\frac{HP}{HP}$ _____

13 PUMP EFF. $\frac{HP}{HP}$ _____

14 RPM PUMP _____ DRIVER _____

FUEL CONSUMPTION _____ G P H TYPE _____

SEASON FUEL _____

OPERATION _____ OTHER POWER _____

15 GALLONS PUMPED _____

16 _____

17 _____

REMARKS *Well #3 in Sec 23 on Arsenal Map*

9-185
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

MA-55
MA-57

MCB

WELL SCHEDULE

C2-67-290001

Date 8/24/55

19

Field No.

Record by ROS & LAH

Office No.

Source of data R.M.A. files & Pers. Obs.

1. Location: State Colorado County Adams

Map R.M.A. Map No. 7164-2105

SW 1/4 NE 1/4 sec. 23 T. 2 S. R. 67 E. W.

2. Owner: Rocky Mtn Arsenal Address Derby, Colo.

Tenant NONE

Address

Driller UNKNOWN

Address

3. Topography gently rolling plain

4. Elevation 5186.2 ft. above MP (UMS AFD) below

5. Type: Drilled drilled, driven, bored, jetted 19

6. Depth: Rept. — ft. Meas. 47.0 ft.

7. Casing: Diam. 48 in., to — in., Type CONC.

Depth — ft., Finish —

8. Chief Aquifer — From — ft. to — ft.

Others —

9. Water level 37.95 ft. rept. 9/6 10.55 above Top below

at E. Edge CONC. Csg. which is 25 ft. above surface below

10. Pump: Type NONE Capacity — G. M. —

Power: Kind — Horsepower —

11. Yield: Flow — G. M., Pump — G. M., Meas. Rept. Est.

Drawdown — ft. after — hours pumping — G. M.

12. Use: Dom., Stock, PS, RR, Ind., Irr. Obs. Unused

Adequacy, permanence good obs. well

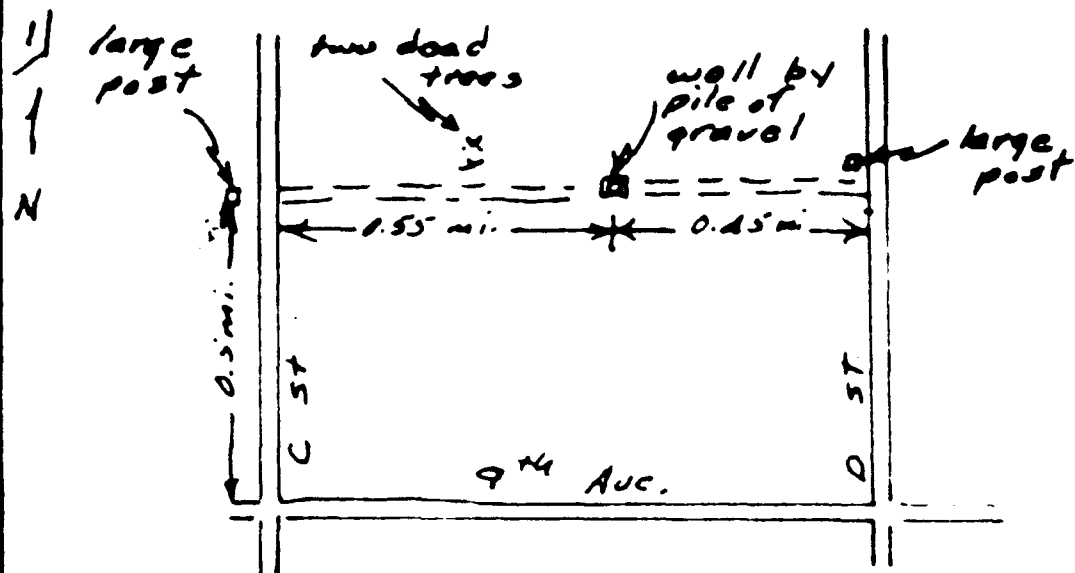
13. Quality — Temp — °F.

Taste, odor, color — Sample Yes No

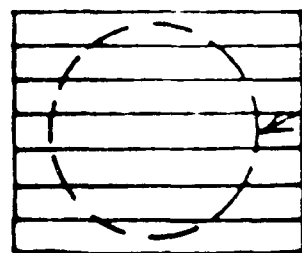
Unit for —

14. Remarks: (Log, Analysis, etc.) Well No. 3 in SEC. 23 on Arsenal Map.

D/W - 11/6/57 - 38.25 below MP - DC



9/1
N



Plan view

Lift center
part of wood
cover to reveal
NIP on top of
CSQ. E side

67
23 added

U. S. GEOLOGICAL SURVEY GROUND WATER BRANCH

LRH & ROS. R.M.F. files & Field obs.

LOCATION STATE Colorado COUNTY Adams

SE 1/4 NE 1/4 SEC 23 T 2 N R 67 E
R.M.F. well location map No. 7164-2105

OWNER Rocky Mtn. Arsenal Derby, Colo

TENANT None

DRAWER Unknown

1 ALTITUDE (ft) 5166.8 (H.P.) by KMB & DEX

2 TYPE AUG DRILLED DRIVER JETTED

3 DEPTH REPT 34 FT MEAS 30.6 FT

4 CASING DIA 42.5 IN ID IN TYPE CONC

7. AQUIFER(S) AND DEPTHS

21.5
WATER LEVEL 22.24 FT MEAS 9/6/55
CONC casing W. side WHICH IS 0.7 FT ABOVE SURFACE

9 PUMP TYPE None CAPACITY GPM HP

POWER KIND DRIVER HP RPM

10 YIELD FLUX GPM PUMP GPM MEAS REPT 1ST

DRAWDOWN FT AFTER HRS PUMPING GPM MEAS REPT 1ST

11 SPEC CAP TRANS FT PERM (YIELD 100)

12 USE DOM STOCK P.S. BR. IND 100 NONE Unused

13 SAMPLE (VSS) P.C.H. TEMP FIELD COND (EC & SP IN 25° C)

14 REMARKS (TASTE COLOR ODOOR ETC) Water stagnant

LAB DATA

LAB TIME

COLOR

TDS (ppm) RES TEMP

HARDNESS As Ca CO₃ Ca. Mg

PERCENT NO

Beta-Gamma um c L U 10⁻⁶ gr L

ppm epm

SiO₂

Fe

Ca

Mg

Na

K

CO₃

HCO₃

SO₄

Cl

NO₃

B

F

ERROR

REMARKS (TASTE COLOR ODOOR ETC)

TIME BACK

1 DATE _____ WELL NO. _____ LOG (S)

2 BY _____ CO _____ ACCT _____

3 WELL DISCH _____ Dd _____ SPEC CAP _____

4 DISCHARGE LEVEL ABOVE M P _____ TEMP _____ °F

5 PUMP TYPE _____ SIZE _____ MAKE _____

6 MOTOR NO _____ HP _____ MAKE _____

7 METER NO _____ V _____ AMPS _____ GA _____

READINGS (in) _____ TIME (to) _____

(in) _____ (to) _____

(in) _____ (to) _____

DIFFERENCE _____

8 INPUT TO MOTOR DISC REV _____ TIME _____

9 KW. _____ 1.50 _____

10 HP. _____ 1.54 _____

11 HP. _____ 1.59 _____ HP. _____ 1.50 _____

12 OVER ALL EFF. = $\frac{HP_o}{HP_i}$ _____

13 PUMP EFF. = $\frac{HP_o}{HP_i}$ _____

14 RPM PUMP _____ DRIVER _____

15 FUEL CONSUMPTION _____ G.P.H. _____ G.P. TYPE _____

16 OPERATION NOS _____ OTHER _____

17 ACRE FEET PUMPED _____ 5.430 HCT _____

18 _____ 19 _____ 20 _____

19 REMARKS *Well no. 7 in sec 23 or Arsenal well loc.*

Map

9-185-July 1928
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES BRANCH

WELL SCHEDULE

C2-67-23 add 1

Date 8/24/55

19

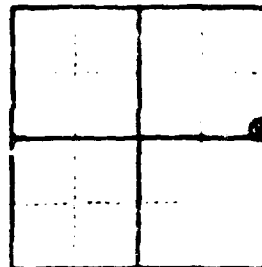
Fe

Record by RDS & LAH

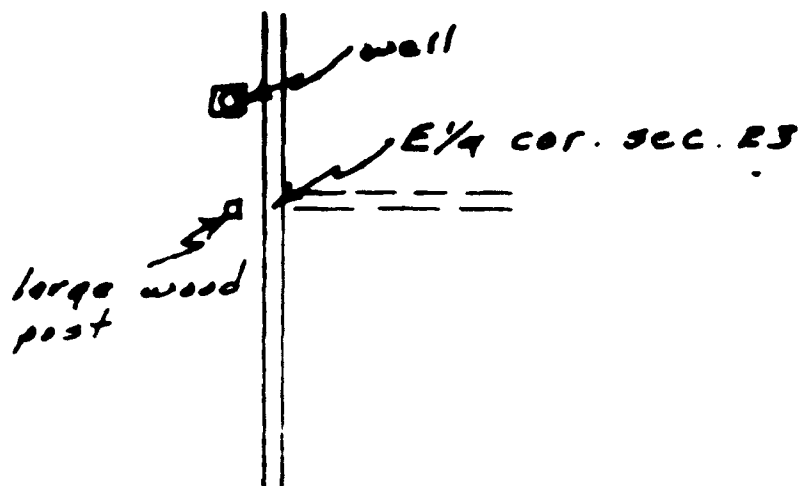
Office No.

Source of data RMA files & field obs.

1. Location: State Colorado County Adams
Map RMA well location map no. 7164-2105
SE 1/4 NE 1/4 sec. 23 T 2 R 67 W
2. Owner: Rocky Mtn. Arsenal Address Darby, Colo
Tenant None Address —
Driller Unknown Address —
3. Topography gently rolling plain
4. Elevation 5166.8 ft. above ME #2
below
5. Type: Dug/drilled, driven, bored, jetted 10
6. Depth: Rept. 34 ft. Meas. 50.6 ft.
7. Casing: Diam. 4 1/2 in., to 10 in., Type conc.
Depth — ft. Finish —
8. Chief Aquifer — From — ft. to — ft.
Others —
9. Water level 22.24 ft. rept. 9/6/55 above top of
concrete casing which is 0.7 ft. above surface
below
10. Pump: Type None Capacity — G. M.
Power: Kind — Horsepower —
11. Yield: Flow — G. M., Pump — G. M., Meas. Rept. Est. —
Drawdown — ft. after — hours pumping — G. M.
12. Use: Dom., Stock, PS., RR., Ind., Irr. Obs. Unused
Adequacy, permanence good obs. well
13. Quality poor Temp — °F.
Taste, odor, color stagnant Sample Yes — No —
Use for —
14. Remarks: (Log, Analysis, etc.) Well no. 7 in sec. 23
an Arsenal well loc. map

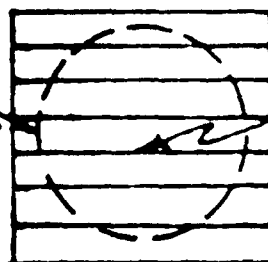


11
1
N



9/
1
N

MP no 1
top of
csq. w side



MP no 2 top of
wood well cover
at center

MP changed 10/3/55 by ROS. MP no. 2 is
top of wood well cover at center 1.0
ft. above LSD and 0.3 ft. above MP no. 1

2 3 67
23 bad CC

5/04
LANE POS RMA files 1 field obs
Colo Adams
SE NE NW 23 2 67
2,100 ft N 2,220 ft W of SE cor 23
USDA (SCS) aerial photos
Rocky Mtn. Arsenal - Derby, Colo.

Qual water

378

87

217

97

19

LANDSIDE 5155 @ Topo

About 450' W
1 1/2 mi. N of N
1/4 sec. 23

TYPE DRILLER

DEPTH 520

BLASTING DIA 510

AQUIFER(S) AND DEPTHS

WATER LEVEL

23g. 1. side under pump base 0.4

2. PUMP cylinder

Wind

CATIONS	Ca	1.5
	Mg	1
	Na	87
	K	3
CO	14	
MCO	179	
SO	12	
Cl	30	
NO	7	
B	3	
F	26	

11 SPEC CAP

12

13 SAMPLE

14

15 REMARKS TASTE COLOR ODOR ETC.

for deer

10-2-68

1 DATE	WELL NO.	
2 BY	TO	ACC'T
3 WELL USED		SPEC. CAP.
4 DISCHARGE LEVEL ABOVE M.P.		TEMP.
PUMP TYPE		
MOTOR HP		
METER NO.		
HEAD (FEET)		
DIFFERENTIAL		
5 INPUT TO MOTOR (WATTS)		
6 KW		
10 HP		
11 HP		
12 OVER ALL EFF. - $\frac{\text{HP}}{\text{KW}}$		
PUMP EFF. - $\frac{\text{HP}}{\text{KW}}$		
14 PUMP		
15 DESCRIPTION		
16 OPERATING WAYS		
17 AC FEET PUMPED		
	5 432 033	
REMARKS: Well #5 in sec 23 on Arsonal well loc. map 7164-2105. Pump installed on well - unable to Mod.		

9-185
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL SCHEDULE

C2-67-23 bad 1

Date 8/24/55

10

Field No.

Known to be ~~LAN~~ & ROS

Source: ~~LAN~~ & ROS files & field notes

1. Location: NE 1/4 of Agric. Sec. 23, T. 2 N., R. 23 E., S. 20 N. NE 1/4 NW 1/4 R. 23 E., S. 20 N.

2. Owner: Rocky Mountain Arsenal, Denver, Colo.

Tenant:

Driller:

3. Topography: very gently rolling

4. Elevation: ft. above/below

5. Type: Dig. drilled driven, bored, jetted

6. Depth: Rept. 520 ft. Meas. ~~520~~ ft.

7. Casing: Diam. 6" 10" 12" 14" 16" 18" 20" 22" 24" 26" 28" 30" 32" 34" 36" 38" 40" 42" 44" 46" 48" 50" 52" 54" 56" 58" 60" 62" 64" 66" 68" 70" 72" 74" 76" 78" 80" 82" 84" 86" 88" 90" 92" 94" 96" 98" 100"

Depth: ft. Finish:

8. Chief Aquifer:

From:

To:

Others:

9. Water level: ft. rept. mean

19

always below top of

Csg. 5 side under pump base which is 0.4 ft. below surface

10. Pump: Type hand Capacity: G. M.

Power: Kind: Horsepower:

11. Yield: Flow: G. M. Pump: G. M. Meas. Rept. Est.

12. Casing: Stock, PS, 1/2", 3/4", 1", 1 1/4", 1 1/2", 1 3/4", 2", 2 1/4", 2 1/2", 2 3/4", 3", 3 1/4", 3 1/2", 3 3/4", 4", 4 1/4", 4 1/2", 4 3/4", 5", 5 1/4", 5 1/2", 5 3/4", 6", 6 1/4", 6 1/2", 6 3/4", 7", 7 1/4", 7 1/2", 7 3/4", 8", 8 1/4", 8 1/2", 8 3/4", 9", 9 1/4", 9 1/2", 9 3/4", 10", 10 1/4", 10 1/2", 10 3/4", 11", 11 1/4", 11 1/2", 11 3/4", 12", 12 1/4", 12 1/2", 12 3/4", 13", 13 1/4", 13 1/2", 13 3/4", 14", 14 1/4", 14 1/2", 14 3/4", 15", 15 1/4", 15 1/2", 15 3/4", 16", 16 1/4", 16 1/2", 16 3/4", 17", 17 1/4", 17 1/2", 17 3/4", 18", 18 1/4", 18 1/2", 18 3/4", 19", 19 1/4", 19 1/2", 19 3/4", 20", 20 1/4", 20 1/2", 20 3/4", 21", 21 1/4", 21 1/2", 21 3/4", 22", 22 1/4", 22 1/2", 22 3/4", 23", 23 1/4", 23 1/2", 23 3/4", 24", 24 1/4", 24 1/2", 24 3/4", 25", 25 1/4", 25 1/2", 25 3/4", 26", 26 1/4", 26 1/2", 26 3/4", 27", 27 1/4", 27 1/2", 27 3/4", 28", 28 1/4", 28 1/2", 28 3/4", 29", 29 1/4", 29 1/2", 29 3/4", 30", 30 1/4", 30 1/2", 30 3/4", 31", 31 1/4", 31 1/2", 31 3/4", 32", 32 1/4", 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2 : 67
23

LOC. COLLECTOR'S LOC. SAMPLE LOC. ANALYST LOC.

TOWNSHIP RANGE

U.S. GEOLOGICAL SURVEY GROUND WATER BRANCH

DATE 8/24 52

LAB. CAP. TEMP. ELEVATION PH. SUSP. MATTER

LAKESIDE Colo. COUNTY Adams

NE SW SW 23 2 3 67

RMA Well loc. map # 7164-2105

UNDER Rocky Mtn Arsenal in Derby, Colo.

PUMP TYPE CENT. POWER WIND NONE

DEPTH 63 FT. MEAS 63.0 LS

CASING DIAM 24

AQUIFER(S) AND DEPTHS

WATER LEVEL 45.67

WOOD WELL RIM E SIDE WHICH IS 9.1

S PUMP TYPE CENT. CAPACITY GPM HP GPM

POWER WIND NONE

TO THE PUMP CUMULATIVE DEPT EST

FIELD TESTS

USE STICK PT OR IN USE WIND UNUSED, FORMERLY DONE

REMARKS TASTE COLOR ODOR ETC.

LABORATORY TESTS

SPEC FIELD

ALTITUDE

LOG (S)	
1 DATE	WELL NO
2 BY	CO ACCT
3 WELL DISCH	DE SPEC CAP
4 DISCHARGE LEVEL ABOVE M.P.	TEMP
5 PUMP TYPE	SIZE MAKE
6 MOTOR NO	HP MAKE
7 METER NO	V AMPS
READINGS (in) _____ TIME (to) _____ (out) _____ DIFFERENCE _____	
8 INPUT TO MOTOR DISC REV	TIME
9 KW	136
10 HP	134
11 HP	133 HP 1360
12 OVER ALL EFF	MP MP
13 PUMP EFF	MP MP
14 RPM PUMP	DRIVER
15 FUEL CONSUMPTION	G.P. TYPE SEASON FUEL
16 OPERATION HRS	OTHER POWER
17 ACRE-Feet PUMPED	1430 033
18 REMARKS Well A / in sec 23 on RMA map	

9-108-July 1928
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

C2-67-23 ccal

Date 8/24/35

19

Field No.

Record by L.A.H. & R.O.S.

Source of data R.M.A. files & pers. obs.

1. Location: State Colorado County Adams

Map R.M.A. well loc. map no. 7164-2

SW 1/4 SW 1/4 sec. 23 T. 2 R. 67

2. Owner Rocky Mtn. Arsenal Address Berks, Colo

Tenant None

Address

Driller Unknown

Address

3. Topography nearly flat plain

4. Elevation ft. above
below

5. Type: Dug, drilled, driven, bored, jetted 19

6. Depth: Rept. 63 ft. Meas. 63.0 ft.

7. Casing: Diam. 24 in., to in., Type iron

Depth ft., Finish

8. Chief Aquifer

From ft. to ft.

Others

9. Water level 45.67 ft. rept. 9/6 1935 above
meas. below top of

wood well rim & side which is 2.1 ft. above
below surface

10. Pump Type None

Capacity G.M.

Power K.W.

11. Yield Flow G.M. Pump

Drawdown ft. after hours pumping G.M.

12. Use: [Dm], Stock, PS., RR., Ind., Irr. (Obs.) Unused

Adequacy, permanence good obs. well

13. Quality Temp °F.

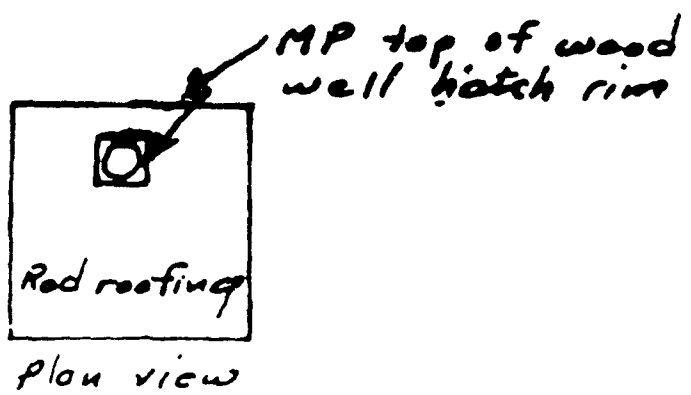
Taste, odor, color Sample Yes
No

Unit for

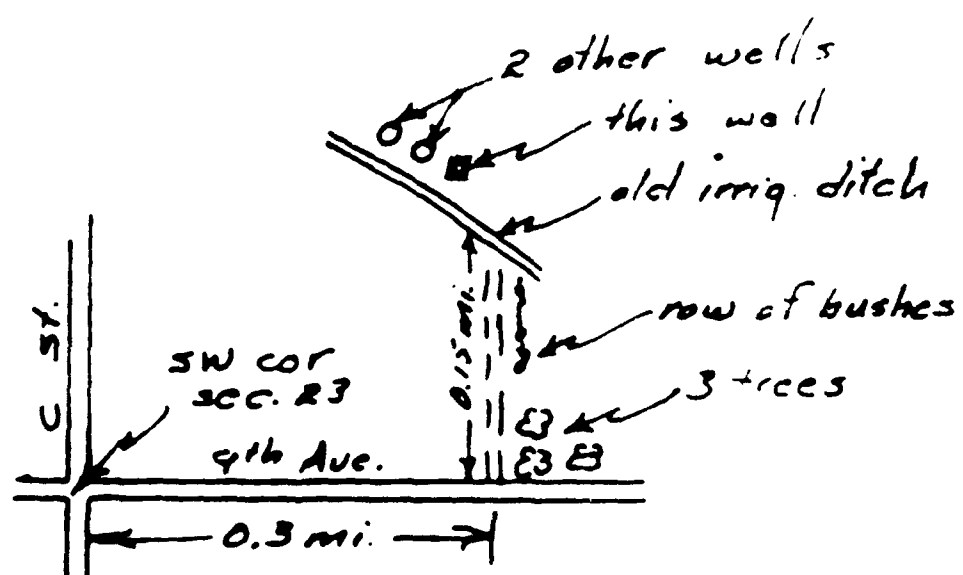
14. Remarks: (Log, Analysis, etc.) Well No. 1 in sec. 23. 22

R.M.A. Map

9/
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24 acc Co

U.S. GEOLOGICAL SURVEY GROUND WATER BRANCH
DATE: 10-2-56
PROJECT NO: 7164-2104
LOCATION: SW 34 NW 24 2 67
COUNTY: Adams
TOWNSHIP: 2
RANGE: 67
QUALITY: Qual. Water
TEMP: 20.40
COLOR: 74
SUSP: 1520
HARDNESS: 710
OWNER: Rocky Mtn Arsenal, Derby, Colo.
PERMIT NO: 38
SAP: 52

DRILLER: R. O. Smith
ALTITUDE: 5160
TYPE: DRILLED
DEPTH: 22
Casing diam: 8
DEPTH: 22
AQUIFER(S) AND DEPTHS: Sand & gravel
WATER LEVEL: 11
PUMP TYPE: (Myers) cyl.
CAPACITY: 25 (MPT)
POWER KIND: gas engine
DRIVER: 3

CATIONS	SiO ₂	26	
	Fe		
	PO ₄	0	
	Ca	185	
ANIONS	Mg	60	
	Na	198	
	K	2.6	
	CO ₃	0	
ANIONS	HCO ₃	302	
	SO ₄	650	
	Cl	148	
	NO ₃	8.4	
ANIONS	B	33	
	F	8	

11 SPEC CAT: (FRESH) LOW
12 USE DUM STOCK PS: NO
13 SAMPLE: P C H TEMP
14 REMARKS: (TASTE COLOR ODOR ETC.)
15 LABORATORY TESTS: (FRESH) LOW
16 LABORATORY TESTS: (FRESH) LOW
17 LABORATORY TESTS: (FRESH) LOW
18 LABORATORY TESTS: (FRESH) LOW
19 LABORATORY TESTS: (FRESH) LOW
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44 LABORATORY TESTS: (FRESH) LOW
45 LABORATORY TESTS: (FRESH) LOW
46 LABORATORY TESTS: (FRESH) LOW
47 LABORATORY TESTS: (FRESH) LOW
48 LABORATORY TESTS: (FRESH) LOW
49 LABORATORY TESTS: (FRESH) LOW
50 LABORATORY TESTS: (FRESH) LOW
51 LABORATORY TESTS: (FRESH) LOW
52 LABORATORY TESTS: (FRESH) LOW
53 LABORATORY TESTS: (FRESH) LOW
54 LABORATORY TESTS: (FRESH) LOW
55 LABORATORY TESTS: (FRESH) LOW
56 LABORATORY TESTS: (FRESH) LOW
57 LABORATORY TESTS: (FRESH) LOW
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60 LABORATORY TESTS: (FRESH) LOW
61 LABORATORY TESTS: (FRESH) LOW
62 LABORATORY TESTS: (FRESH) LOW
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64 LABORATORY TESTS: (FRESH) LOW
65 LABORATORY TESTS: (FRESH) LOW
66 LABORATORY TESTS: (FRESH) LOW
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81 LABORATORY TESTS: (FRESH) LOW
82 LABORATORY TESTS: (FRESH) LOW
83 LABORATORY TESTS: (FRESH) LOW
84 LABORATORY TESTS: (FRESH) LOW
85 LABORATORY TESTS: (FRESH) LOW
86 LABORATORY TESTS: (FRESH) LOW
87 LABORATORY TESTS: (FRESH) LOW
88 LABORATORY TESTS: (FRESH) LOW
89 LABORATORY TESTS: (FRESH) LOW
90 LABORATORY TESTS: (FRESH) LOW
91 LABORATORY TESTS: (FRESH) LOW
92 LABORATORY TESTS: (FRESH) LOW
93 LABORATORY TESTS: (FRESH) LOW
94 LABORATORY TESTS: (FRESH) LOW
95 LABORATORY TESTS: (FRESH) LOW
96 LABORATORY TESTS: (FRESH) LOW
97 LABORATORY TESTS: (FRESH) LOW
98 LABORATORY TESTS: (FRESH) LOW
99 LABORATORY TESTS: (FRESH) LOW
100 LABORATORY TESTS: (FRESH) LOW

ERROR: CATIONS - ANIONS
REMARKS: (FRESH) LOW
10-2-56

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

C2-67-24 ACCI

12

10-11-86

11. *Chlorophyll *a**

Source of data: N. N. A. Const. 16.29 no. 7164 2104

A. L.

Admission *Free*, *Admission*

[illegible]

Volume

dic.

(R)

2510

100

1

1

۷۰

UCC 1045 ~~1045~~ A

which is 11 ft above surface.

Capacity 25 G.M. Rept

10-11-44) Longpower 3

G. M., Mean, Rept Ent. .

63

Temp. t

USG S

20

Well No 391 cont.

7149-2104

9-128
(October 1955)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL SCHEDULE

C2-67-246CC1

Date 9/2/55

10

Field No.

Recorded by Rex O. Smith

Office No.

Source of data RMA files & field obs

1. Location State Colorado County Adams
Map RMA well loc. map no. 7164-2105
SW 1/4 NW 1/4 sec 24 T 2 R 67
2. Owner Rocky Mtn Arsenal Address Arby, Colo.
Tenant None Address _____
Driller Unknown Address _____
3. Topography mostly flat plain
4. Elevation _____ ft. ☐ above ☐ below
5. Type Drilled, driven, bored, jetted _____
6. Depth: Rept. _____ ft. Meas. 22 ft.
7. Casing: Diam. _____ in., to _____ in. Type _____
Depth _____ ft. Finish _____
8. Chief Aquifer _____ From _____ ft. to _____ ft.
Others _____
9. Water level 25.24 ft. 9/2/55 surface
24.5 ft. plumb over well which is 4 ft. below surface
10. Pump: Type None Capacity _____ G.M.
Power: Kind _____ Horsepower _____
11. Yield: Flow _____ G.M. Pump _____ G.M. Meas. Rept. Est. _____
Drawdown _____ ft. after _____ hours _____ G.M.
12. User Drum, Pump, PB, RE, Ind. etc. Adams
Adequacy, permanence fair obs. well
13. Quality fair Taste, color, odor fair odor Sample 1
Tests for arsenic, ammonia
14. Remarks (See previous, etc.) Well on 1 is sec. 24
Adams well loc. map

2 67
24 bddcc

DATE 9/2 55
BY R.O. Smith RMA files & field obs.
LOCALITY Colo. COUNTY Adams
SE. SE. NW 24 2 67
RMA well loc. map #7164-2105
Rocky Mtn. Arsenal - Derby, Colo.
TENANT None
OWNER Unknown
ALTITUDE 5155 ft
ELEVATION 6166.5
TYPE DUL DRILLED DRIVEN TESTED
DEPTH REPT 33.3

2600	FT	N
3200	FT	W
5F	54	FT

DATE 1510
TIME 74
TEMP 1060
HARDNESS 453
PERCENT 43 33

CATIONS		PPM
SiO		26
Fe		
PO4		0.1
Ca		119
Mg		38
Na		160
K		26
CO		0
HCO		287
SO		430
Cl		63
NO		11
H		59
F		14

WATER LEVEL 22.0
Static 22.67
conc. esp. N side
PUMP TYPE
PUMPED RIND
CAPACITY
DRIVEN
OTHER

REMARKS 24 bddcc
10-2-55

			LOG (S)	
1 DATE	WELL NO			
2 BY	CO	ACCT		
3 WELL DIM	DI	SPEC CAP		
4 DISCHARGE LEVEL ABOVE M.P.		TEMP		
PUMP TYPE	SIZE	MAKE		
MOTOR NO	HP	MAKE		
METER NO	V	AMPS	AM	
HEAD H ₂ O - FT		TIME (H)		
FOH		FOH		
FOH		FOH		
DIFFERENCE				
5 INPUT TO MOTOR GPH		TIME		
6 KW		1.25		
7 HP		1.34		
8 HP	1.00	HP	1.00	
9 OVER ALL EFF	HP ₂ HP ₁			
PUMP EFF	HP ₂ HP ₁			
10 RPM PUMP		DRIVER		
11 FUEL CONSUMPTION	GPH	GP TYPE SEASON FULL		
12 OPERATION HRS		OTHER POWER		
13 ACRE FEET PUMPED				
14 REMARKS Well #4 in Sec 24 on Arsenal Well loc. map D/W on 11/30/55 - 22.09' D/W on 4/2/56 - 21.40				

9-108-July 1938
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

M. J. De
WM-55
MM-57

WELL SCHEDULE

CR-67-246dd1

Date 9/2/55, 19 Field No. _____

Record by IPex O. Smith Office No. _____

Source of data IPMA files & field obs

1. Location: State Colorado County Adams

Map IPMA well loc. map no. 7164-2105

SE 1/4 NW 1/4 sec. 24 T. 2 R. 67 W.

2. Owner: Rocky Mtn. Arsenal Address Perby, Colo.

Tenant None Address _____

Driller Unknown Address _____

3. Topography Nearly flat plain

4. Elevation 5166.8 above MSL (VMS-Alid)

5. Type: Dug drilled, driven, bored, jatted _____ 19 _____

6. Depth: Rept. _____ ft. Meas. 33.3 ft.

7. Casing: Diam. 24 in., to _____ in., Type Cmc.

Depth 34 ft., Finish _____

8. Chief Aquifer _____ From _____ ft. to _____ ft.

Others _____

9. Water level 22.67 ft. rept. 9/2/55 above top of

Cmc. 539 N side which is 0.7 ft. above surface

10. Pump: Type None Capacity _____ G. M. _____

Power: Kind _____ Horsepower _____

11. Yield: Flow _____ G. M., Pump _____ G. M., Meas., Rept. Est. _____

Drawdown _____ ft. after _____ hours pumping _____ G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. Obs. Unused

Adequacy, permanence good obs. well

13. Quality _____ Temp. _____ °F.

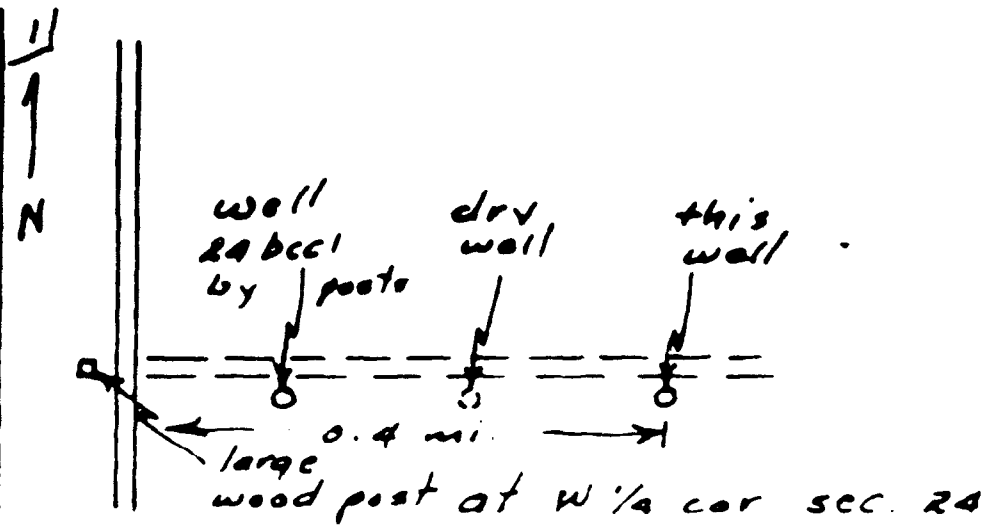
Taste, odor, color _____ Sample Yes USGS

Unfit for _____

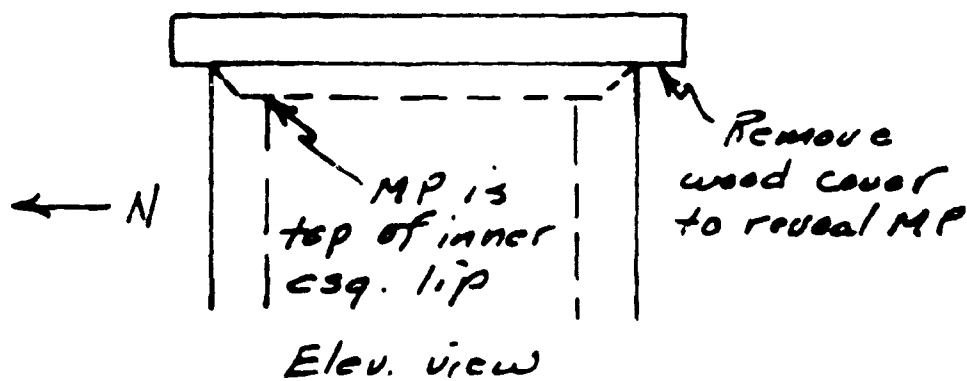
14. Remarks: (Log, Analysis, etc.) Well no. 4 in sec. 24

on Arsenal well loc. map

P/W - 11/6/57 - 20.18' below MP - PC



91



D/W on 11/30/55 — 2209'

D/W on 4/3/56 — 21.40

LOG (S)	
1 DATE	WELL NO.
2 BY	CU
3 WELL DNM	NO
4 DISCHARGE LEVEL ABOVE M.P.	TEMP
5 PUMP TYPE	WAGE
6 MOTOR NO.	WAGE
7 METER NO.	AMPS
8 INPUT TO MOTOR DISC REV	TIME
9 HP ₁	1.55
10 HP ₂	1.15
11 HP ₃	1.55
12 OVER ALL EFF	HP ₃ / HP ₁
13 PUMP EFF	HP ₂ / HP ₁
14 RPM PUMP	DRIVER
15 FUEL CONSUMPTION	G.P.H.
16 OPERATION	OTHER POWER
17 ACRE-Feet PUMPED	1400 000
18 REMARKS	Well # 2 in sec. 26 on Arsenal Well
	loc. map # 7164-2105

9-183-July 1933
Revised

WV Keysoit
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

CE-67-26 bobi

Date *8/31/55*

10

FIELD

Record by *Rex O. Smith*

Office No.

Source of data *RMA files & pers. obs*

1. Location State *Colorado* County *Adams*
Map *RMA well loc map no. 7164 2105*
NE 1/4 NW 1/4 sec. 26 T. 2 S. R. 67
2. Owner *Rocky Mtn. Arsenal* Address *Derby, Colo.*
Tenant *None* Address _____
Driller *Unknown* Address _____
3. Topography *very gently rolling plain*
4. Elevation _____ ft. above _____ below
5. Type ☒ Dug ☐ drilled, driven, bored, jetted — 19 —
6. Depth Rept _____ ft. Meas *39.4* ft
7. Casing Diam *28* in. to _____ in. Type *brick*
Depth — ft. Finish _____
8. Chief Aquifer _____ From _____ ft. to _____ ft.
(Others _____)
9. Water level *39.10* ft. rept. *8/31/55* *top of*
board well casing W. side which is *0.6* ft. *above* surface
below
10. Pump Type *None* Capacity _____ G. M. _____
Power: Kind _____ Horsepower _____
11. Yield: Flow _____ G. M. Pump _____ G. M. Meas. Rept. Est. _____
Drawdown — ft. after _____ hours pumping _____ G. M.
12. Use: Dom., Stock, PS, RR, Ind., Irr. ☒ *UNUSED*
Adequacy, permanence *poor obs. well*
13. Quality *poor, stagnant* Temp. _____ °F.
Taste, odor, color *foul odor* Sample Yes _____ No _____
Use for *human consumption*
14. Remarks: (Log, Analysis, etc.) *Well no. 2 in sec. 26 on*
Arsenal well loc. map no. 7164-2105

2 67
27 66a Ca

9/6/55

ROS LAH

RMA files 1 fion obs

Quel water

875

Colo.

County Adams

7.0

NE NW NW 27 2 67

520

RMA map # 7164-2105 4900 ft; 4400 W of SE corner 27

271

Ruby Mtn Arsenal in Derby Colo.

31

15

None

3.20

Topo

45

35.7

W

7.10

Iron

AQUICLIM AND DEPTHS

Static

35.67

9/6/55

Top of

iron csg. N side

7.0

None

	ppm	ppm
SO ₄		
Fe		
Ca	79	
Mg	18	
Na	68	
K	41	
CO ₃	0	
HCO ₃	112	
SO ₄	340	
Cl	195	
NO ₃	13	
H	.01	
F	6	

Unused, formerly domestic

C3-31

11-9-54

LOG	
1 DATE	WELL NO.
2 BY	ACCY
3 WELL NAME	SPC CAP
4 DISCHARGE LEVEL ABOVE M.P.	TEMP
5 PUMP TYPE	MAKE
6 MOTOR NO.	MAKE
7 WATER NO.	CMPS
8 INPUT TO MOTOR DISC REV.	TIME
9 REV.	130
10 HP	1130
11 HP	100
12 OVER ALL EFF.	HP
13 PUMP EFF.	HP
14 RPM PUMP	DRIVEN
15 FUEL CONSUMPTION	G.P.H.
16 FUEL PUMPED	1000000
17 REMARKS	Well #2 in Sec 27 on Arsenal well loc. map. Almost dry

9-122-July 1968
Revised

on Keyser
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

C2-67-2766a1

Date 2/6/55, 19____ Field No. _____
Record by R. A. S. & L. A. H. Office No. _____
Source of data R. M. A. since 5 Sept. 1954.

1. Location: State California County Adams
Map R. M. A. Map No. 7164-2105
NW 1/4 NW 1/4 sec. 27 T. 22 N. R. 67 E.
2. Owner: Rocky Mtn. Arsenal Address Deer, Cal.
Tenant None Address _____
Driller W. A. R. W. R. Address _____
3. Topography Nearly flat plain
4. Elevation _____ ft. above
below
5. Type: Drill driven, bored, jetted 19____
6. Depth: Rept. 45 ft. Meas. 35.7 ft.
7. Casing: Diam. 7 1/2 in., to _____ in., Type Steel
Depth _____ ft., Finish _____
8. Chief Aquifer _____ From _____ ft. to _____ ft.
Others _____
9. Water level 35.67 ft. rept. 2/6 1955 above surface
ice on S. side which is 7.0 ft. above surface
10. Pump: Type None Capacity _____ G. M. _____
Power: Kind _____ Horsepower _____
11. Yield: Flow _____ G. M., Pump _____ G. M., Meas., Rept. Est. _____
Drawdown _____ ft. after _____ hours pumping _____ G. M.
12. Use: Dom., Stock, PS., RR., Ind., Irr. Obs. ~~Used~~
Adequacy, permanence _____
13. Quality _____ Temp. _____ °F.
Taste, odor, color _____ Sample Yes
No
Used for _____
14. Remarks: (Log, Analysis, etc.) Well No. 2 in Sec. 27. AR
Arsenal well-log. M. A. P.

67
27 ddd

8/24/55

ROSIAMH

RMA files & field obs.

Colo

Adams

SE SE SE 27 2 67

RMA del. map 7/64-2105 & Aerial photo.

Ruby Man. Arsenal Derby, Colo.

None

Unknown

5190.4

Alid
VMBP RMA

SE	SE	SE
27	27	27
27	27	27
27	27	27
27	27	27
27	27	27

58

57.8

3/2 50

iron

Static S.E.

51.36

9/6/55

top of

tin at top of conc. site

0.5

None

Quar. cluster

576

87

261

32

76

9

Beta Gamma

DO

SO

Ca

total No

Ca

M

Na

K

CO

HCO

SO

Cl

NO

H

F

8.5

2

78

6

0

151

60

73

16

.08

1.4

unused, formerly dom.

10-1-55

1. DATE	2. BY	3. WELL DISCH	4. DIS. MARGE. LEV. 150' 1/2 MP
5. PUMP TYPE	6. MOTOR NO	7. METER NO	8. INP. T. 1.5 MION
9. KW	10. HP	11. HP	12. OVER ALL EFF
13. PUMP EFF	14. PPM PUMP	15. CONSUMPTION	16. OPERATE N. 1/2
17. GPM TEST PUMPS	18. GPM	19. GPM	20. GPM

REMARKS Well # 5 in Sec 27 on Arsenal Well
 loc. map

9-22- July 1968
Revised

ON Kayser
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

C2-67-29ddd1

Date 8/24/55, 19____ Field No. _____

Record by RDS & LAM Office No. _____

Source of data RMA file 2 & field obs.

1) Location: State Colorado County Adams
Map RMA well loc. map no. 7164-2MS & aerial photos
SE 1/4 SE 1/4 sec. 27 T. 2 R. 67 N.

2. Owner: Rocky Mountain Iron Derby, Colo

Tenant Name Address _____

Driller Unknown Address _____

3. Topography mostly rolling plain

4. Elevation _____ ft. above _____ below

5. Type: Dug drilled driven, bored, jetted _____

6. Depth: Rept. 27 ft. Meas. 27.2 ft.

7. Casing: Diam. 3 1/2 in. to _____ in. Type iron

Depth _____ ft. Finish _____

8. Chief Aquifer _____ From _____ ft. to _____

Others _____

9) Water level 51.36 ft. 9/6/1955 above top of fin at top of case & sidewich is 0.5 ft. below surface

10. Pump: Type None Capacity _____ G. M. _____

Power: Kind _____ Horsepower _____

11. Yield: Flow _____ G. M., Pump _____ G. M., Meas., Rept. Est. _____

Drawdown _____ ft. after _____ hours pumping _____ G. M.

12. Use: Dom., Stock, FS, RR., Ind., Irr. Unused

Adequacy, permanence good obs. well

13. Quality _____ Temp _____ °F.

Taste, odor, color _____ Sample Yes _____ No _____

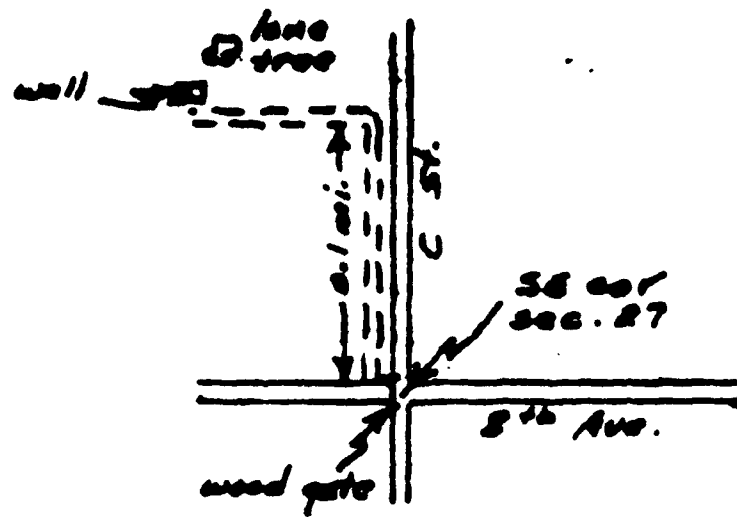
Unit for _____

14. Remarks: (Log, Analysis, etc.) Well no. 5 in sec. 27

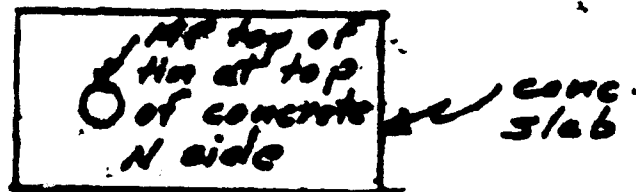
on Ardena well loc. map

About 200' W of SE cor. sec. 27

11
1
N



9
1
N



Plan view

OFFICE OF THE
SHERIFF
COUNTY OF LOS ANGELES
CALIFORNIA

9-122-July 1966
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

C2-67-28dab1

Date 9/6/65 , 19 65 Field No.
Record by R. O. S. & L. A. N. Office No.
Source of data R. M. A. files + pers. obs.

1) Location: State Colorado County Adams
Map R. M. A. Map No. 7164-2105

N. 1/2 SE 1/4 Sec. 28 T. 2 N. R. 67 6

2. Owner Baby M. Arneson Address Derby, Colo.

Tenant None Address

Driller U. M. A. M. A. Address

3. Topography nearly flat plain

4. Elevation 5140 ft. above MSL
below

5. Type Dr drilled, driven, bored, jetted 10

6. Depth: Rept. 48 ft. Meas. 53.2 ft.

7. Casing: Diam. 4 1/2 in. to 10 in. Type Cas

Depth ft. Finish Blk. Iron

8. Chief Aquifer From ft. to ft.

Others

9) Water level 42.20 ft. MSL 2/6 1965 above top of
concrete cas. which is at above surface
below

10. Pump: Type None Capacity G. M.

Power: Kind Horsepower

11. Yield: Flow G. M., Pump G. M., Meas. Rec. Est.

Drawdown ft. after hours pumping G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. Unsed

Adequacy, permanence

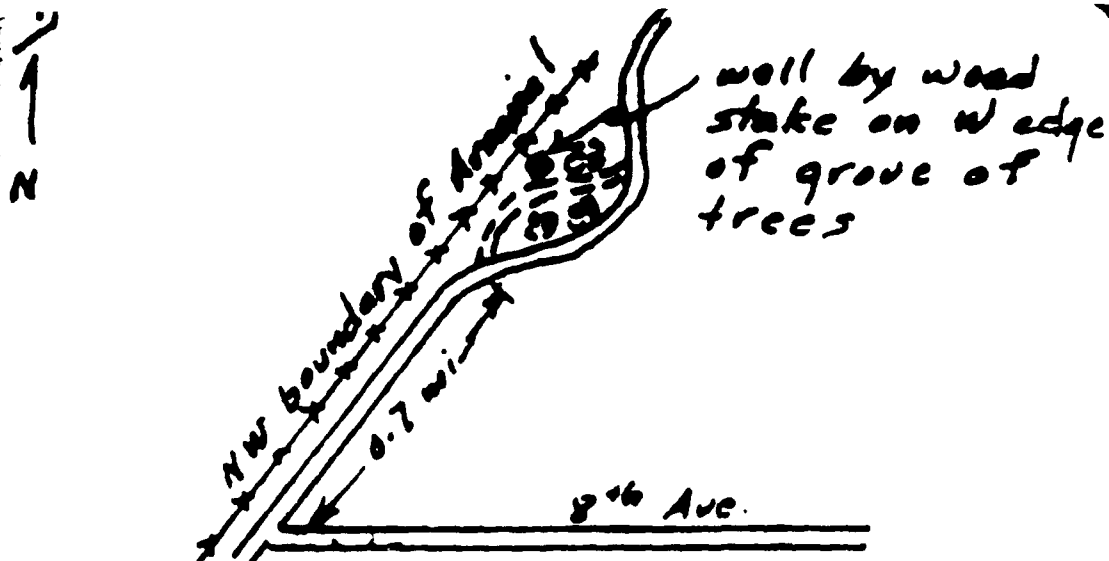
13. Quality Temp °F.

Taste, odor, color Sample Yes
No

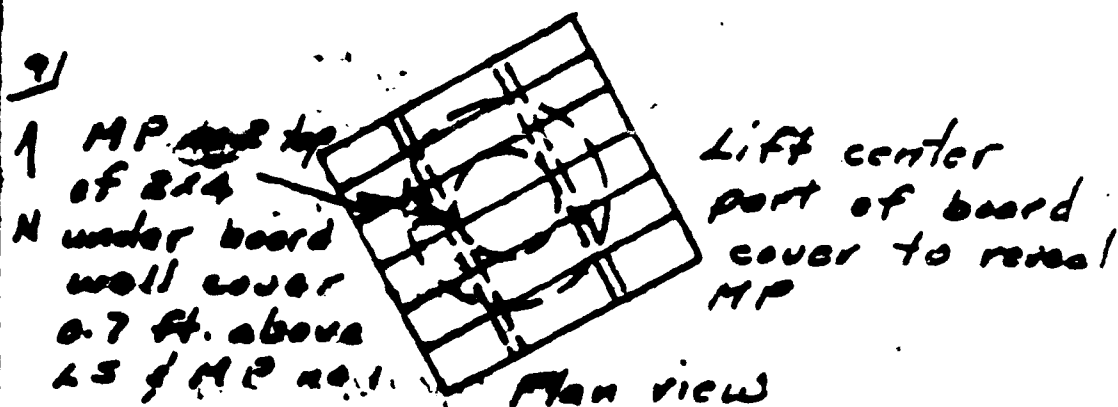
Unit for

14. Remarks: (Log, Analysis, etc.) Well No. 1 in Sec. 28

on Arneson Map.



7/ 44" 20 cas. to 84.3 ft.; 18" iron cas. to 53.2 ft.



LOG 15

1 DATE

WELL NO

2 BY

CO

ACCT

3 WELL DEPTH

DI

SPEC CAP

4 DISCHARGE LEVEL ABOVE M.P.

TEMP

5 PUMP TYPE

SIZE

MAKE

6 MOTOR NO

HP

MAKE

7 METER NO

I

LOOPS

RA

8 READINGS ON

TIME T

A

T

P

T

9 DIFFERENCE

10 INPUT TO MOTOR DISC. NO.

TIME

11 KWH

1.50

12 HP

1.50

13 HP

1.50

HP

1.50

14 OVER ALL EFF.

HP

1.50

15 PUMP EFF.

HP

1.50

16 GPM PUMP

DRIVER

17 FUEL CONSUMPTION

GPH

G.P.

TYPE

18 OPERATION NOS

OTHER

POWER

19 ACRES-FEET PUMPED

I

1.50

20 REMARKS: Well #8 in Sec 33 on Arsenal Map

9-188-July 1936
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

MAP 53
MM-57

WELL SCHEDULE

C2-67-33bch

Date 2/25/55, 19... Field No.
Record by R.S. & L.H. Office No.
Source of data R.M.A. files & Pers. Obs.

1. Location: State Colorado County Adams
Map P.M.A. well loc. map No. 7164-2105
SW X NW X sec. 33 T. R N R. 67 E. W

2. Owner Rcky Mtn. Arsenal Address Deer, Colo.
Tenant None Address
Driller K.K.N. & Co. Address

3. Topography gently rolling plain

4. Elevation 5151.0 ft. below M.S.L. (V.M.S. A.D.)

5. Type: Dug drilled driven, bored, jetted 19....

6. Depth: Rept. 50 ft. Meas. 47.6 ft.

7. Casing: Diam. 6 1/2 in., to in., Type iron
Depth ft., Finish

8. Chief Aquifer From ft. to ft.
Others

9. Water level 44.95 ft. rept. 9/6 19 55 above top of
iron cas. E side which is 0.5 ft. below surface

10. Pump: Type None Capacity G. M.
Power: Kind Horsepower

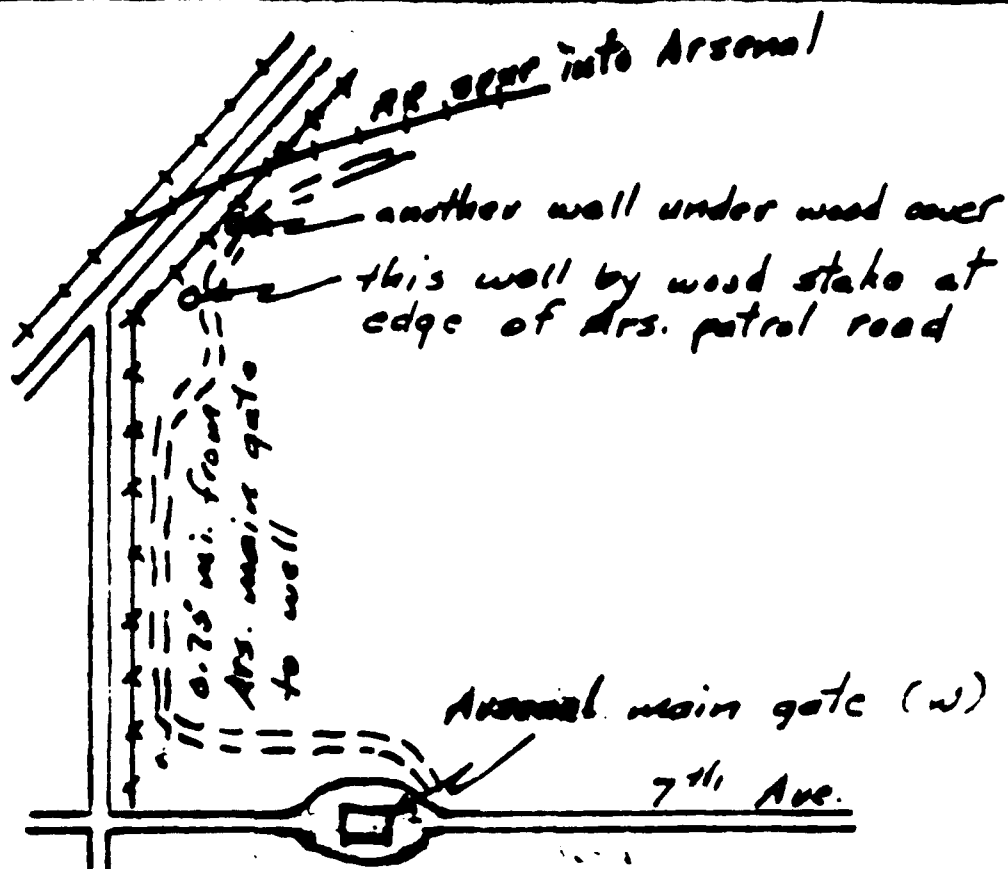
11. Yield: Flow G. M., Pump G. M., Meas., Rept. Est.
Drawdown ft. after hours pumping G. M.

12. Use: Dom., Stock, PS., RR., Ind., Irr. Obs. Unused
Adequacy, permanence

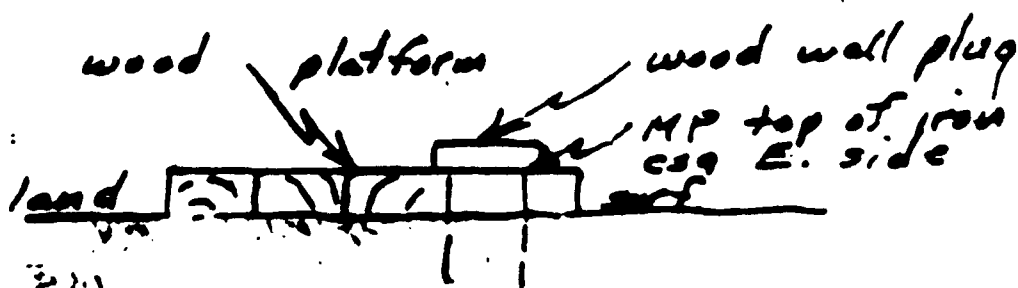
13. Quality Temp °F.
Taste, odor, color Sample Yes No
Use for

14. Remarks: (Log, Analysis, etc.) Well No. 8 in Sec. 33 on
Arsenal Map
E/W - 11/6/57 - 48.23' below I.P. - DC

11
1
N



91



W on 12/1/55 - 44.91
W on 4/3/56 - 44.75

2 67 0
35 6000

8/24/ 55

LAN & ROS - RMA Fins & Pmc obs
Colorado Adams

NW NW 35 2 67 0
RMA well loc. map & aerial photos of Adams Co
Rocky Mtn. Arsenal Derby, Colo.

None

UNKNOWN

526.8

40.3

35

30" ID.

8?

Approx 1200' W
RMA's of NW
Co. Sec 35

Static 36.57

9/4/55 top of
1.3

well cover plank N. edge

None

Unused

CATIONS
SiO
Fe
Ca
Mg
K
CO
HCO
SO
Cl
NO
R

LOG (S)

DATE	WELL NO.	CO	ACCT
1 BY	DR	DR	DR
1 OF L. INCH	DR	DR	DR
1 DISCHARGE LEVEL ABOVE M.P.	DR	DR	DR
PUMP TYPE	DR	DR	DR
MOTOR NO.	DR	DR	DR
METER NO.	DR	DR	DR
HEAD NGV	DR	DR	DR
DIFF.	DR	DR	DR
REFERENCE	DR	DR	DR
1 INPUT TO MOTOR DIS. REV.	DR	DR	DR
1 KW	DR	DR	DR
1 HP	DR	DR	DR
1 HP.	DR	DR	DR
2 OVER ALL EFF.	DR	DR	DR
PUMP EFF.	DR	DR	DR
SPIN PUMP	DR	DR	DR
FUEL CONSUMPTION	DR	DR	DR
OPERATION	DR	DR	DR
41 HP FEET PUMPED	DR	DR	DR

REMARKS For OBS. well. 11/30/55 - 36 96 wend-y
 11/21/56 - 87-89 11/6/57
 Well #2 in Sec 35 on PMA loc. near.
 Be sure to get tape into 8" csg. at bottom
 of 30" large well when meas'g
 1/ 80' 30 brick csg. to 35', then about an 8"
 iron csg. to 40'

9-186-July 1935
Revised

CH. K. YSCIT
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

MM-65
MM-67

WELL SCHEDULE

C2-67-35 bbd1

Date 8/24/55

19

Field No.

Record by L.A.H. & R.O.S.

Office No.

Source of data RMA files & pers. obs.

1 Location: State Colorado County Adams
Map RMA well loc. map & aerial photos of Adams Co.

NW 1/4 NW 1/4 sec. 35 T. 2 S. R. 67

2 Owner Rocky Mtn. Arsenal Address Derby, Colo

Tenant None Address

Driller Unknown Address

3 Topography very gently rolling plain

4 Elevation ft. above
below

5 Type Dug/drilled, driven, bored, jetted 19

6 Depth: Rept. 30 ft. Meas. 40.3 ft.

7 Casing: Diam. 30 in. to 2 in. Type steel

Depth ft. Finish

8 Chief aquifer From ft. to

Others

9 Water level 36.57 ft. 7/6/1955 above top of well course peak of ridge of which is 1.3 ft. below surface

10 Pump: Type None Capacity G. M.

Power: Kind Horsepower

11 Yield: Flow G. M., Pump G. M., Meas., Rept. Est.

Draw down ft. after hours pumping G. M.

12 Use: Dom., Stock, PS, RR., Ind., Irr Obs. unused

Adequacy, permanence fair obs. well

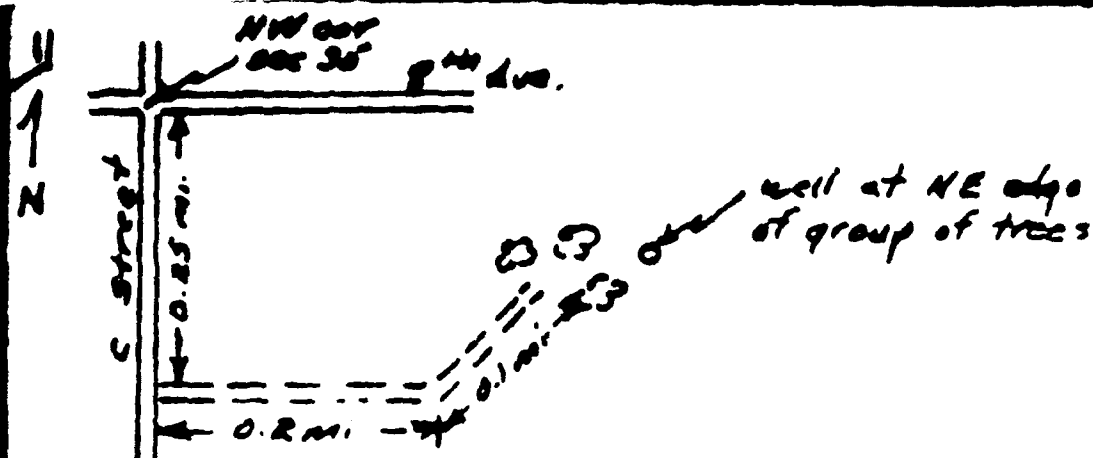
13 Quality Temp °F.

Taste, odor, color Sample Yes No

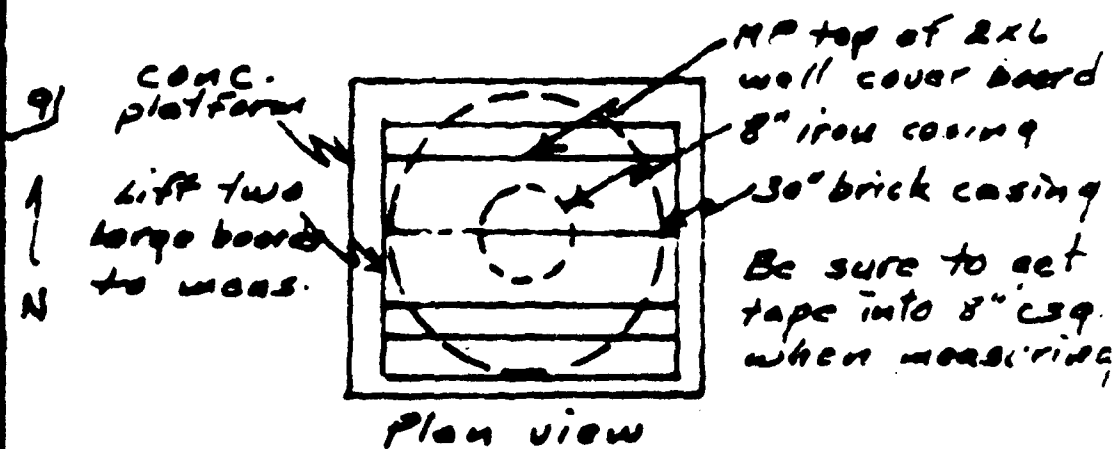
Unfit for

14 Remarks: (Log, Analysis, etc.) Well no 2 in sec. 35 on Arsenal well loc map. Be with next trip to site & log at bottom of well.

About 1500' E of 900' S of NW cor. sec. 35



7/ 30" ID brick csq to 35 ft., then about
on 8" iron csq. to 40 ft.



D/W on 11/30/55 — 36.96

D/W on 4/3/56 — 37.88

well dry 11/6/57

2 3 67

35 67

blonde

DATE 10-10-55

BY Petri

LOCATION STATE Colo. Adams

NE SW NW 35 2 T. 67

3,450 ft N, 3,400 ft E of SE cor sec 35

OWNER RMA

TENANT

DEVELOPER

LATITUDE 3220

TYPE DUG OR DRIVEN WELL

DEPTH 126.8

CASING 3 1/2

DEPTH

WATER LEVEL

DISCHARGE

ORADATION

WPC CAP

TRANSMISSION

PERMEABILITY

TO YIELD

TO USE

TO SAMPLE

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

U.S. GEOLOGICAL SURVEY GROUND WATER BRANCH

Qual water

1560

7.7

962

98

86

12

Reid Gamma

EDM

ABOUT 250' N.E.
700' E. OF W. 1/4
COR SEC 35

SO.	51
Fe	
PO ₄	.1
Ca	27
Mg	74
Na	280
K	1.8
CO	0
HCO ₃	115
SO ₄	475
Cl	69
NO ₃	.11
B	.2
F	.4

9-6 10.55 BELOW T.C.E.

0.4 ABOVE SURFACE

CAPACITY

DRIVEN

TO YIELD

TO USE

TO SAMPLE

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

TO REMARKS

UNUSED - good for obs

ERROR

REMARKS

NOT DATA

011 Keyser

9.183
(October 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL SCHEDULE

CR-67-35bca1

Date 8/20/55

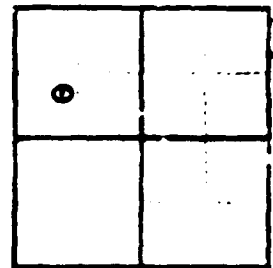
Field No.

Record by LAM & ROS

Office No.

Source of data RMA files & field obs.

1. Location State Colorado County Adams
Map RMA well loc. map no. 7164-2105 & aerial photos
SW 1/4 NW 1/4 sec 35 T 2 R 67
2. Rocky Mtn Arsenal Address Derby, Colo.
Tenant None Address —
Driller Unknown Address —
3. Topography gently rolling plain
4. Elevation — ft. above — ft. below
5. Type Aug. drilled driven, bored, jetted 19
6. Depth 124 ft. Meas 126.8 ft.
7. Casing Diam 3 1/2 in., to — in., Type SI
Depth — ft., Finish —
8. Chief Aquifer — From — ft. to —
Others —
9. Water level 88.78 ft. rept 9/6/1955 above top of
100 ft. cap. E side below surface
which is 0.4 ft. below
10. Pump: Type None Capacity — G. M. —
Power: Kind — Horsepower —
11. Yield: Plus — G. M. Pump — G. M. Motor and Fan —
Drawdown — ft. after — G. M.
12. Use: Dom. Stock, C. S. RR, Ind. Unusual
Adequacy, permanence good obs well
13. Quality Temp — °F.
Taste, odor, color Sample Yes No
Unfit for —
14. Remarks: Lab. Analyses, etc. Well no. 1 in sec. 35 on
Arsenal well loc. map



WP-11677

APPENDIX D
REPORT OF PLUGGING OPERATIONS
OF DEEP WELLS ON THE
ROCKY MOUNTAIN ARSENAL

REPORT OF PLUGGING OPERATIONS OF DEEP WELLS
ON THE ROCKY MOUNTAIN ARSENAL

In the area of the contaminated surface aquifer, numerous deep wells extend into the Laramie formation. These farm wells existed prior to the acquisition of the land by the Government for the purpose of construction of the Rocky Mountain Arsenal. All of the wells were tapping bedrock water.

The possibility exists that contaminated water from the surface aquifer could be transmitted to the bedrock aquifer by piping down along the casing in the deep wells. To eliminate the possibility of contaminating the bedrock aquifer, the Corps of Engineers, U. S. Army, Omaha District, recommended to the Rocky Mountain Arsenal that the deep wells be plugged.

Upon concurrence by the Rocky Mountain Arsenal, the Corps of Engineers began the well plugging program in April, 1962. Since the South Platte River is the major controlling drainage feature in the area, the elevation of the maximum scour of the river, elevation 4850, was chosen as the maximum depth of the bottom seal-off plug in the wells.

Method of Plugging:

A Failing 1500 drill was used as a workover rig to clean the wells of debris. The majority of the wells were either bridged off by caving or by foreign material dropped into the wells. The wells were cleaned by using roller rock bits and a bentonitic drilling mud.

After the wells were cleaned, the casing was parted at the seal-off interval by detonating two 1 $\frac{1}{4}$ " sticks of 60% high velocity gelatin dynamite. Upon computation of the amount of neat cement grout put into the well after the blast, the parting of the well casing ^{was} more than effectively achieved in all cases.

Following the parting of the casing, 2" galvanized pipe was put in the well and neat cement grout was pumped into the seal-off zone. The neat cement grout consisted of a slurry of portland cement weighing approximately fifteen pounds per gallon. The casing was parted and cemented off at three intervals in each well.

Individual Well Records:

Section 22, T2S, R67W

Well #A-1 (Well #3 on reference map)

Elev. 5140 BR Elev. 5108

Well #A-1 (Cont'd)

500' deep?

Well casing - 4" dia. iron

1 $\frac{1}{4}$ " pipe set in well with hand pump at surface.

Well housed in 4' x 4' x 6' concrete pit.

Well plugging record:

Pulled 1 $\frac{1}{4}$ " pipe and pump.

Washed hole clean to 292'.

Blasted casing at 280' depth.

Pumped 115 gal. neat cement grout in hole.

Blasted casing at 100' depth.

Pumped 95 gal. neat cement grout in hole.

Blasted casing at 37' depth.

Tremied 70 gal. neat cement grout in hole.

Top of hardened cement in hole at 15' depth.

Well #A-49a (Well #2 on reference map)

Elev. 5170 BR Elev. 5120

524' deep?

Well casing - 3' dia. concrete

1 $\frac{1}{4}$ " pipe in well with hand pump at surface.

Well plugging record:

Pulled 1 $\frac{1}{4}$ " pipe and hand pump from well.

Probed and washed with rock bit and N rods.

Found no indication of drilled well deeper than
probed depth of 34'. Large diameter casing
indicates this is a shallow well. Depth
of 524' in records must be in error.

Did not fill well, replaced well cover.

Well #A-49b (Well #1 on reference map)

Elev. 5130 BR Elev. 5100

500' deep?

Well casing - 6" dia. iron

Well housed in 4' x 4' x 6' concrete pit.

Well #A-49b (Cont'd)

Well plugging record:

Cleaned debris from pit.
Washed hole clean to 290' depth.
Blasted casing at 280' depth.
Pumped 115 gal. neat cement grout in hole.
Blasted casing at 123' depth.
Pumped 155 gal. neat cement grout in hole.
Blasted casing at 40' depth.
Tremied 120 gal. neat cement grout in hole.
Hard cement in pit, hole completely filled.

Section 23, T2S, R67W

Well #A-2 (Well #4 on reference map)

460' deep?

Unable to locate well. Arsenal records indicate well was razed and filled.

Well #A-3b (Well #5 on reference map)

Elev. 5150 BR Elev. 5130

520' deep?

Well casing - 4" dia. iron

Windmill in state of disrepair over well.

Hand pump set on casing at ground surface.

Well plugging record:

Dismantled windmill, pulled 1½" pipe and hand pump from well.
Washed hole clean to 300' depth.
Blasted casing at 300' depth.
Pumped 200 gal. neat cement grout in hole.
Blasted casing at 160' depth.
Pumped 100 gal. neat cement grout in hole.
Blasted casing at 70' depth.
Pumped 110 gal. neat cement grout in hole.
Blasted casing at 30' depth.
Tremied 75 gal. neat cement grout in hole.
Top of hardened cement in hole at 3' depth.

Well #A-4 (Well #6 on reference map)

480' deep?

Dug and probed area trying to locate well. Unable to locate it. Former resident stated the well had been razed and filled by the Rocky Mountain Arsenal.

Section 24, T2S, R67W

Well #D-1d (Well #6 on reference map)

Elev. 5165 BR Elev. 5135

450' deep?

Well casing - 30' dia. galvanized

Well plugging record:

Probed and washed hole with rock bit and N rods.

Unable to find evidence that the well was drilled deeper than 50'. Large diameter casing supports this evidence. Records of deeper depth must be in error.

Did not fill well, replaced well cover.

Well #D-10 (Well #1 on reference map)

Elev. 5180 BR Elev. 5150

No data on total depth.

Well casing - 6-3/4" dia. galvanized

Well plugging record:

Attempted to clean hole with N rod and rock bit.

Hole appeared to be filled with debris.

Twisted rock bit off in hole at 35.6' depth.

Blasted casing at 35' depth.

Tremied 100 gal. neat cement grout in hole.

Hard cement standing in hole at 5.5' depth.

Section 26, T2S, R67W

Well #A-59b (Well #2 on reference map)

Elev. 5190 BR Elev. 5142

Well #A-59b (Cont'd)

700' deep?

Well casing - 30" dia. brick

Well plugging record:

Probed and washed well but unable to find evidence that well was drilled deeper than 30'. Large diameter brick casing indicates well was hand dug and the 700' depth shown in the records is erroneous.

Did not fill well, replaced well cover.

Well #A-87 (Well #1 on reference map)

Elev. 5180 BR Elev. 5155

27' deep?

Hand dug down 6' but unable to locate well casing. Field evidence indicates this well to be of greater drilled depth than 27'. The records of Well #A-59b could be the records of this well. Rocky Mountain Arsenal records show this well to be razed and filled.

Backfilled hand dug location hole.

Section 27, T2S, R67W

Well #A-55b (Well #2 on reference map)

Elev. 5120 BR Elev. 5070

No data on total depth.

Well casing - 7-1/8" dia. galvanized.

Well housed in 6' x 6' x 7.5' concrete pit.

Well plugging record:

Filled well pit with dirt.

Cleaned and washed hole to 58' depth, encountered hard obstruction. Put drive sampler on bottom of N rods and drove sampler from 58' to 59' using 70 blows.

Recovered bedrock from drive sampler.

Blasted casing at 53' depth.

Well #A-55b (Cont'd)

Tremied 55 gal. neat cement grout in hole.
Blasted casing at 33' depth.
Tremied 50 gal. neat cement grout in hole.
Hand cement in hole at 15' depth.

Well #A-58 (Well #1 on reference map)

Elev. 5125 BR Elev. 5075

620' deep?

Well casing - 5" dia. iron

Well housed in 4' x 6' x 6" concrete pit.

Well plugging record:

Cleaned and washed hole to 280' depth.
Blasted casing at 280' depth.
Pumped 500 gal. neat cement grout in hole.
Blasted casing at 160' depth.
Pumped 300 gal. neat cement grout in hole.
Blasted casing at 58' depth.
Pumped 110 gal. neat cement grout in hole.
Hard cement in hole at 16' depth.

Section 35, T2S, R67W

Well #A-91 (Well #1 on reference map)

Elev. 5205 BR Elev. 5175

124' deep

Well casing - 4" dia. iron

Casing located at ground surface.

Well plugging record:

Cleaned hole to 128' depth.
Blasted casing at 100' depth.
Tremied 80 gal. neat cement grout in hole.
Blasted casing at 37' depth.
Tremied 60 gal. neat cement grout in hole.
Hard cement in hole at 8' depth.

Well #A-92 (Well #4 on reference map)

Elev. 5245 BR Elev. 5217

Well #A-92 (Cont'd)

650' deep?

Well casing - $5\frac{1}{2}$ " dia. iron

Well housed in $4\frac{1}{2}$ ' dia. rough circular
6' deep concrete and brick pit.

Well pit filled with dirt by RMA.

Well plugging record:

Washed and cleaned hole to 400' depth.

Blasted casing at 400' depth.

Pumped 250 gal. neat cement grout in hole.

Blasted casing at 250' depth.

Pumped 190 gal. neat cement grout in hole.

Blasted casing at 70' depth.

Tremied 50 gal. neat cement grout in hole.

Blasted casing at 35' depth.

Tremied 50 gal. neat cement grout in hole.

Hard cement in hole at 10' depth.

Section 36, T2S, R67W

Well #D-23 (Well #1 on reference map)

No data on total depth.

Unable to locate this well. Rocky Mountain Arsenal
records indicate the well was razed and filled.

Well #D-24 (Well #2 on reference map)

No data on total depth.

Unable to locate this well. Rocky Mountain Arsenal
records indicate the well was razed and filled.

APPENDIX E
PRE-1942 WELLS
SUMMARY OF AVAILABLE DATA

LEGEND

Section Number

Hole Number

numeral - number from Map 7164-2105
letter - additional well from appraisal reports

Tract Number - 1942

From appraisal reports

Tract Number - 1946

From Army data shown in Appendix B

Well Status

C = "covered" P = "plugged"

F = "filled"

A = "as is"

Well Depth in Feet

(600) - more than one well on a parcel;
uncertainty as to which one the depth refers

S = Shallow

D = Deep

Casing Type

C = Concrete

I = Iron

B = Brick

C/S = Steel casing in concrete pit or casing

S = Steel

Note: Data for each well appears on two consecutive pages.

* = Suggested priority well for investigation.

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		CASING DIAMETER IN INCHES		CASING TYPE	
		1942 REPORTS ATTACH 2	1946 ARMY WELL INVENTORY APP. B	1942 REPORTS APP. B	1946 ARMY WELL INVENTORY APP. C	1942 APPRAISAL REPORTS APP. A	1946 ARMY WELL INVENTORY APP. C
1	A	E5		6			
	B	E6		6			
2	1	B66	B66	6	4		
	2	B65	B65		6		
	3	B63	B63				
	4	B63	B63				
	5	B12	B12				
3	1	B62	B62		40		C
	22	B62	B62				
	2	B61	B61		6		
	3	B60	B60				
	4	B50	B55				
	5	B5	B12		6		
	6	B4	B4		6		
	7	B6	B6		8		
	8	B37	B37				
	9	B42	B42				
	A	B42					
10	10	B43	B43		18		TILE
	11	B44	B44		6		

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		CASING DIAMETER IN INCHES		CASING TYPE	
		TRACT NUMBER -1942 APPRAISAL REPORTS ATTACH 2	TRACT NUMBER -1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B
	2105						
	12	B44	B56	48			
	13	B51	B51	6			
	14	B58	B58				
	15	B40	B40				
	16	B38	B38	6			
	17	B57	B52	48			
	18	B59	B59		6		
	19	B54	B54	42	30		
	B	B54					
	20	B52A	B52A				
	21	B53	B53				
	C	B10					
	D	B11		6			
	(23)	B39	B39		6		
	F	B41					
	G	B46					
	H	B48					
	I	B49		6			
	J	B55					
	K	B55					

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		CASING DIAMETER IN INCHES		CASING TYPE	
		1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B
	2105	ATTACH 2	APP. B				
	L	B56		48			
	(24)	B52	B52	8			
4	1	B33	B33				
	A	B33					
	2	B31	B31				
	3	B16	B16	40		C	
	4	B21	B21	48		C	
	5	B34	B34	36		C	
	6	B13	B13	40		C	
	7	B13	B17				
	8	B14	B14				
	9	B33A	B33A	6			
	10	B35	B35	6			I
	11	B36	B36				
	12	B1	B1				
	14	B1	B1				
	13	B2	B2				
	B	B22					
	C	B26				C	
	D	B32					

PRE-1942 WELLS

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		TRACT NUMBER		CASING DIAMETER IN INCHES		CASING TYPE	
		-1942 APPRAISAL REPORTS	-1946 ARMY WELL INVENTORY APP. B	-1942 APPRAISAL REPORTS	-1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1942 APPRAISAL REPORTS APP. A	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C
5	E	B36A							
	F	B36B							
	1	E8	E8			36			B
	2	E9	E9						
	3	E9	E9			4			I
6	4	E4	E4						
	1	E3	E3						
	2	E3	E3			6			
	3	E3	E3			6			
	4	E3	E3						
8	5	E2B	E2B						
	6	E7	E7			6			
	1	E92	E92			30			B
	A	E92	E92						B
	1	B85	B85						
9	2	B85	B85						
	16	B85	B85			6			
	3	B85	B85			4			
	4	B71	B71			6			C
	5	B124	B124			30			

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		CABING DIAMETER IN INCHES		CABING TYPE	
		-1942 APPRAISAL REPORTS ATTACH 2	-1946 ARMY WELL INVENTORY APP. B	1946 ARMY WELL APP. B	1946 ARMY WELL APP. C	1942 APPRAISAL REPORTS APP. A	1955-56 USGS APP. B
	10	B124	B124				
	6	B67	B67	6			
	7	B76	B69				
	19	B76	B76				
	8	B140	B140	36		B	
	9	B82	B83	36/7	40		
	11	B142	B142				
	15	B142	B142				
	12	B122	B122	6			
	13	B122	B122				
	14	B79	B79	36		C	
	17	B123	B123	6	6		1
	18	B73	B73	6	5		1
	A	B69					
	B	B72					
	C	B75					
	D	B80					
	(20)	B81		48	6		
	F	B83					
	G	B125 or 126					

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER	TRACT NUMBER	CASING DIAMETER IN INCHES		CASING TYPE		
				1942 APPRAISAL REPORTS	1946 ARMY WELL APPRAISAL INVENTORY U808 APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL APPRAISAL INVENTORY U808 APP. B	1955-56 U808 APP. C
10	1	B159	B158		8			
	2	B154	B154		48		C	
	3	B152	B152		40			
	4	B161	B161		36		C	
	5	B163	B163				C	
	17	B163	B163		6			
	21	B163	B163					
	6	B149	B149		6			
	7	B145	B151				B	
	8	B147	B147		6			
	9	B150	B150	36	48	C	C	
	20	B150	B150				B	
	10	B146	B146					
	11	B67	B87					
	12	B88	B88		48		C	
	13	B89	B89		36		B	
	16	B89	B89					
	14	B85	B86					
	22	B85	B86					
	A	B86	B86		5			

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER -1942 REPORTS ATTACH 2	TRACT NUMBER -1946 ARMY APPRAISAL WELL INVENTORY APP. B	CASING DIAMETER IN INCHES		CASING TYPE		
				1946 ARMY WELL APPRAISAL REPORTS APP. B	1946 ARMY WELL APPRAISAL REPORTS APP. C	1942 APPRAISAL REPORTS APP. A	1946 ARMY APPRAISAL REPORTS APP. B	1955-56 INVENTORY USGS APP. C
11	15	B92	B92					
	18	B165	B165					
	19	B160	B162					
	B	B164						
	1	B189	B189	48				
	A	B189						
	2	B187	B187	48				
	3	B186	B186	48				
	4	B185	B185	48	40			
	5	B188	B188	48				
	6	B184	B184	48				
	7	B176	B176	6				
	8	B175	B175	48				
	9	B190	B170	48	36/6			
	B	B170						
	10	B178	B178	6				
	11	B172	B172	36				
	12	B180	B180	10				
	13	B120	B120	48				
	28	B120	B120	48				

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT		CASING DIAMETER IN INCHES		CASING TYPE	
		NUMBER -1942 APPRAISAL REPORTS ATTACH 2	NUMBER -1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B
	7164- 2105						
		B113	B113	48	48/2	C	
		B112	B112		8		
		B118	B118	40	36	C	
		B107	B107	6	6		
		B117	B117				
		B117	B116				
		B110	B110		36		C
		B109	B109		40	C	C
		B104	B104	5	6		
		B105	B105			C	
		B101	B101				
		B100	B100		6		
		B100					
		B99	B99	6	6		B
		B95	B95				
		B108					
		B114					
		B115					
		B168		36/6			
(29)		B168	B168	36/12	36		C

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER	TRACT NUMBER	CASING DIAMETER IN INCHES	CASING TYPE	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS INVENTORY APP. C	1955-56 USGS APP. C
12	1	B182							
	J	B183							
	1	E34	E34						
	2	E15	E15	6					
	3	E12	E12	48					
	4	E11	E11	36					
	5	E10	E10	48					
	6	E22	E22	48					
	7	E24	E24	40					
	9	E24	E25						
	8	E25	E25	8					
	10	E27	E27	6					
	11	E29	E29	14/10					
	12	E43	E43	48					
	13	E45	E45	48/7					
	14	E54	E54						
	15	E55	E55	6					
	16	E47	E46						
	17	E57	E58	10					
	A	E57							

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		CASING DIAMETER IN INCHES		CASING TYPE		
		-1942 APPRAISAL REPORTS	-1946 ARMY WELL INVENTORY ATTACH 2 APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. A	1955-56 USGS APP. C
	18	E58	E59	18			I	
	19	E88	E87	6				
	20	E89	E88	8				
	21	E89	E89					
	B	E89						
	22	E85	E85	6				
	C	E13						
	D	E13						
	E	E18						C
	F	E19						
	G	E33						
	H	E45A						
	I	E50						
	J	E52						C/S
	K	E56						C/S
	L	E59		36/7				C/S
	M	E81		6				
	N	E82						
	O	E84		6				
	P	390		6				

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER -1942 APPRAISAL REPORTS ATTACH 2	TRACT NUMBER -1946 ARMY WELL INVENTORY APP. B	CASING DIAMETER IN INCHES		CASING TYPE	
				1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS	1946 ARMY WELL INVENTORY APP. B
19	1	D11	D11	6	6	I	I
20	1	D5	D5	10			
	2	D5	D5				
	3	D5	D5	4	3.5	I	I
	4	D7	D7	4	4.5	I	I
22	1	A49	A49	6			
	2	A49	A49		36	C	C
	3	A1	A1	6	4.5	I	I
23	1	A54	A54		24	I	I
	2	A54	A54	36		C	C
	8	A54	A54	36		C	C
	3	A3	A3	48	48	C	C
	5	A3	A3	6	5	I	I
	4	A2	A2	6			
	6	A4	A4	6			
	7	A4	A4	48	32		C
24	1	D10	D10				
	2	D9	D9	8			
	3	D1	D1	120/5	6	C	
	4	D1	D1	24	24		C

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		CASING DIAMETER IN INCHES		CASING TYPE					
		-1942 APPRAISAL REPORTS ATTACH 2	-1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS APP. B	1946 ARMY WELL INVENTORY APP. C	1942 APPRAISAL REPORTS APP. A	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C			
	5	D1	D1	5	60						
	6	D1	D1		8	48					C
	A	D2				8					I
25	1	D10	D10		6						
	2	D10	D10		6						
	3	D10	D10								
26	1	A87	A87		8						
	2	A59	A59		36	28					B
	3	A59	A59		36						
27	1	A58	A58			7					I
	2	A55A	A55B								
	3	A55	A55								
	4	A55C	A55C								
	5	A86	A86		6	3.5					I
	6	A57B	A57B		36/7						
28	A	A57									
	1	A81	A56A		4	44/18					C/I
	2	A84	A84		48						
	A	A56									
	B	A56A									

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		CASING DIAMETER IN INCHES	CASING TYPE
		-1942 APPRAISAL REPORTS ATTACH 2	-1946 ARMY WELL INVENTORY APP. B		
30	C	A82		24/4	
	5	D13	D13		C
	4	D14	D14		
	1	D20	D20	6	6
	6	D20	D20		
	2	D21	D20	36	8
	3	D21	D21		
	4	D25	D25	12	12
	9	D25	D25		
	2	D26	D26	6	
31	3	D26	D26		
	5	D28	D28	48	8
	6	D28	D28		
	7	D28	D28		
	8	D28	D28	6	
	1	D30	D30	36	C
	4	D5	D5		
	6	D5	D5	6	
	1	D31	D31	36	C
	2	D31	D31		
32	4	D5	D5		
	6	D5	D5	6	
	1	D31	D31	36	C
	2	D31	D31		
	3	D31	D31		
	4	D31	D31		
	5	D31	D31		
	6	D31	D31		
	7	D31	D31		
	8	D31	D31		

CASINO TYPE	
1942	1946
APPRAISAL	ARMY
REPORTS	WELL
APP. A	INVENTORY
APP. B	1953-56
APP. C	USGB

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		TRACT NUMBER		CASING DIAMETER IN INCHES		CASING TYPE	
		MAP 7164- 2105	APPRAISAL REPORTS ATTACH 2	-1946 ARMY WELL INVENTORY APP. B	-1942 ARMY WELL INVENTORY APP. C	1946 ARMY WELL INVENTORY APP. B	1942 APPRAISAL REPORTS APP. A	1946 ARMY WELL INVENTORY APP. C	
33	3		D32	D32	D32	20	24	I	C
	5		D32	D32	D32				
	1		A76	A74	A74	30		C	
	2		A76	A74	A74				
	9		A76	A76	A76	48		C	
	10		A76	A76	A76	36		C	
	3		A93	A93	A93				
	4		A93	A93	A93	6			
	5		A88	A88	A88	30		B	
	6		A88	A88	A88	3			
34	7		A79B	A79	A79				
	8		A78	A79D	A79D	7	6		I
	11		A75	A75	A75				
	A		A74						
	B		A79A						
	C		A79C						
	D		A79D						
	E		A79E						
	F		A94						
	1		A89	A89	A89	30		B	

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT		CASING DIAMETER IN INCHES		CASING TYPE	
		NUMBER -1942	NUMBER -1946	1946 ARMY WELL	1946 ARMY WELL	1942 APPRAISAL REPORTS	1942 APPRAISAL REPORTS
35	1	A91	A91	4	3.5		
	2	A90	A90	36	30/8		C
	3	A92	A92				C/I
	4	A92	A92	6			
	A	A97					
36	1	D23	D23				
	2	D24	D24				
	A	D24	D24				

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		WELL STATUS		WELL DEPTH IN FEET			
		-1942 APPRAISAL REPORTS	-1946 ARMY WELL INVENTORY APP. B	1943 MAP - 7164- 2105	1946 ARMY WELL INVENTORY APP. B	1955-56 INVENTORY USGS APP. C	1981 G & M APP. C	1981 G & M ATTACH 3	
1	A	E5					40		
	B	E6					40		
	1	B66	B66	C	C	C	30		S
2	2*	B65	B65	C	C	C	89		S
	3	B63	B63	F	F		(600)		
	4	B63	B63	C	F				
3	5	B12	B12	A	C			170+	D
	1	B62	B62	A	A	F	(70)	35	S
	22	B62	B62	C			(7)		
4	2	B61	B61	C	C	F	?	44	S
	3	B60	B60	A	F		42		S
	4	B50	B55	A	C		50		S
	5	B5	B12	A	A		73	69	S
	6	B4	B4	A	A		5	67	S
	7	B6	B6	A	A		?	77	S
	8	B37	B37	A			?		
	9*	B42	B42	A	F		(700)		D
	A	B42					(S)		
	10	B43	B43	C	C		?	59	S
	11*	B44	B44	C	C		(500)		D

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		1943 MAP 7164- 2105	WELL STATUS		WELL DEPTH IN FEET										
		-1946 ARMY APPRAISAL REPORTS ATTACH 2	-1946 ARMY WELL INVENTORY APP. B		1946 ARMY WELL INVENTORY APP. B	1955-56 USGB APP. C	1981 G & M	1946 ARMY WELL APPRAISAL REPORTS APP. B	1955-56 USGB APP. C	1981 G & M ATTACH 3							
4	L	B56					60										
	(24)	B52	B52								43						
	1	B33	B33	C	C		(?)				71						8
	A	B33					(?)										
	2	B31	B31	F	F												9
	3	B16	B16	C	C		92				54						8
	4	B21	B21	C	C	F	?				57						8
	5	B34	B34	C	C	F	65				51						8
	6	B13	B13	F	F		(?)										8
	7	B13	B17	C	C	F					65						9
	8	B14	B14	F			60										8
	9	B33A	B33A	C	C		87				78						8
	10	B35	B35	C	C	C	?				72						9
	11	B36	B36	F	F												8
	12	B1	B1	C													8
	14	B1	B1	C													8
	13	B2	B2	F	F												8
	B	B22															
	C	B26															
	D*	B32						60									

SUMMARY OF AVAILABLE DATA

[illegible]

SUMMARY OF AVAILABLE DATA

[illegible]

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA

	HOLE NUMBER	TRACT NUMBER -1946	TRACT NUMBER ARMY APPRAISAL REPORTS ATTACH 2	TRACT NUMBER INVENTORY APP. B	1943 MAP 7164-2105	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1981 G & M	WELL STATUS	WELL DEPTH IN FEET	
	B	B125 or 126									
10	1	B159	B158	C					S		
	2	B154	B154	C		F				34	8
	3	B152	B152	C						49	8
	4	B161	B161	A							8
	5	B163	B163	C		C				45	8
	17	B163	B163	F					(35)		8
	21	B163	B163	F		F					8
	6	B149	R149	F		F					D
	7	B149	B151	C					35	31	D
	8	B147	B147	C					35		D
	9	B150	B150	C					(?)	38	
	20	B150	B150	F						36	8
	10	B146	B146	C					D	40	8
	11	B87	B87	F		F			60		8
	12	B88	B88	C					60	39	8
	13	B89	B89	C					(80)	50	8
	16	B89	B89	A					(535)		8
	14	B86	B86	C		F			(555)		8
	22	B86	B86	C					(75)	64	8

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		TRACT NUMBER		WELL STATUS		WELL DEPTH IN FEET				
		-1942 APPRAISAL REPORTS	ATTACH 2	-1946 ARMY WELL INVENTORY	APP. B	1943 MAP 7164- 2105	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1981 G & M APP. C	1981 G & M ATTACH 3		
11	A	B86										
	15	B92	B92			C			(80)	580	580	8
	18	B165	B165			A	A		?			8
	19	B160	B162			C			41			8
	B	B164							50			8
	1	B189	B189			C		F	(?)	33.5		8
	A	B189							(?)			
	2	B187	B187			A			56	32		8
	3	B186	B186			C		F	S	32		8
	4	B185	B185			C		F	30	47		8
	5	B188	B188			C			S	38		8
	6	B184	B184			C		F	S	33.5		8
12	7	B176	B176			C	F					
	8	B175	B175			C		F	S	35		8
	9	B190	B170			C		F	(72)	34		8
	B	B170							(54)			
	10	B178	B178			C			S	39		8
	11	B172	B172			C		F	D	33		8
	12	B180	B180			C			S	33		8

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		TRACT NUMBER		WELL STATUS		WELL DEPTH IN FEET	
		-1942 APPRAISAL REPORTS ATTACH 2	-1946 ARMY WELL INVENTORY APP. B	1943 MAP 7164- 2105	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1981 G & M	1955-56 USGS APP. C	1981 G & M ATTACH 3
13	B120	B120	B120	C	F	(31)	36	S	
28	B120	B120	B120	C		(?)	45	S	
14	B113	B113	B113	C	F	45		S	
15	B112	B112	B112	A	F	44	38	S	
16	B118	B118	B118	C	F	49	24	S	
17	B107	B107	B107	C		44	25		
18	B117	B117	B117	C	A	(D)		S	
19	B117	B117	B116	C	C			S	
20	B110	B110	B110	C	F	S	27	S	
21	B109	B109	B109	A	F	55	25	S	
22	B104	B104	B104	A		45	35	S	
23	B105	B105	B105	A		53		S	
24	B101	B101	B101	C		?		S	
25	B100	B100	B100	C		(?)	54	S	
C	B100					(?)			
26	B99	B99	B99	C		30	42	S	
27	B95	B95	B95	C			40	S	
D	B108					45			
E	B114					?			

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT		WELL STATUS		WELL DEPTH IN FEET						
		NUMBER -1946 APPRAISAL REPORTS ATTACH 2	NUMBER ARMY WELL INVENTORY APP. B	1943 MAP 7164- 2105	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1981 G & M	1981 G & M ATTACH 3				
12	G	B168					(50)					
	(29)	B169	B168				(40)	34				
	I	B182					50					
	J	B183					S					
	1	E34	E34	F			S					
	2	E15	E15	C			?	21				S
	3	E12	E12	C			65	25				S
	4	E11	E11	C			55	25	23			S
	5	E10	E10	C			S	35				S
	6	E22	E22	C				23.5				S
	7	E24	E24	C			(D)	29				S
	8	E25	E25	C			S	20				S
	10	E27	E27	C			?	40				S
	11	E29	E29	C			S	30				S
	12	E43	E43	C			D	19				S
	13	E45	E45	C			50					S
14	E54	E54	C			29	30				S	
15	E55	E55	C			45	22				S	
16	E47	E46	C			S					S	
	--	--	--	C		(30)	25				S	

SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT		WELL STATUS		WELL DEPTH IN FEET	
		NUMBER -1946	ARMY WELL INVENTORY APP. B	1943 MAP 7164- 2105	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1981 G & M ATTACH 3
A	E57				(35)		
B	E58	E59	C		47		8
C	E59	E87	C		23		8
D	E88	E88	C		(7)		8
E	E89	E89	C		(D)		8
F	E89				(S)		
G	E85	E85	C			35	8
H	E18				(S)		
I	E13				(7)		
J	E18				40		
K	E19				6		
L	E33				S		
M	E45A				38		
N	E50				55		
O	E52				70		
P	E56				50		
Q	E59				60		
R	E81				60		
S	E82				S		

SUMMARY OF AVAILABLE DATA

[illegible]

SUMMARY OF AVAILABLE DATA

[illegible]

SUMMARY OF AVAILABLE DATA

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SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		TRACT NUMBER		WELL STATUS		WELL DEPTH IN FEET		
		NUMBER -1942 APPRAISAL REPORTS ATTACH 2	ARMY WELL INVENTORY APP. B	1943 MAP 7164- 2105	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1981 G & M	1942 APPRAISAL REPORTS APP. B	1955-56 USGS APP. C	1981 G & M ATTACH 3
33	1	D31	D31	C	F			(100)	38	8
	2	D31	D31	C					36	8
	3	D32	D32	C	C			(55)	50	8
	5	D32	D32	F	F			(40)		8
	1	A76	A74	C					56	8
	2	A76	A74	F	F					8
	9	A76	A76	C			F		96	8
	10	A76	A75	C			F		57	8
	3	A93	A93	F	F					8
	4	A93	A93	C				(150)	115	8
	5	A88	A88	C					60	8
6	A88	A88	C			C			8	
7	A79B	A79	C						8	
8	A78	A79D	C			C			50	8
11	A75	A75	C							8
A	A74									8
B	A73A									60
C	A79C									8
D	A79D									54
E	A79E									8

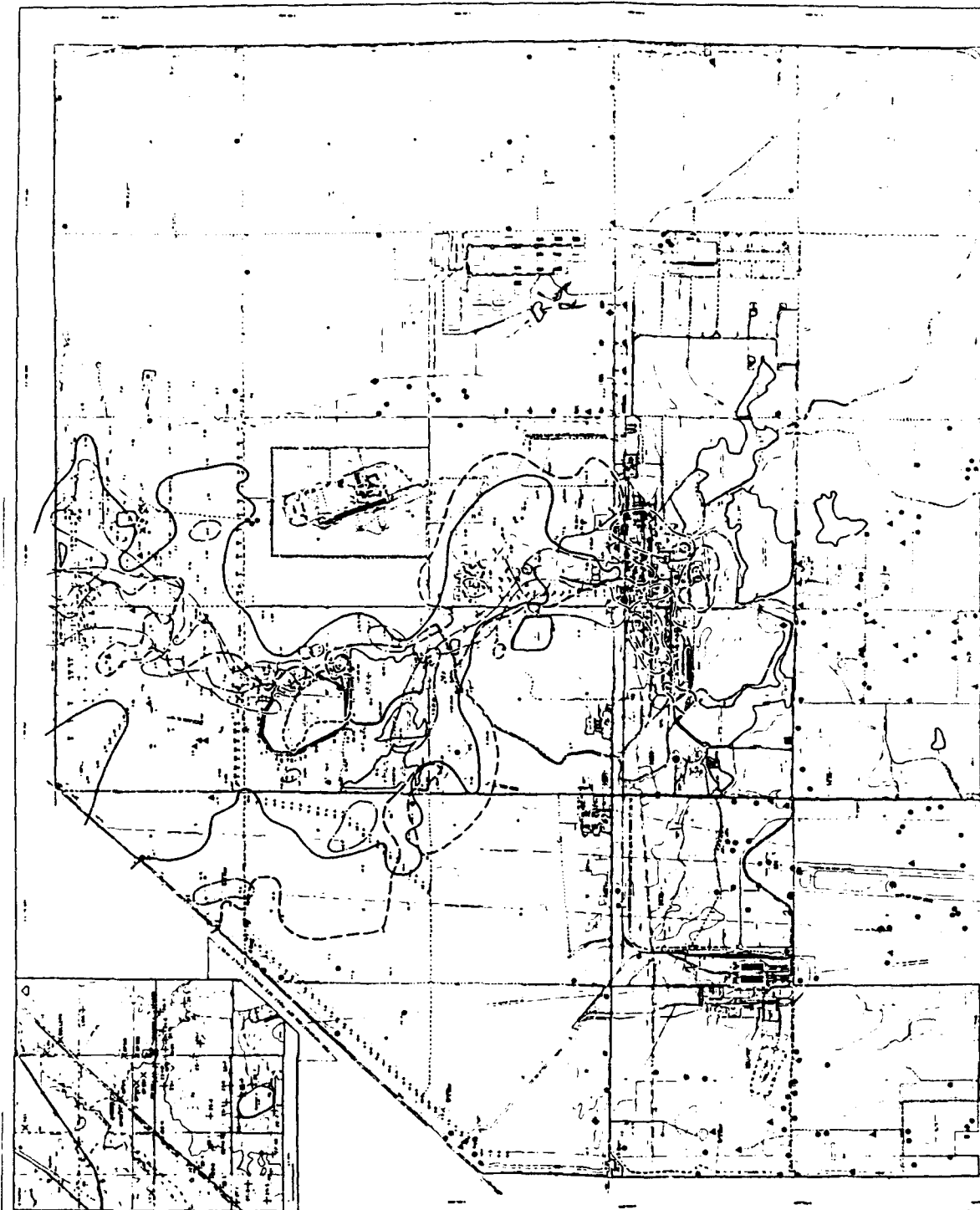
SUMMARY OF AVAILABLE DATA

SECTION NUMBER	HOLE NUMBER	TRACT NUMBER		TRACT NUMBER		<u>WELL STATUS</u>		<u>WELL DEPTH IN FEET</u>	
		-1946 APPRAISAL REPORTS ATTACH 2	ARMY WELL INVENTORY APP. B	-1946 ARMY WELL INVENTORY APP. B	1943 MAP 7164- 2105	1946 ARMY WELL INVENTORY APP. B	1955-56 USGS APP. C	1981 G & M ATTACH 3	
F	A94							50	
34	I	A89	AB9		C				B
35	I	A91	A91		C			?	B
2	A90		A90		C		C	35	B
3	A92		A92		C			(D)	B
4	A92		A92		C				B
A	A97							75	B
36	I	D23	D23		F		F	B	B
2	D24		D24		F		F	(?)	B
A	D24							(?)	B

PRE-1942 WELLS

SUMMARY OF AVAILABLE DATA
COE 1962 REPORT

SECTION	WELL NO.	NO.	STATUS	CASING SIZE	CASING TYPE	APPARENT DEPTH	COMMENTS
22	1	A49	P	6 in.	I	Over 290 ft.	
	2	A49		3 ft.	C	34 ft.	
	3	A1	P	4 in.	I	Over 292 ft.	
23	4	A2					
	5	A3	P	4 in.	I	Over 300 ft.	Unable to locate
	6	A4					
24	1	D10		6 3/4 in.	galv.		Unable to locate
	6	D1		30 in.	galv.	50 ft.	Filled with debris
26	1	A87					
	2	A59		30 in.	brick	30 ft.	Unable to locate
27	1	A58	P	5 in.	I	over 280 ft.	
	2	A55	P	7 1/8 in.	galv.	58 ft.	
35	1	A91	P	4 in.	I	Over 128 ft.	
	4	A92	P	5 1/2 in.	I	Over 400 ft.	
36	1	D23					Unable to locate
	2	D24					Unable to locate



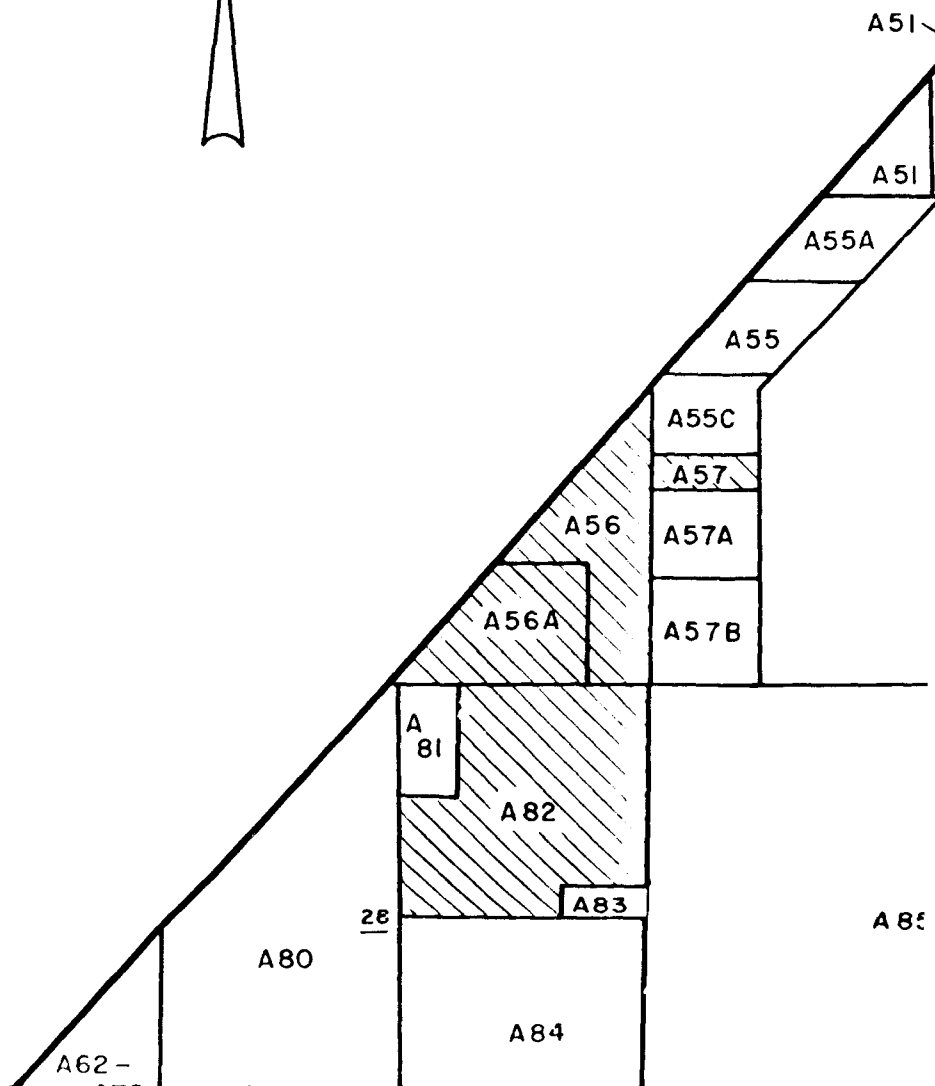
**LOCATION OF ABANDONED FARM WELL
AND PLUME PATTERNS**

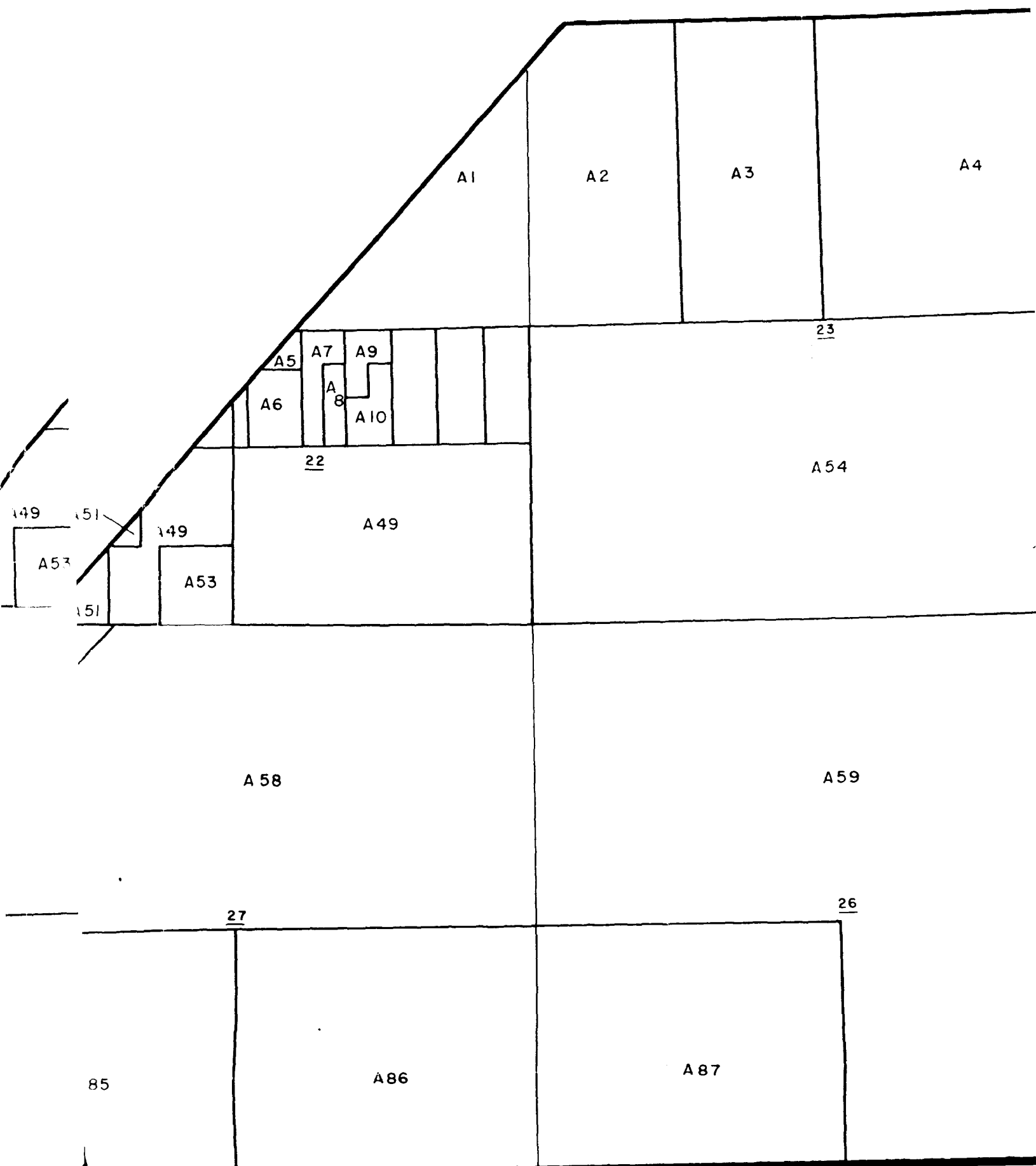
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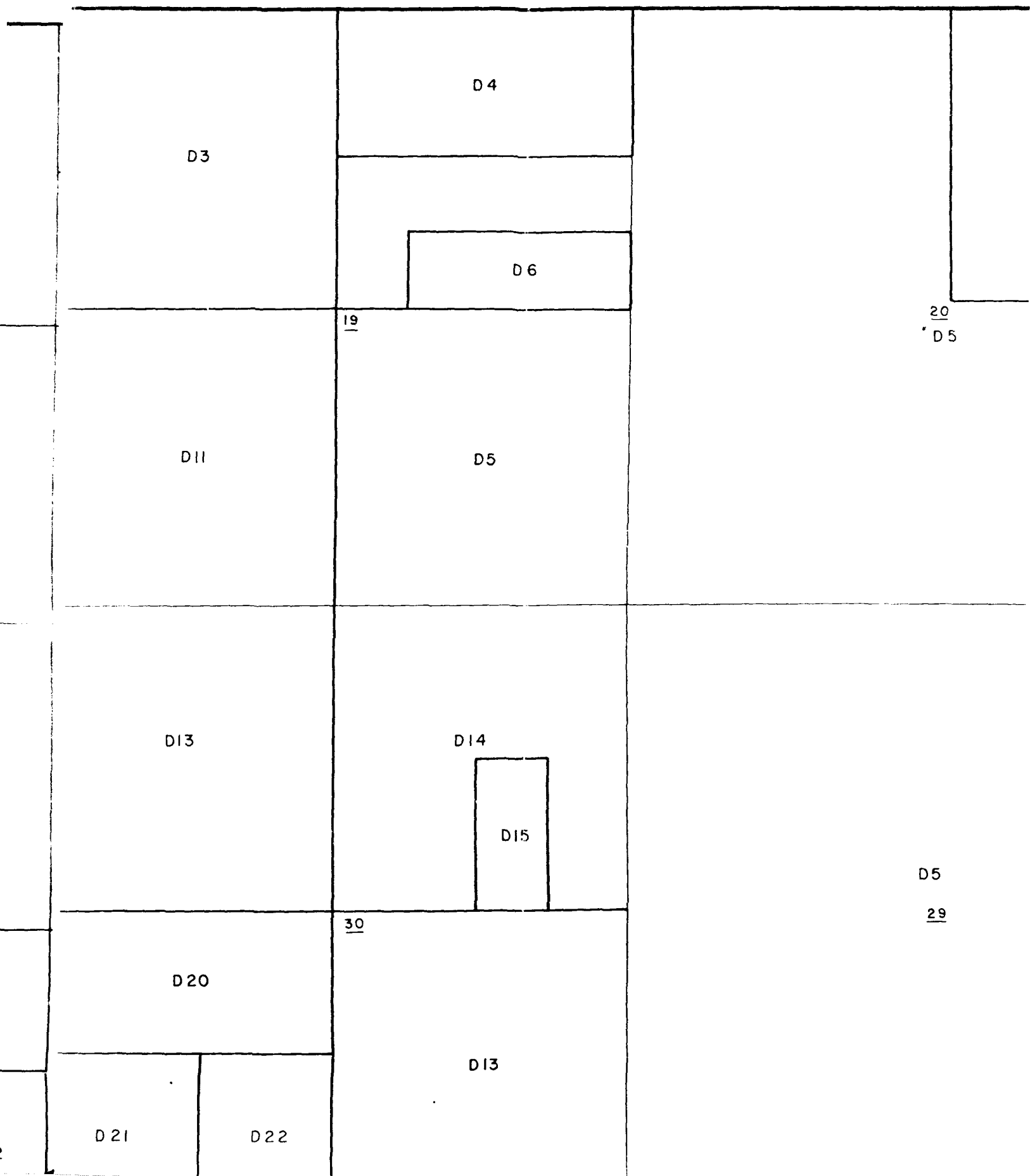
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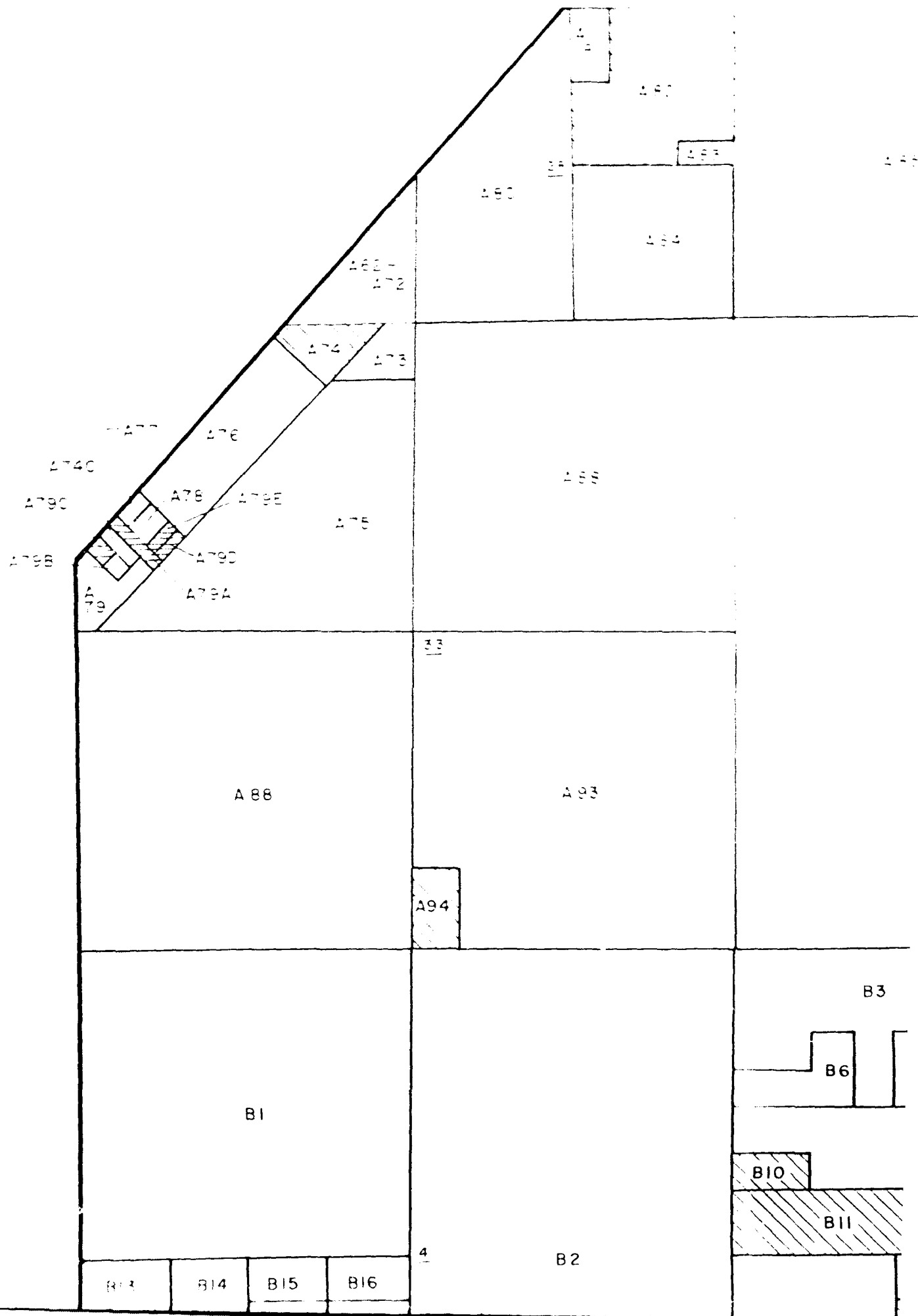


D7

20
D5

D5

29





D12

D16

D17

D2

D18

D19

A92

A92

D24

D23

36

A98

A98

A99

D23

D2

B12

E1

E2

E2A

E5

E5

E6

D20

D20

D13

D21

D22

D19

D25

D25

D26

D26

D27

D27

31

D28

D31

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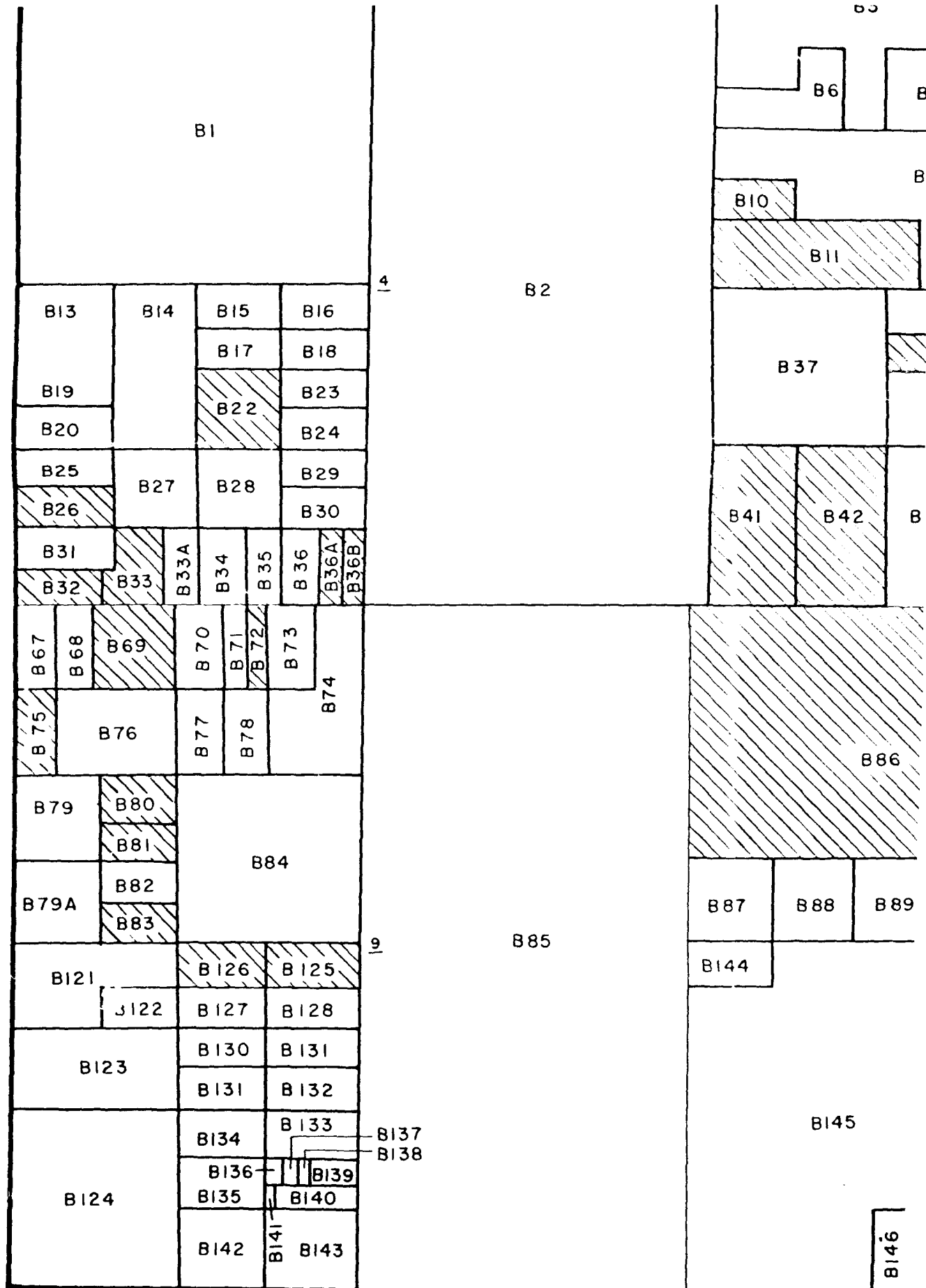
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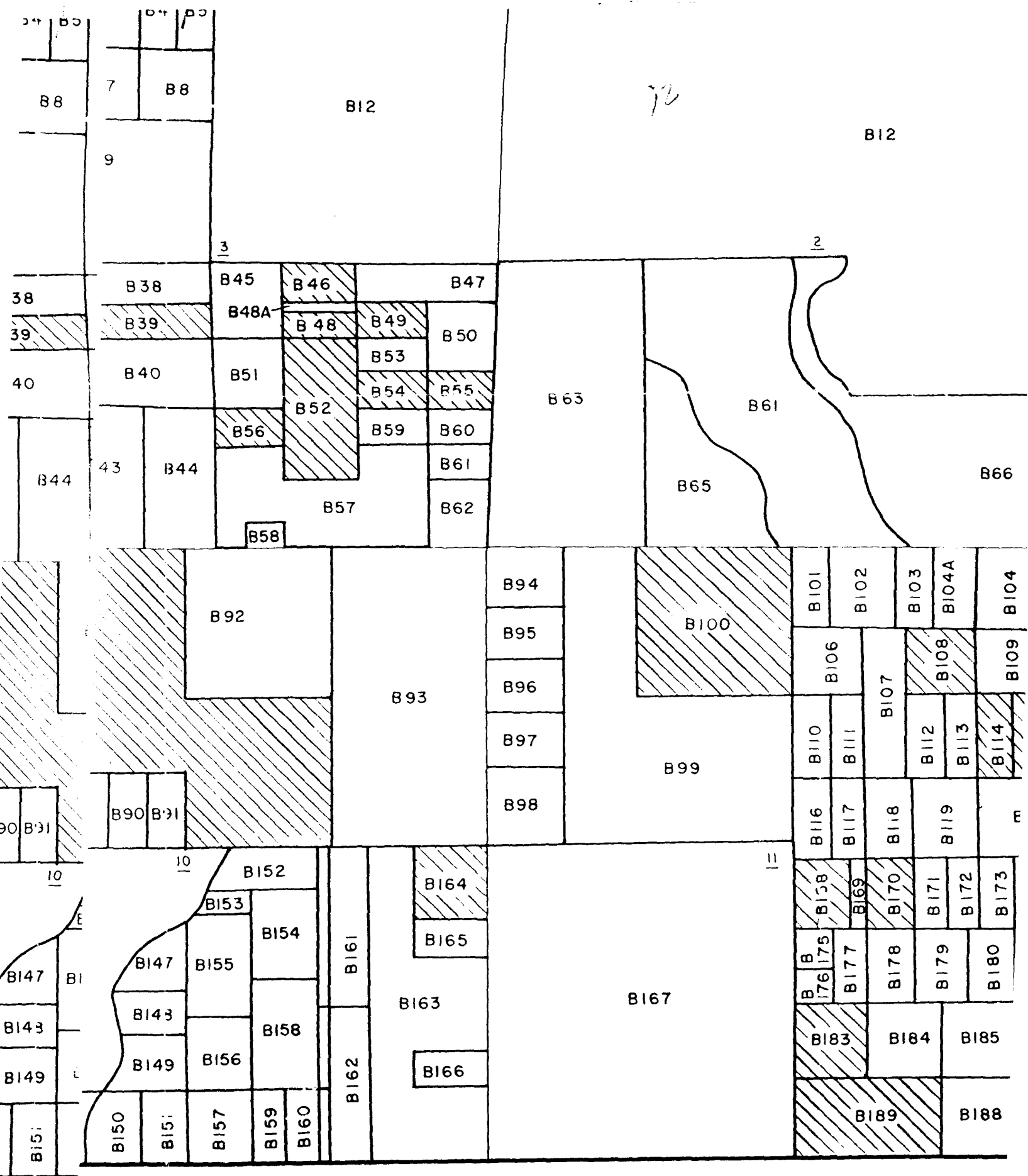
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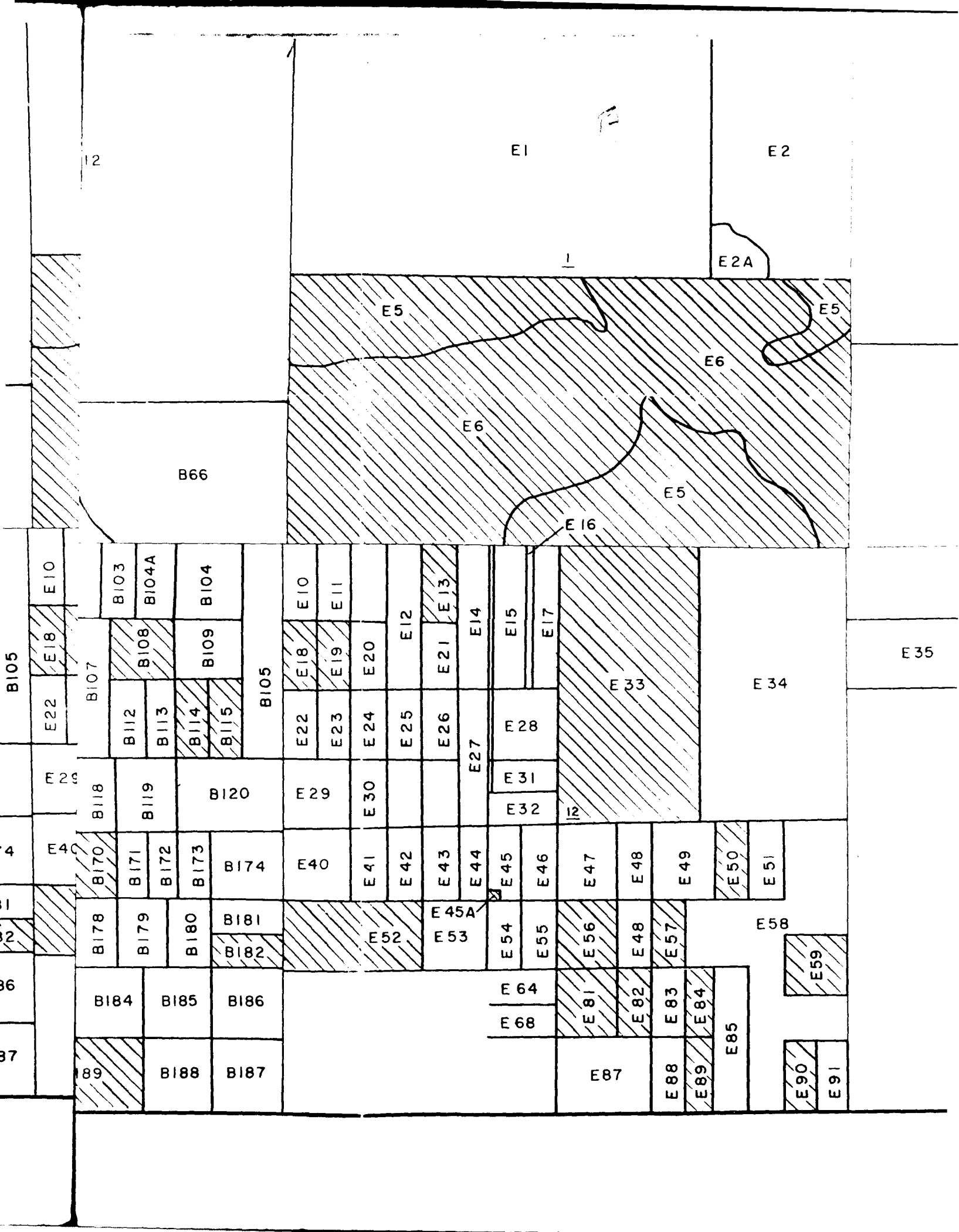
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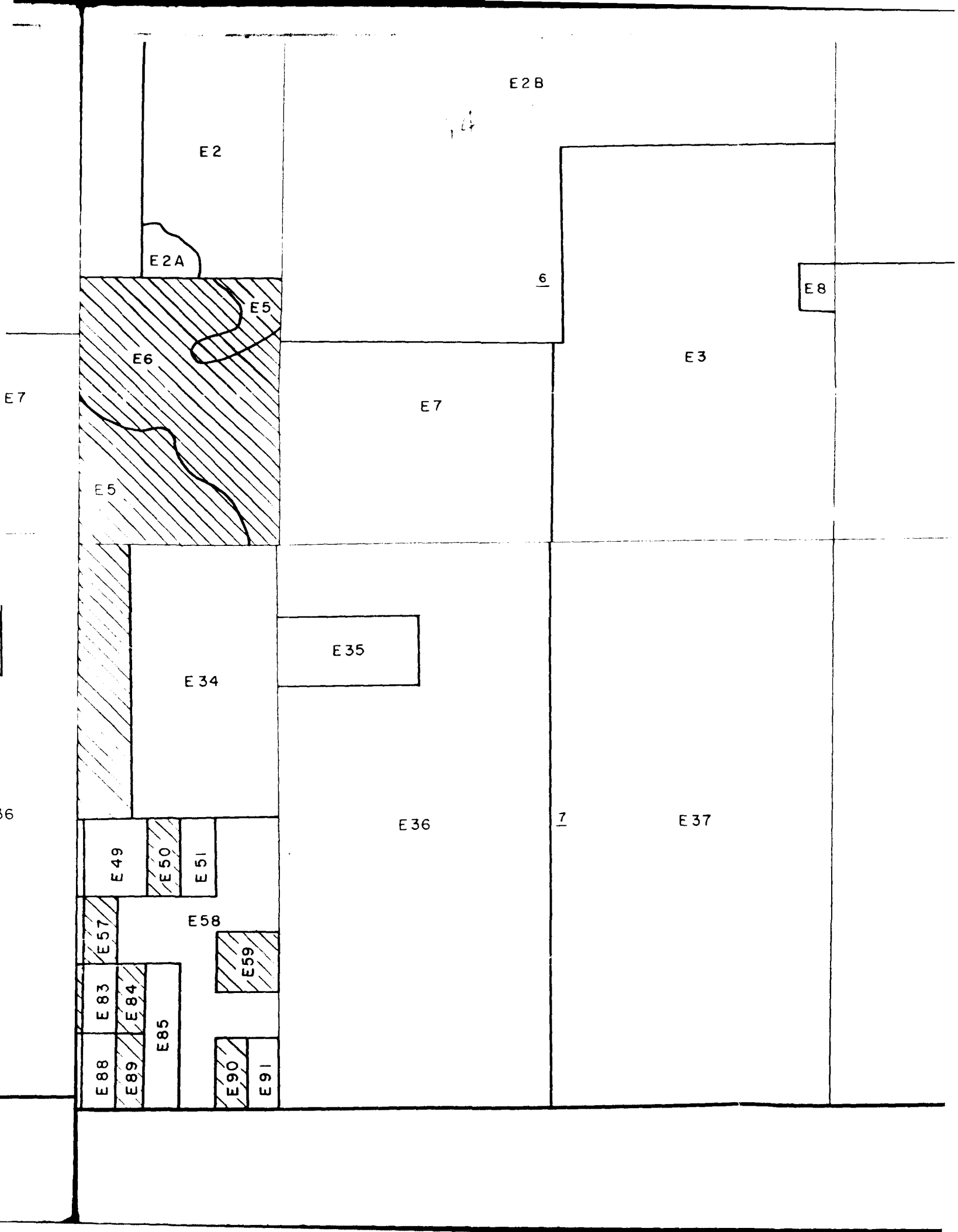
E93

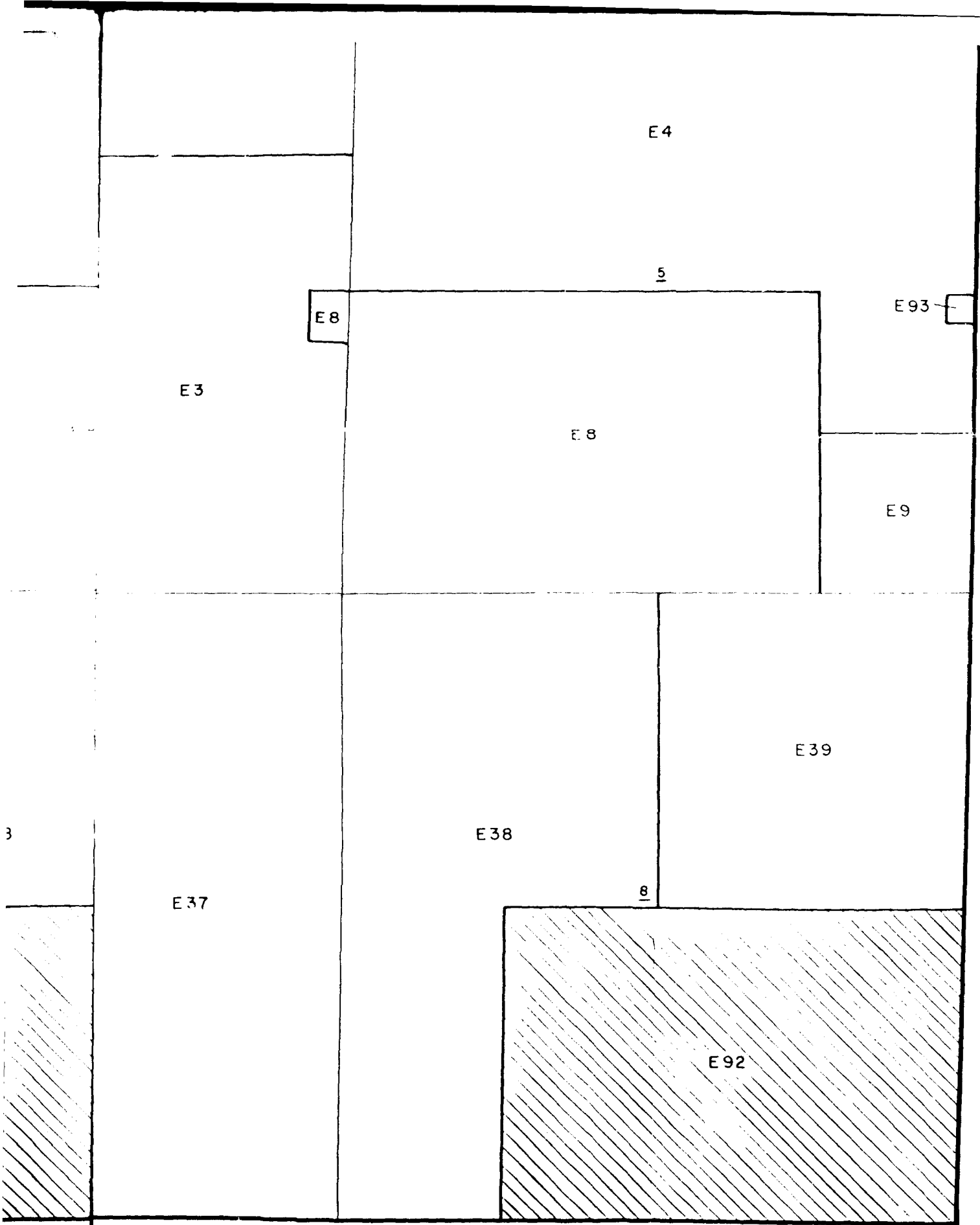
E8

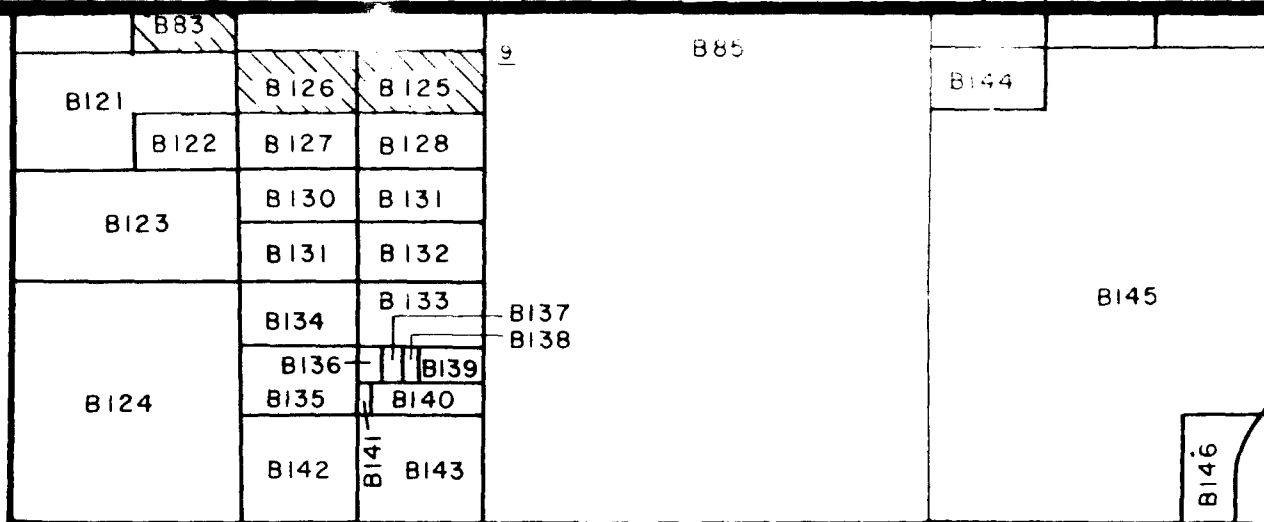








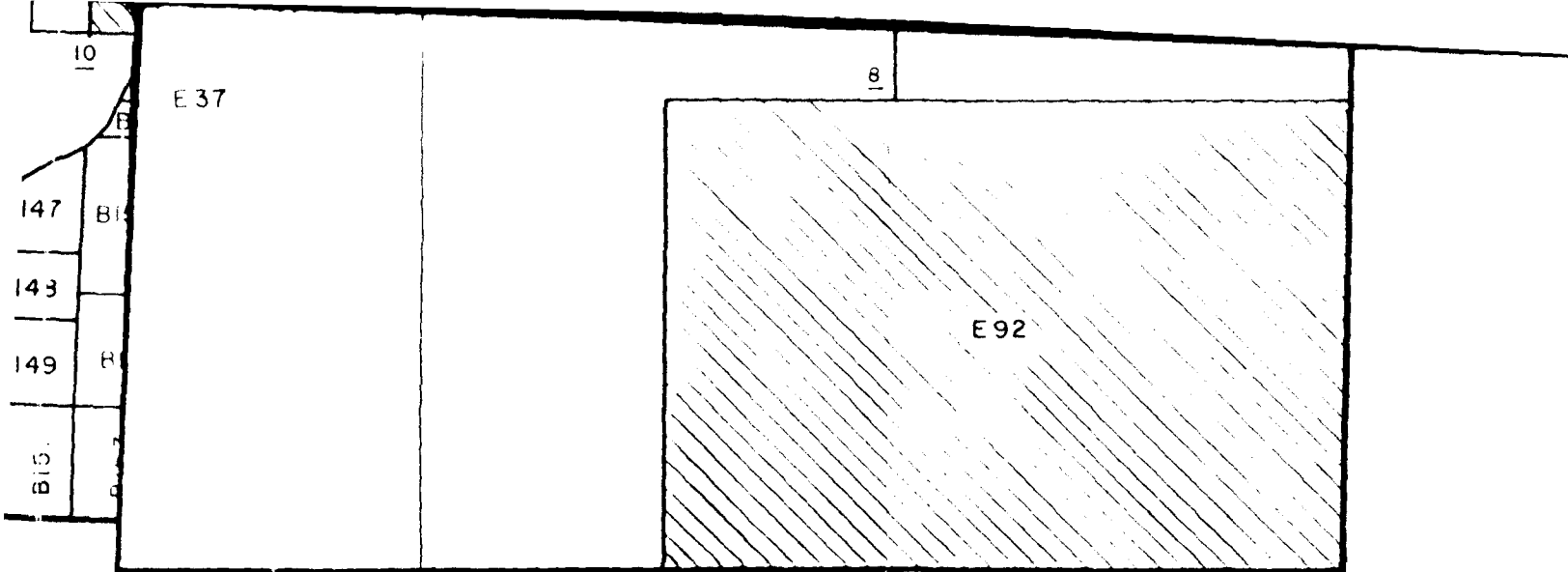




PARCELS ON WHICH WELL(S) ARE NOTED
IN APPRAISAL REPORTS, BUT NOT LOCATED
ON DRAWING 7:64-2105

2

SECTION NUMBER



15

ATTACHMENT 2

REAL ESTATE PLAT MAP

1942

LOCATION AND SIZE OF PARCELS INTERPRETED
FROM APPRAISAL REPORTS

2

2204636.

201998.

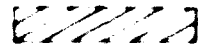
T2A68SEC18



4

T2A68SEC21

MAP LEGEND

	PRIMARY ROAD
	SECONDARY ROAD
	TERTIARY ROAD
	BOUNDARY ROAD
	OFFBASE ROAD
	RAILROAD
	HOMESTEAD

 POSSIBLE WELL SITES
FROM 1937 AERIAL
PHOTOGRAPHS

 WELL NO 2 IN SECTION -
FROM 1943 ARMY MAP
DRILLED LESS THAN 100
FEET OR NO INFORMATION
ON CASING DIAMETER

 ASSUMED HAND DUG WELL;
CASING DIAMETER 24
INCHES OR GREATER - FROM
ARMY 1946 DATA

 WELL GREATER THAN 100
FEET IN DEPTH - FROM
ARMY 1946 DATA

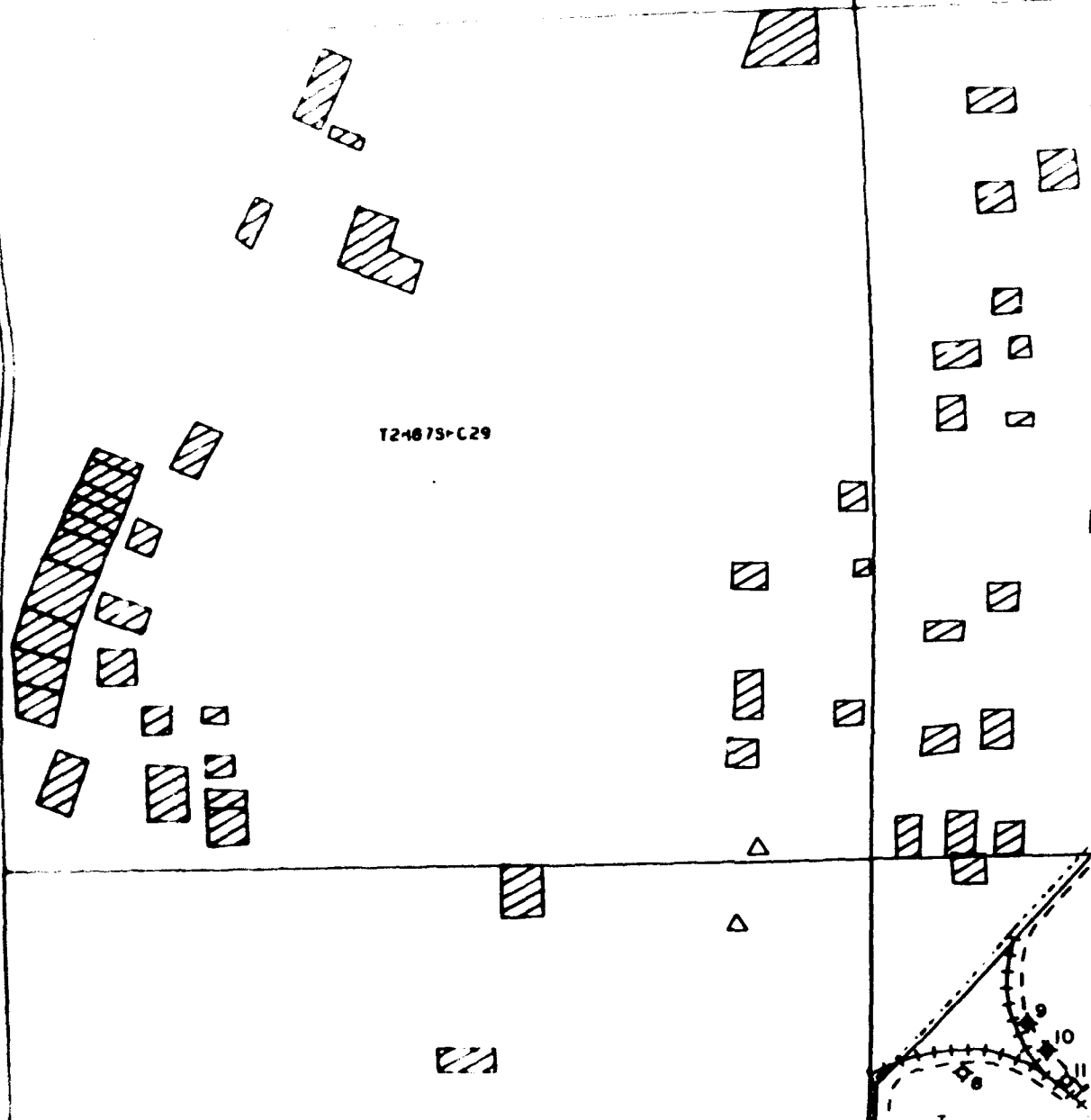
"TESTED" WELL - FROM

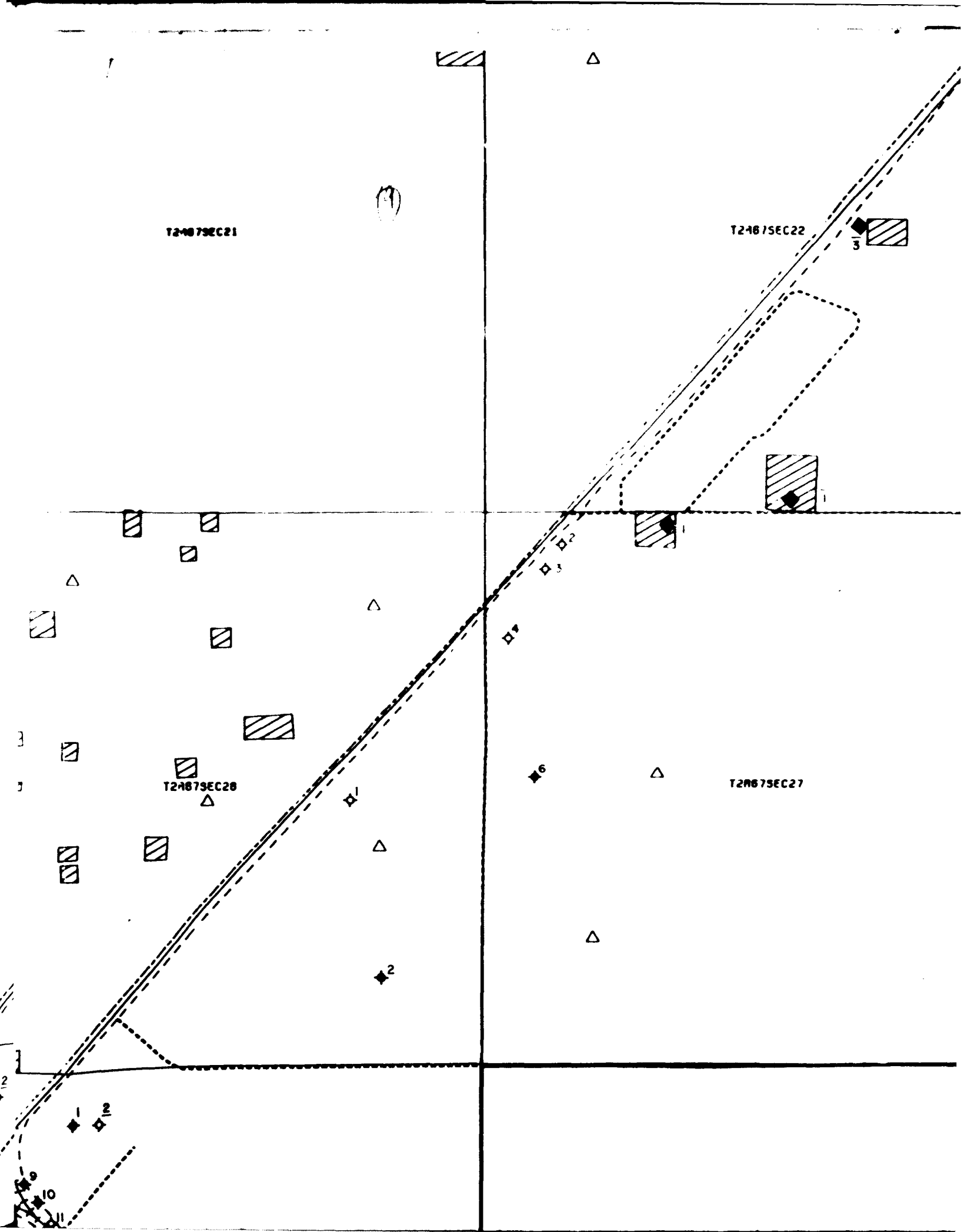
22046 76.

201996.

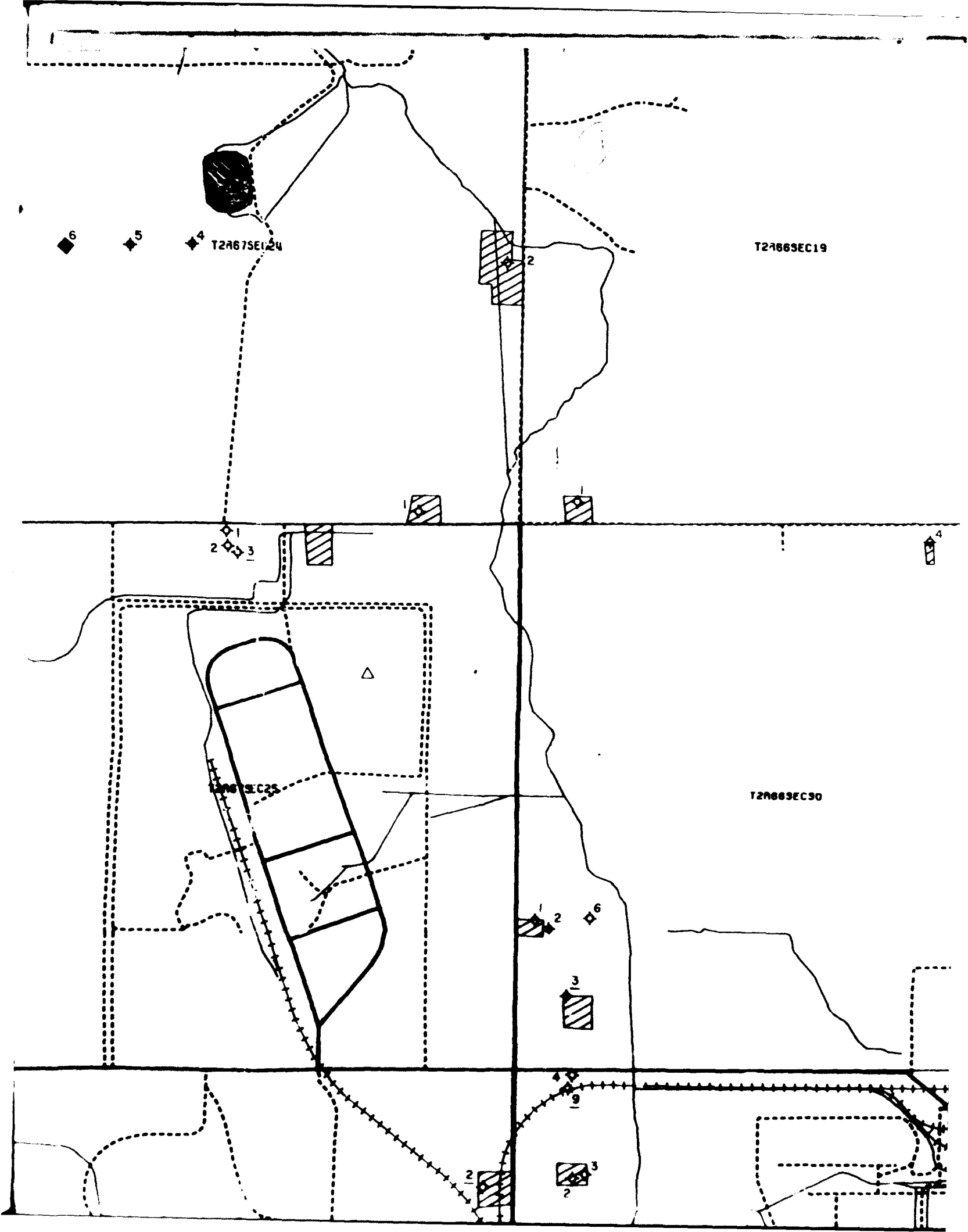
T24075EC20

T24075-C29









92

T2R66SEC20



T2R66SEC29

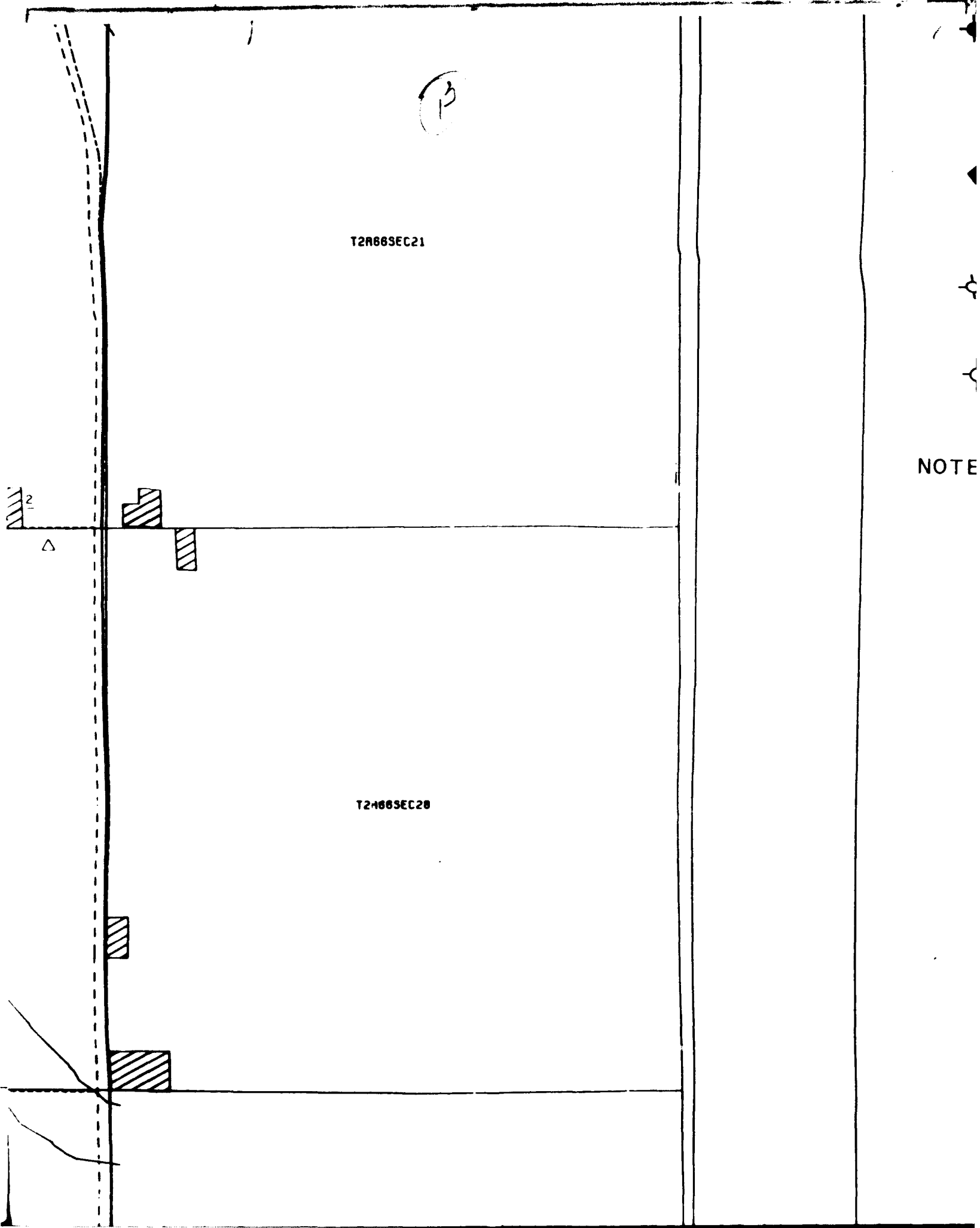


13

T2R66SEC21

NOTE

T2H66SEC20





ASSUMED HAND DUG WELL;
CASING DIAMETER 24
INCHES OR GREATER - FROM
ARMY 1946 DATA



WELL GREATER THAN 100
FEET IN DEPTH - FROM
ARMY 1946 DATA

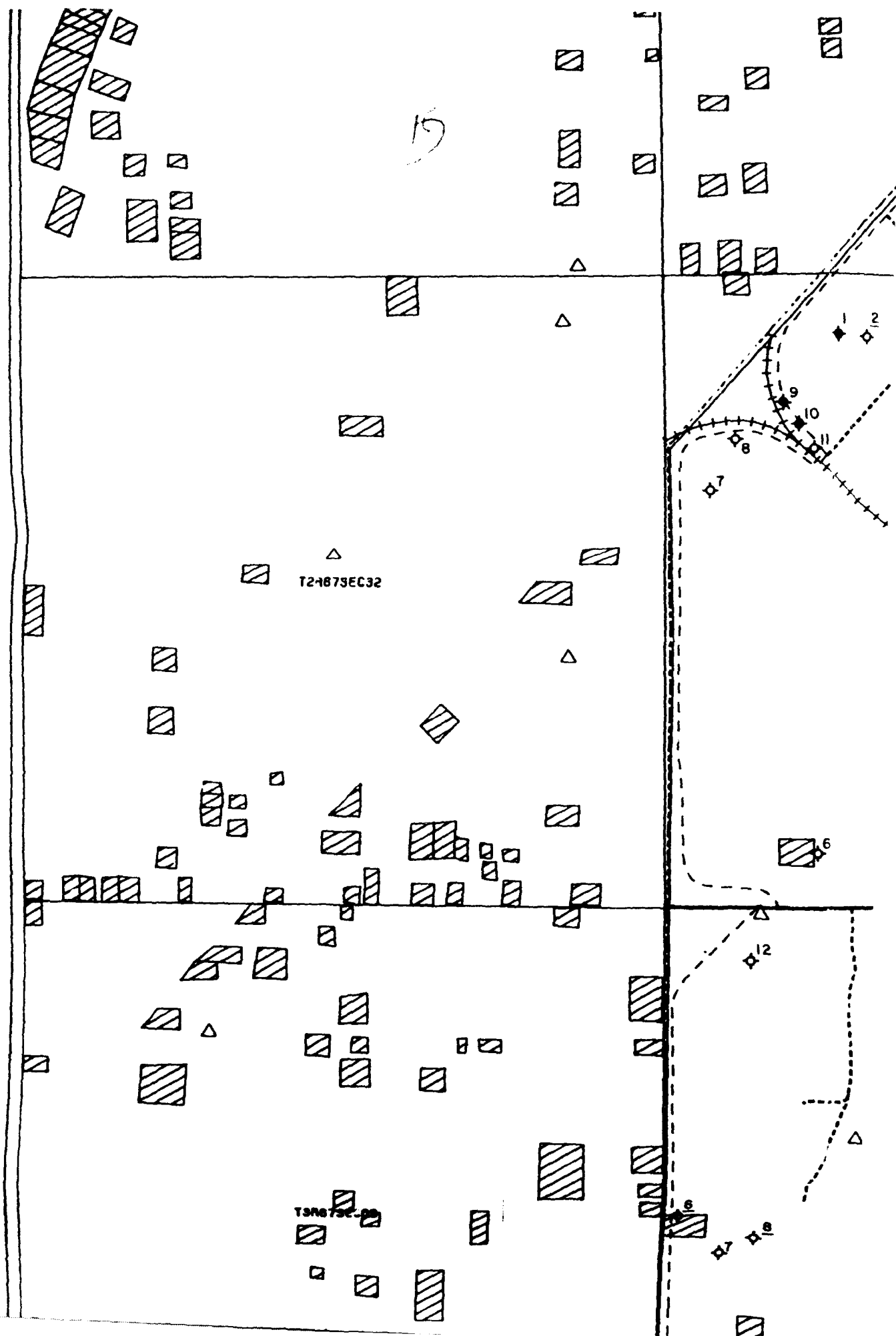


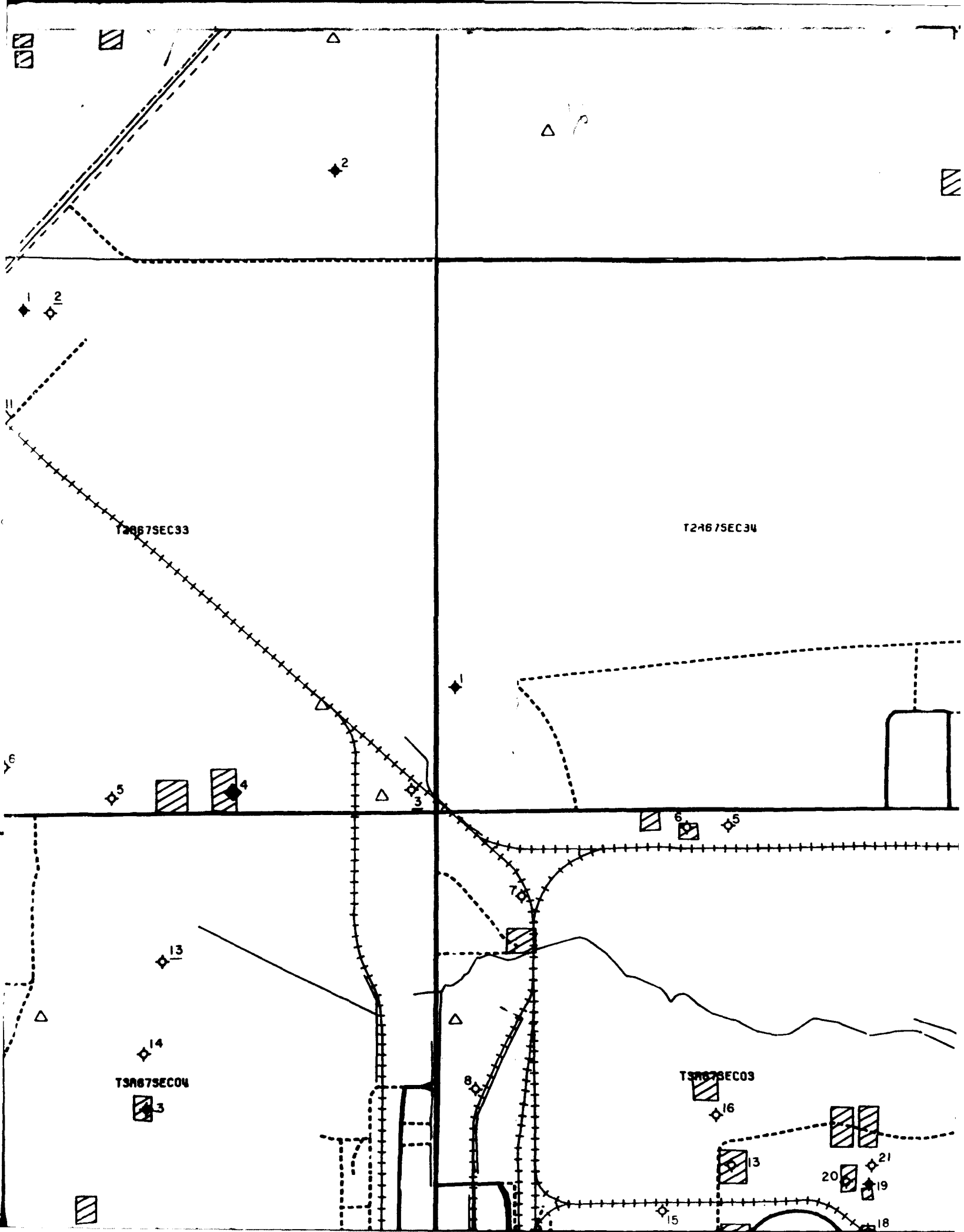
"FILLED" WELL - FROM
ARMY 1946 DATA

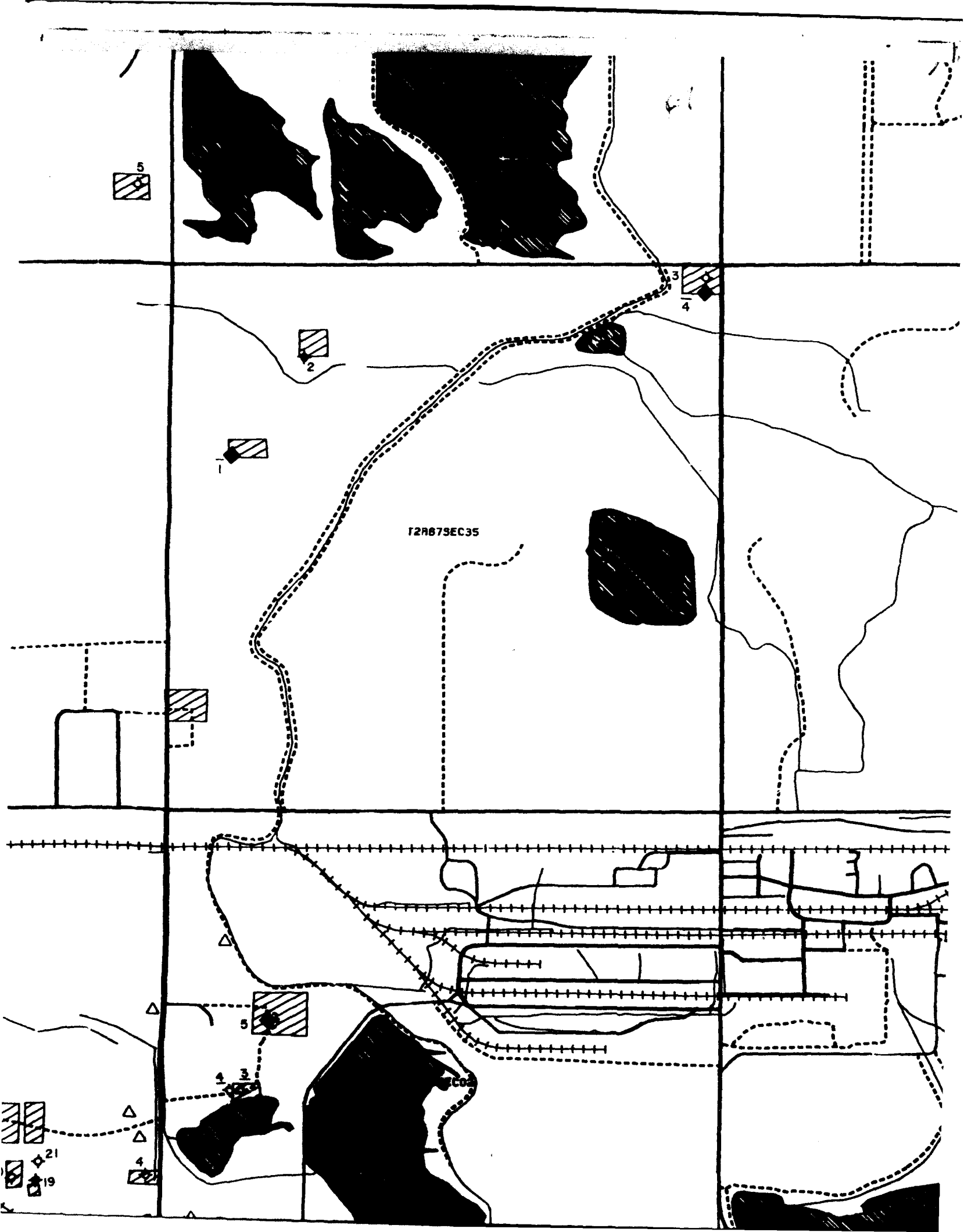


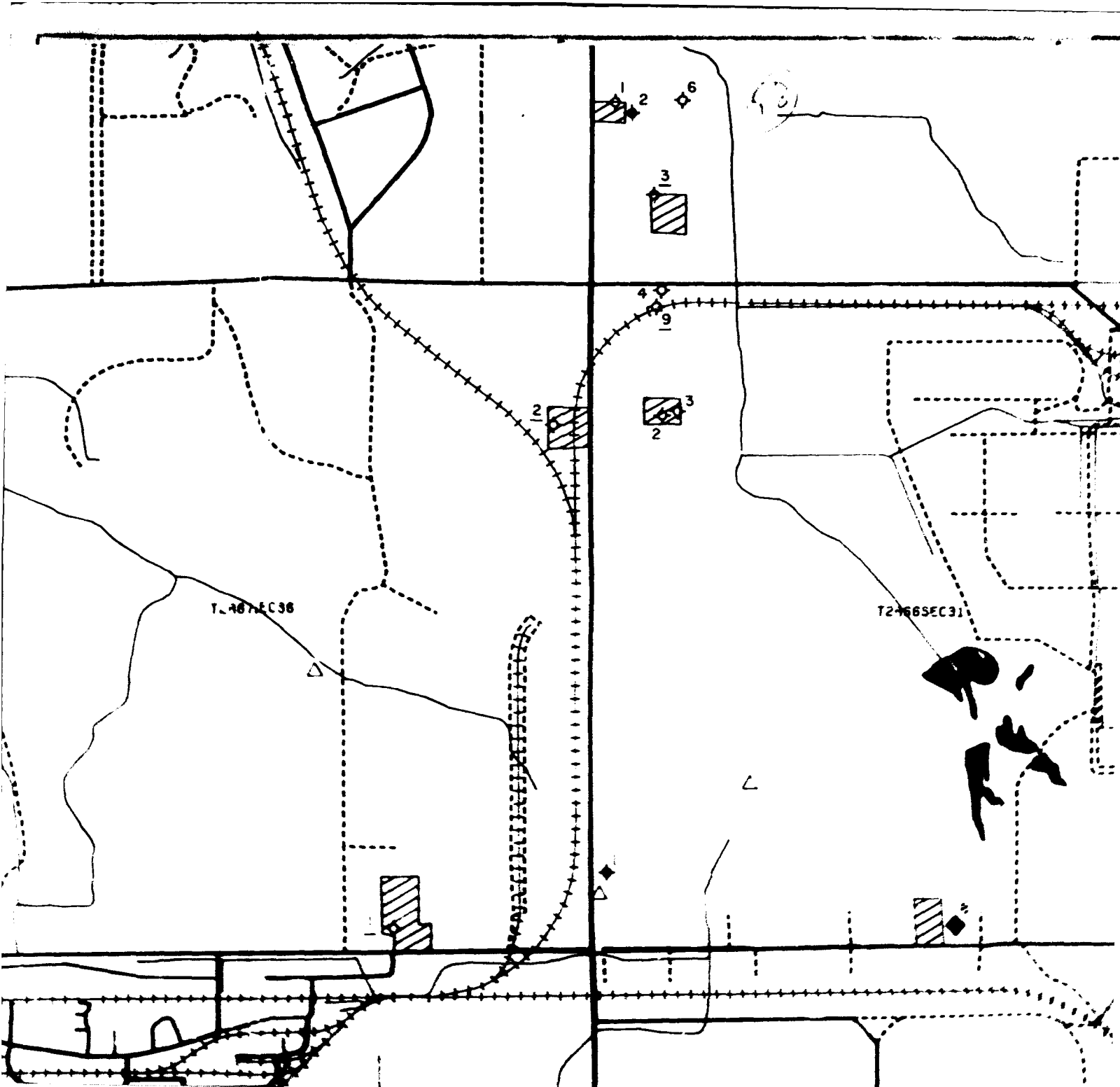
PLUGGED WELL - FROM
ARMY COE 1962 DATA

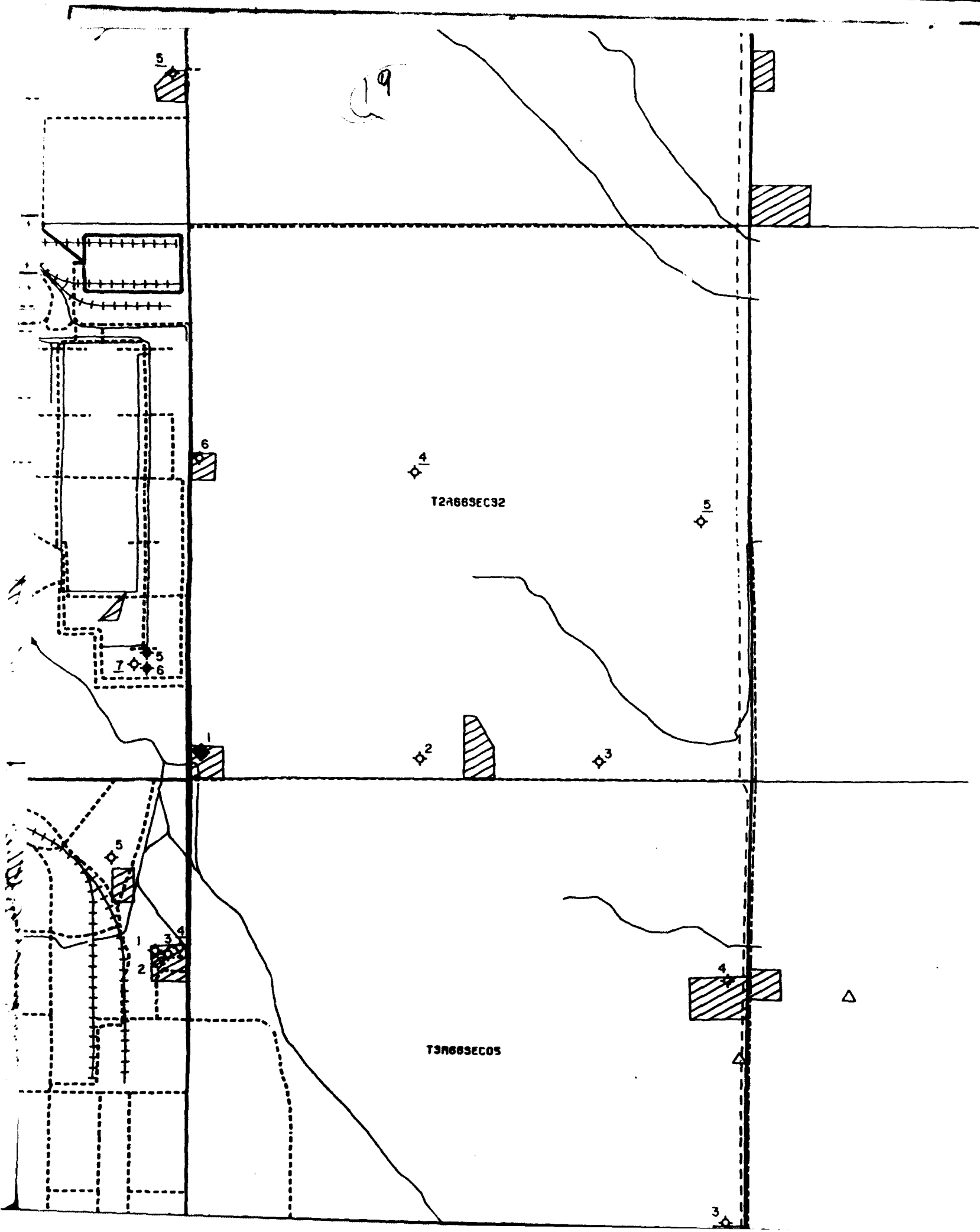
NOTE: ALL FEATURES EXCEPT
HOMESTEADS ARE CONTEMPORARY













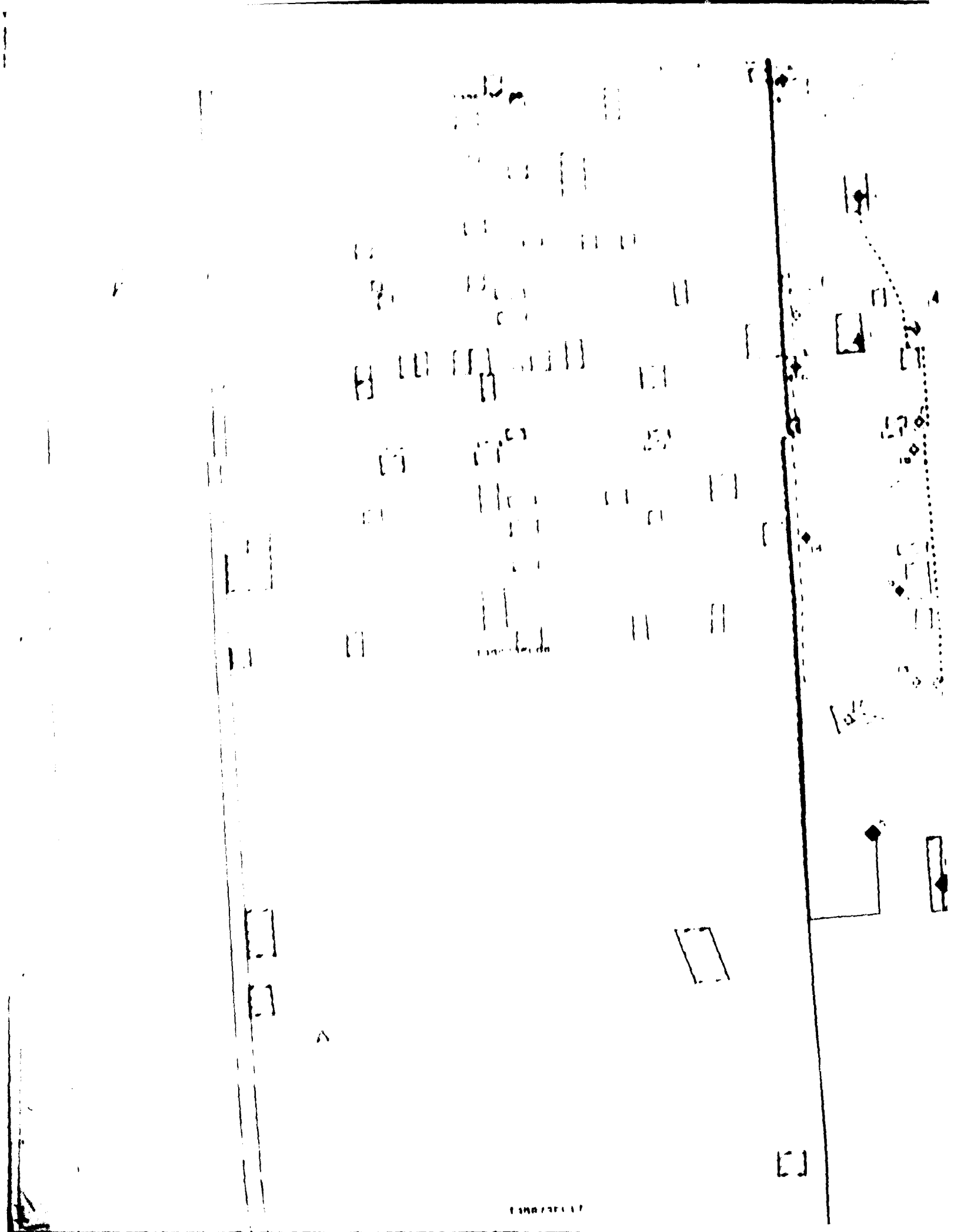
R6

T2R663EC33



T3

T3R663EC04



T3R87SEC08

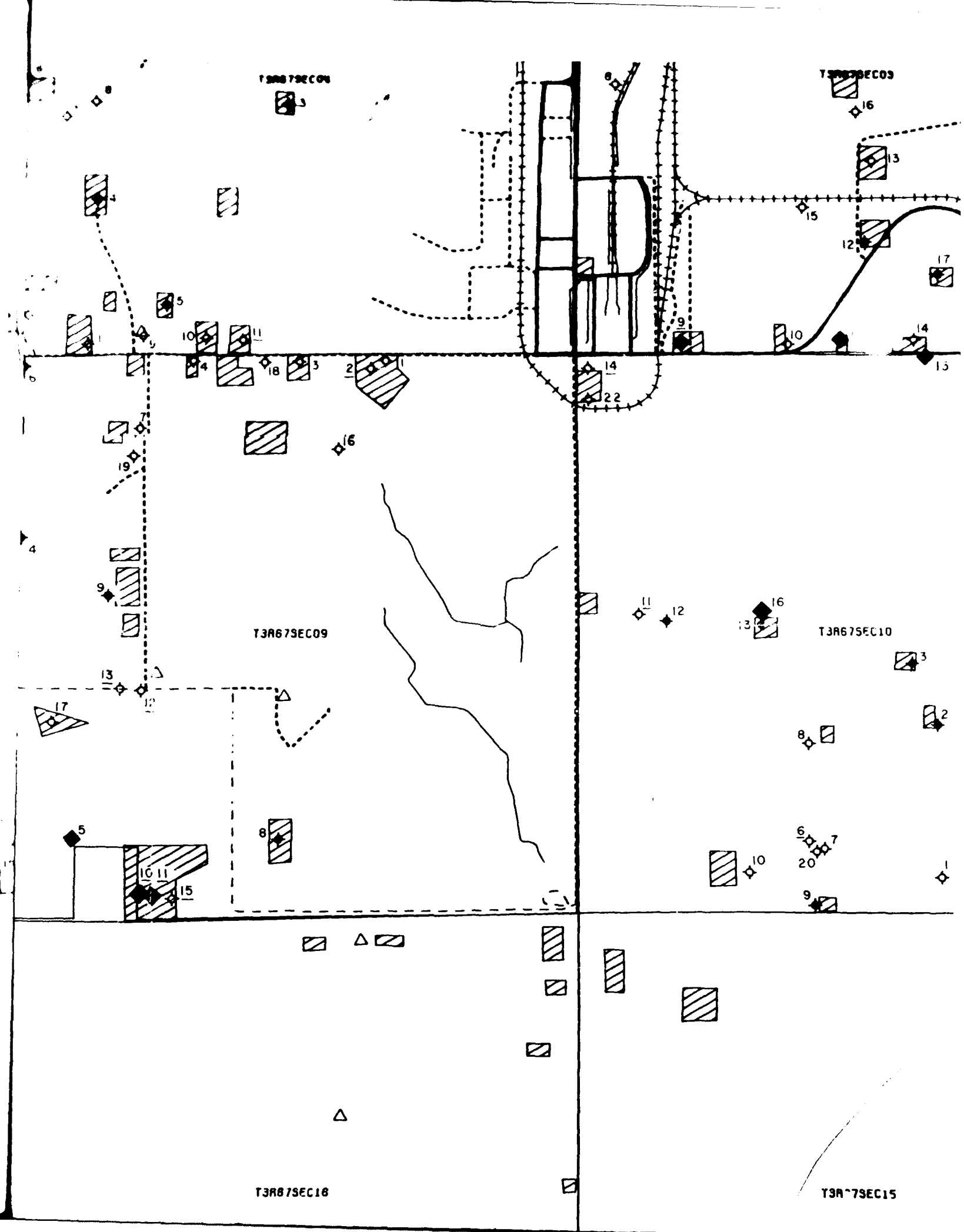
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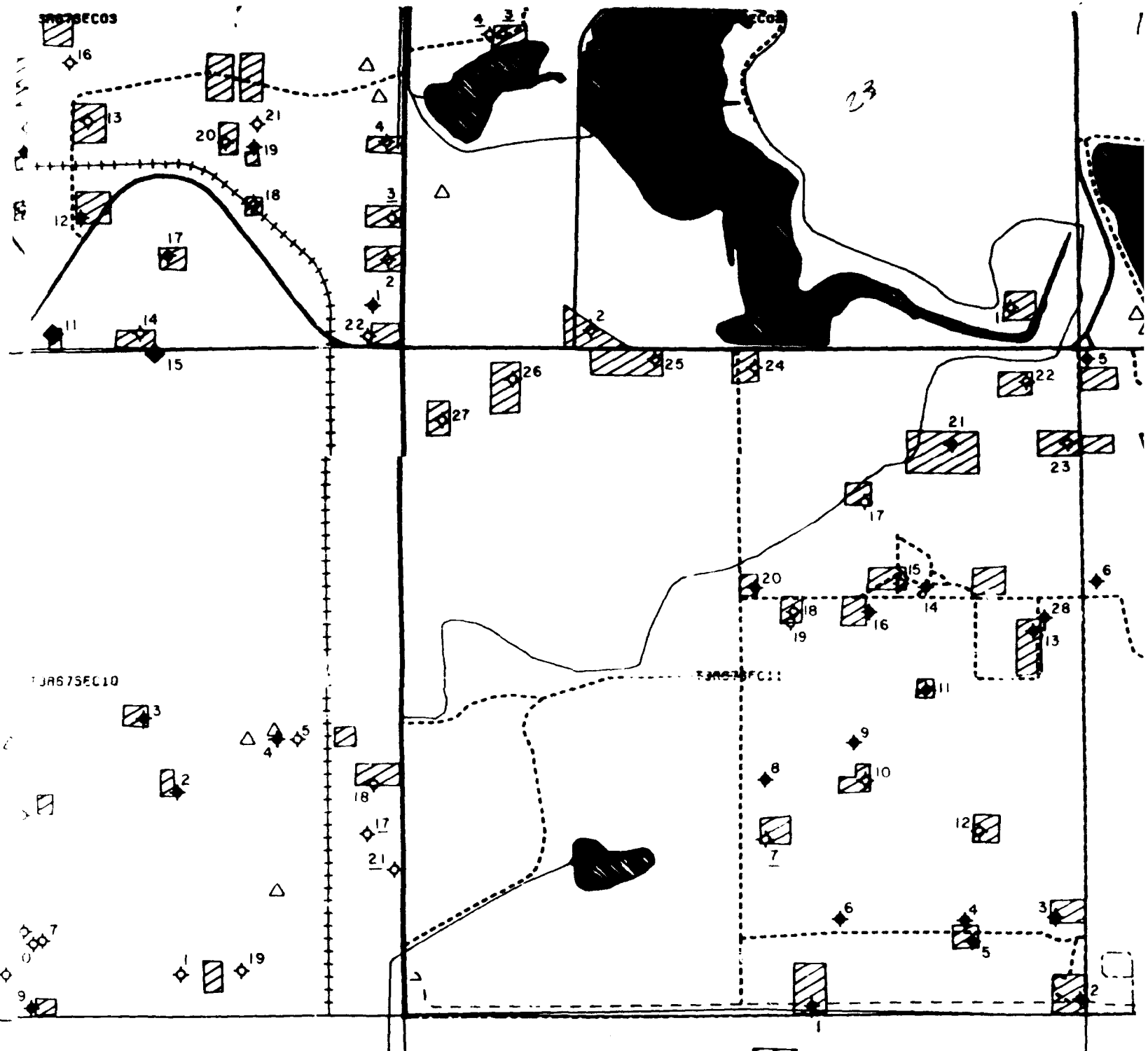
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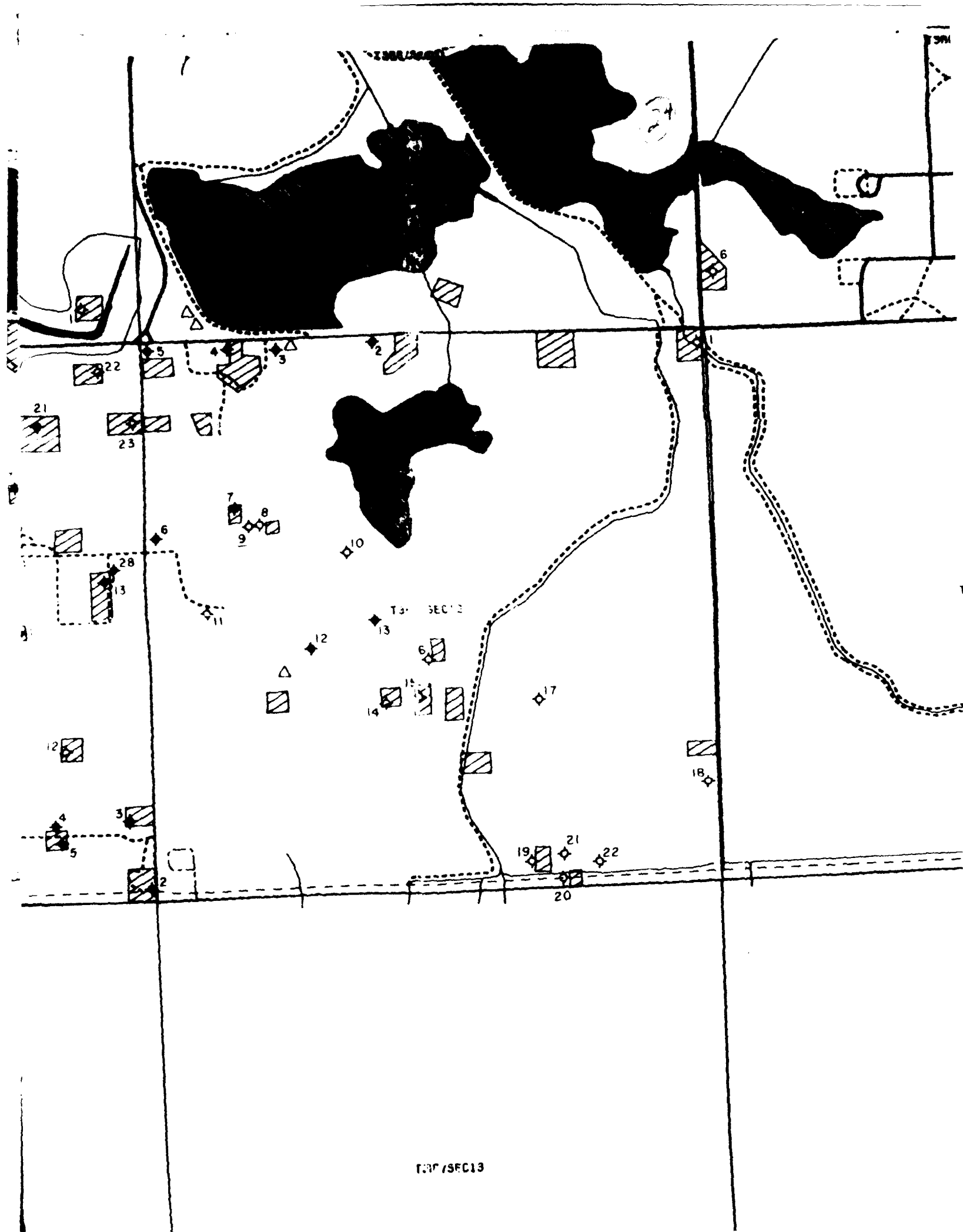
T3R67SEC10

T3R87SEC18

T3R87SEC15







T3A66SEC06

T3A66SF_07

T3A66SEC08

T3A66SEC10

T3A66SEC17

3



2



T3A883EC09



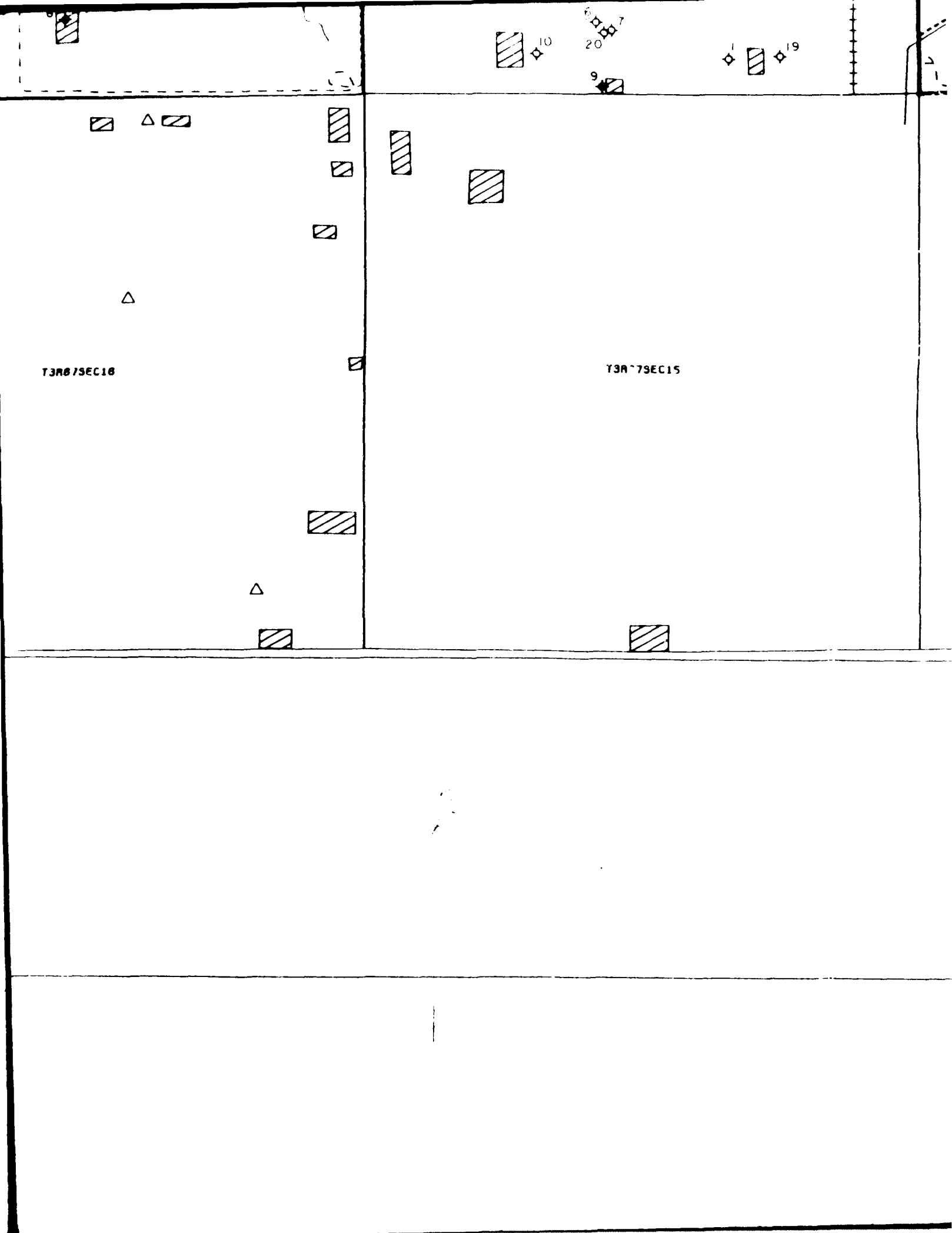
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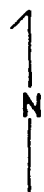
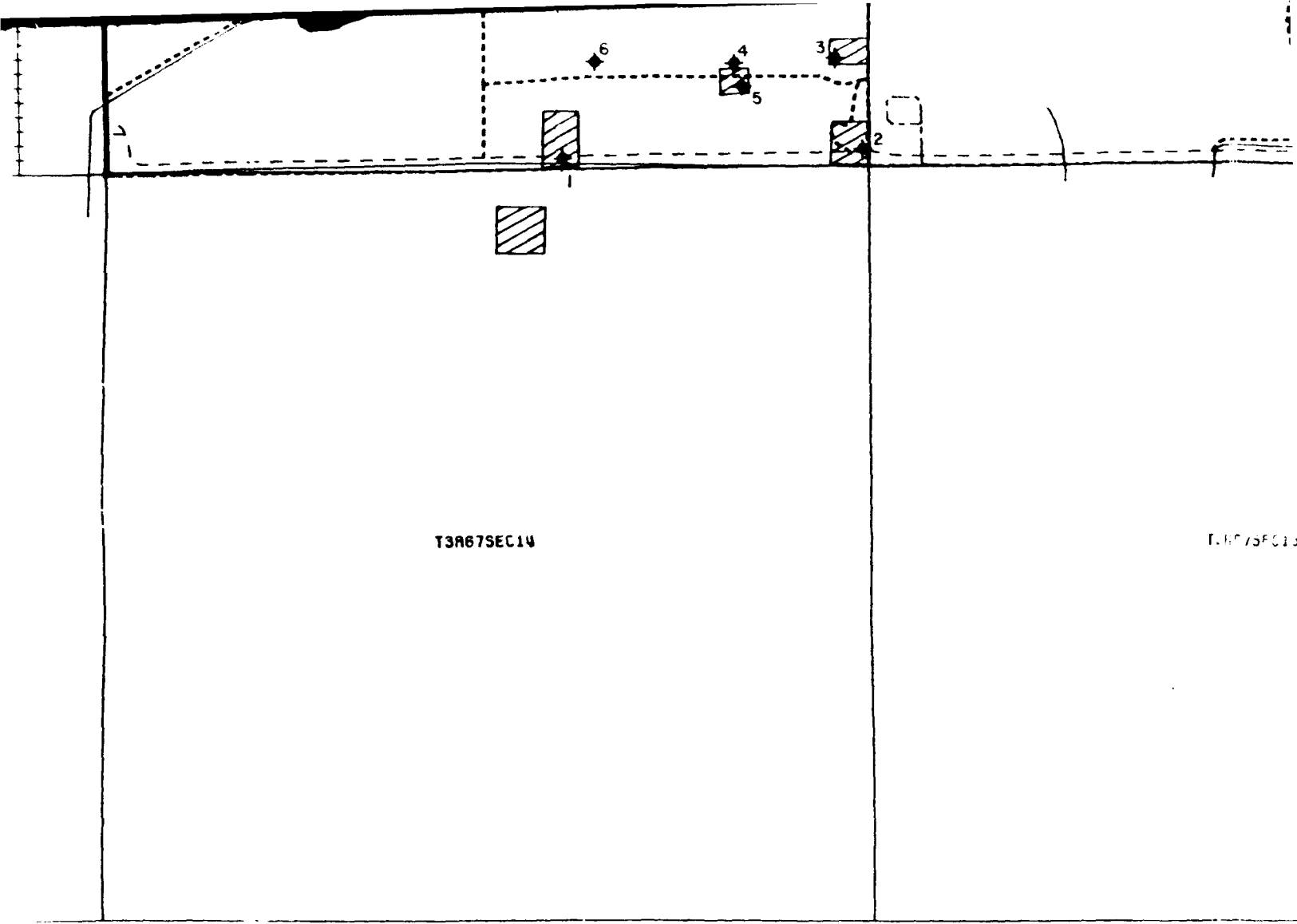
109858.

2.52357.

T3R675EC17







29

19 21 22
20

T3A685-C13

T3A685-C18

4000

670



T3A66SEC17

T3A66

8



184658.

22 JUL 96.



ROCKY MOUNTAIN ARSENAL

PRE-RMA WELL LOCATIONS

ATTACHMENT 3