

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8464

Exam Date: 7/24/2012

1. Current Owner: GREENHORN OWNERS ASSN
C/O JAMES P SPECK ATTY
PO BOX 987
KETCHUM ID 83340

2. Accompanied by: Mike DeChevrieux
Phone No: 788-7628
Address: 195 Greenhorn Rd Ketchum, ID
PO Box 1182 Hailey ID 83333
Relationship to Permit Holder: Operator

3. SOURCE
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None; SEE OVERLAP ANALYSIS SECTION BELOW
2. Other water rights with the same point of diversion: 37-7935 (municipal)

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER NW1/4NE1/4 Sec. 18, Twp 03N, Rge 18E, B.M. BLAINE County

GROUND WATER NW1/4NE1/4 Sec. 18, Twp 03N, Rge 18E, B.M. BLAINE County

Method of Determination: GPS and Existing DEQ Points

2.

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N 17E 13				4.0					.5	1.0							5.5
03N 17E 14							3.0	.5					1.0				4.5
03N 18E 18						2.0											2.0
						L 1											

Total Acres: 12

Method of Determination: Aerial Imagery/Submittal by Mike DeChevrieux

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☐ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☐ Photo of Diversion and System Attached

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
E0007895—Well #1 (indoor well aka west well)	25 hp			submersed, unknown	
E008001—Well #2 (outdoor well aka east well)	25 hp			submersed, unknown	

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Attempted measurement with the Thyme Flyte polysonic	—unsuccessful measurement					
McCrometer Flowmeter						

2. Measurements:

1). Theoretical measurement using horsepower

2). Measuring device on the pipe (McCrometer Flowmeters). Installed within the last 6 years, impellers were replaced last year.

3). I attempted to measure the flow using the polysonic equipment but I was unable to get a good signal. It appeared that there is too much turbulence in the pipe. When I was trying to obtain a measurement, both wells were feeding into the system, filling the storage tank. Because of the fixtures on each individual wells' intake pipe I couldn't attach the equipment to each pipe. Instead, I tried to place the measuring equipment on the common pipe where they came together. I would have been surprised if a good signal occurred due to the way the system is configured and as you can see from the attached tape from the polysonic there was not.

E. FLOW CALCULATIONS

___Y___ Additional Computation Sheets Attached

Measured Method:

1). Well #1

Depth to water – according to the well driller's report it appears that the productive layer is at 35'

PSI – the pressure reading at the discharge point on the well reflected 210 psi

hp – 25 horse

$$8.8 \times 25 \times 0.7 / 35 + (2.31 \times 210) = 154/520.1 = \mathbf{0.30 \text{ cfs or } 134 \text{ gpm}}$$

Well #2

Depth to water – according to the well driller's report it appears that the productive layer is at 103'

PSI – the pressure reading at the discharge point on the well reflected an average of 210 psi

hp – 25 horse

$$8.8 \times 25 \times 0.7 / 103 + (2.31 \times 210) = 154/588.1 = \mathbf{0.26 \text{ cfs or } 117 \text{ gpm}}$$

Wells are used together so a total of **0.56 cfs or 251.3 gpm** is the theoretical estimate of the system

2). Well #1 measured at 0.31 cfs or 140 gpm using the McCrometer

Well #2 measured at 0.20 cfs or 90 gpm using the McCrometer

Wells are used together so a total of **0.51 cfs or 230 gpm** is the measured rate of both wells

System Capacity Conclusion: Well #1 is confirmed to divert up to 0.31 cfs according to the flowmeter and the theoretical estimate. Well #2 is shown to divert up to 0.20 cfs but the theoretical estimate puts it at 0.26 cfs which is a difference of 27 gpm. There are a few assumptions in the theoretical estimate such as efficiency, friction losses and depth to water that may cause the estimate to be inaccurate. For example, if the efficiency is 60% instead of 70% the estimate would be 0.22 cfs. I believe that the flowmeter is making a good measurement since the other flowmeter seems to be right on so I will recommend that this system can produce up to 0.51 cfs or 230 gpm.

Other Considerations when Determining Diversion Rate

Permitted rate: 0.56 cfs

System capacity: 0.51 cfs

37-7935: shares both PDs and is for domestic use for 0.28 cfs (0.51 cfs – 0.28 cfs = 0.23 cfs)

Duty of water for 12 acres = 0.24 cfs

Permit 37-8464 will be licensed with a diversion rate of 0.24 cfs even though the limiting factor is the system capacity. I believe that the original system may have been operating against less pressure since the storage tanks were submerged and the water was entering at the top of the tanks instead of at the bottom like now.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 12 \times 3.5 = 42 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.24 \text{ cfs} \times 1.9835 \times 200 \text{ days} = 95.2 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 42 \text{ afa}$$

2. Volume Calculations for Other Uses: NA

G. NARRATIVE/REMARKS/COMMENTS

Select lots within Greenhorn Sub have developed irrigation uses for a total of 12 acres on 11 lots. I have attached a list of lots and the amount of irrigation that they are allowed per the homeowner's association.

The system was updated about 6 years ago that included a variable frequency drive, measuring devices, telemetry, and a new storage tank. Originally, there were two storage tanks in place with a total capacity of 50,000 gallons.

The new storage tank has a capacity of 150,000 gallon that kicks on when it is at 10' and at 13' the tank is about full. Both wells pump into the storage tank which is located at an elevation of 6000' (the wells are pumping against 450' of head). However, the first five lots get water directly from the 6" main. There are fire hydrants that are intermittently located throughout the subdivision.

Overlap Analysis

1). This permit is for domestic and irrigation purposes in Greenhorn Subdivision just north of Hailey. The domestic portion of this permit is already covered by decreed right 37-7935. Right 37-7935 authorizes 35 lots and the irrigation of ½ acre per lot in the amount of 0.28 cfs. Since the domestic use is already covered, the license for 37-8464 will cover irrigation purposes only.

2). Lot #4 has a private water right, 37-8226, that is for a pasture to the west of the house. The total irrigated area in lot #4 is 5 acres; 2 acres from 37-8226, ½ acre from domestic right 37-7935, and 2.5 acres from this right. There is not an overlap and she has her own well for 37-8226.

3). 37-11955 is for stockwater from a spring. The place of use does not overlap and is not significant.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/15 to 10/31	0.240 CFS	42.00 AF
<u>Totals:</u>		0.240 CFS	42.00 AF

2. Recommended Amendments

☒ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

☒ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Cherie Palmer Date 8/7/2012

Reviewer _____ Date _____

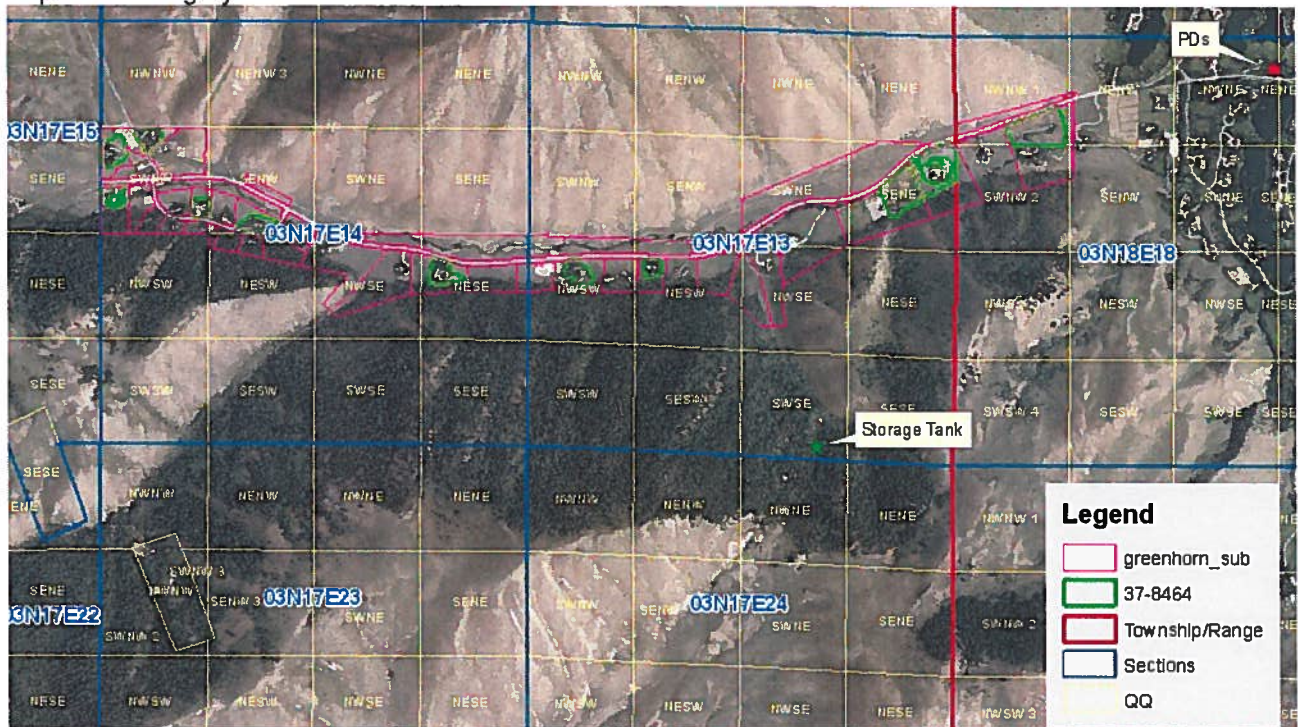
Attachment 1 - Polysonic tape

Attachment 2 - Correspondence from Dechevrioux regarding lots

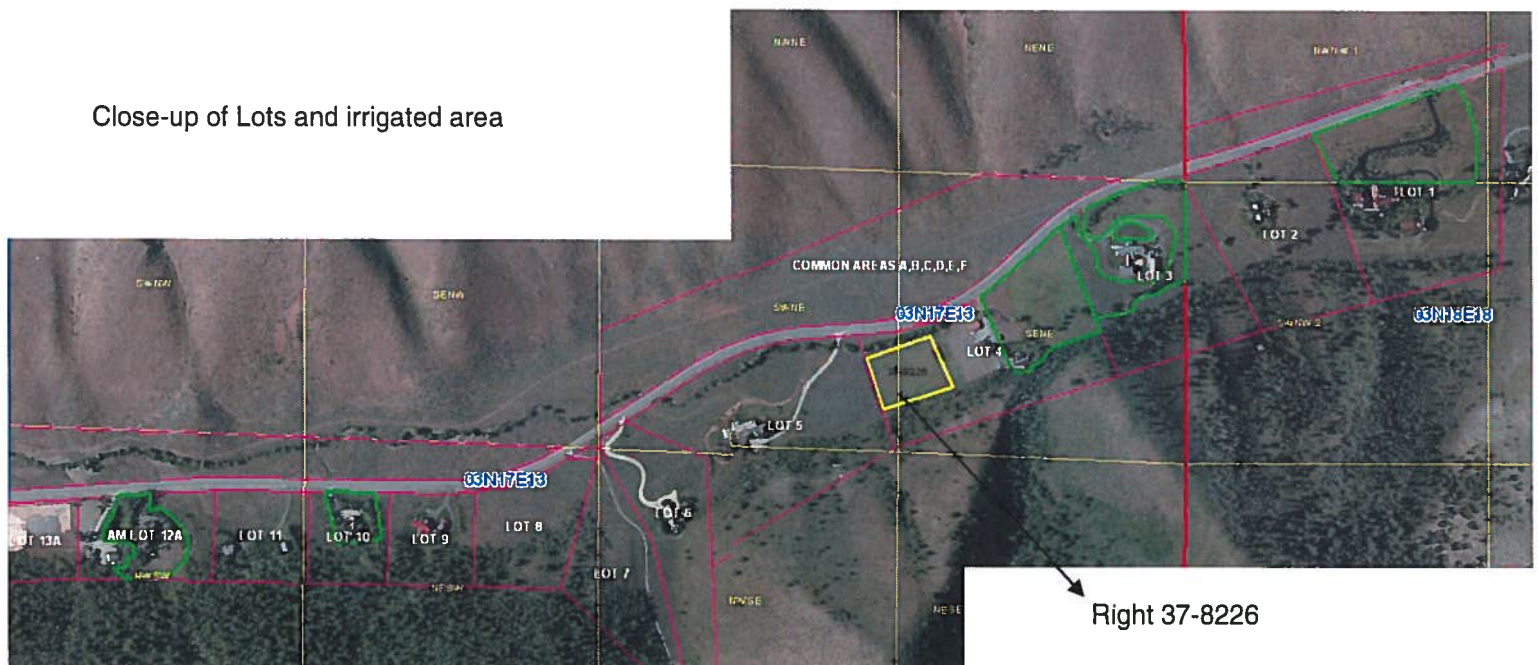
Attachment 3 - well logs

Delivery System Diagram (see the blueprints that have been scanned into the file and are also available on disc)

Map/Aerial Imagery



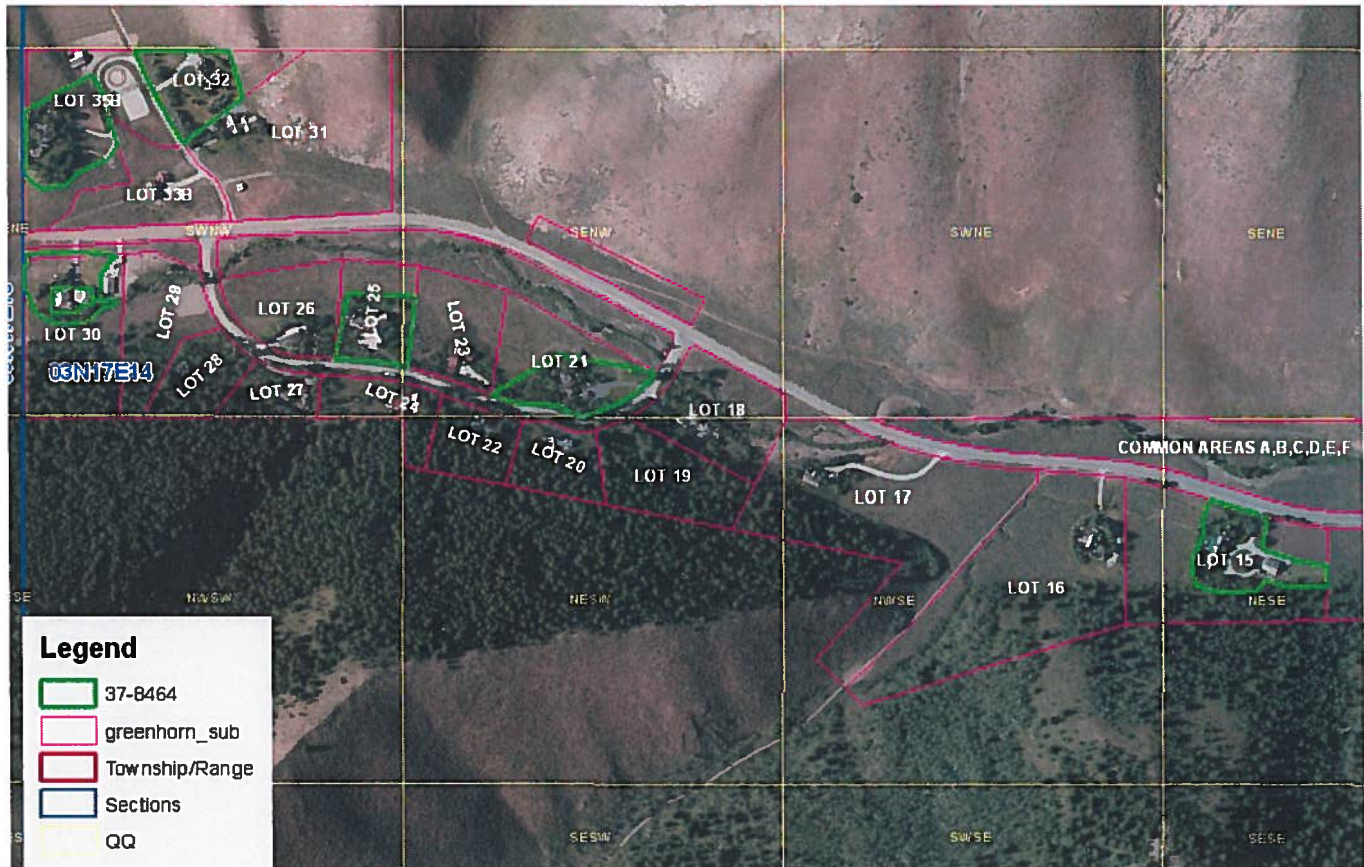
Close-up of Lots and irrigated area



Right 37-8226

Note that I drew nominal shapes within the lots that have irrigation water because it was too difficult to decipher the irrigated area.

The homeowner's association indicated that Lot 29 has 1 acre of irrigation. I could not find any land in the available imagery that looks irrigated within Lot 29. The owner of Lot 30 owns Lot 29 and I could find some imagery that shows irrigation within Lot 30 so I drew the shape within Lot 30.



Here are the acre allotments appurtenant to this permit per lot (these allotments are fixed; no acres will be moved among lots):

Lot 1 – 2.0

Lot 3 – 1.5

Lot 4 – 2.5

Lot 10 – 0.5

Lot 12 – 1.0

Lot 15 – 1.0

Lot 21 – 0.5

Lot 25 – 1.0

Lot 29 – 1.0 (will be identified as Lot 30 since I couldn't find any irrigated land within Lot 29)

Lot 32 – 0.5

Lot 35 – 0.5



Well #2
Facing SE



E0008001
AKA Well #2



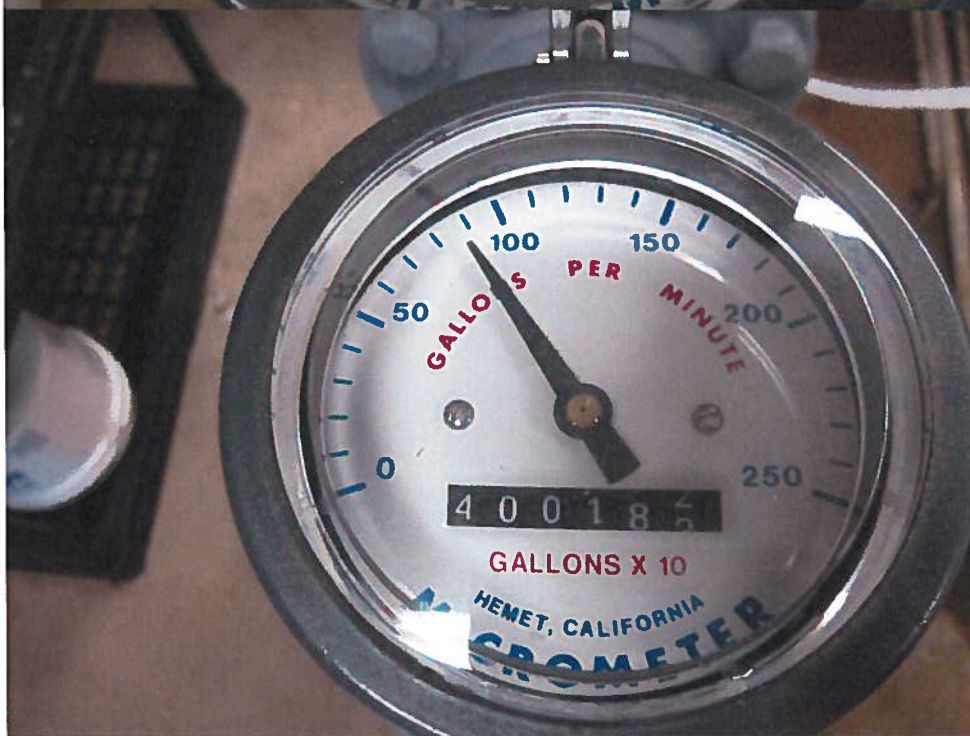
Electrical Box
for pump house



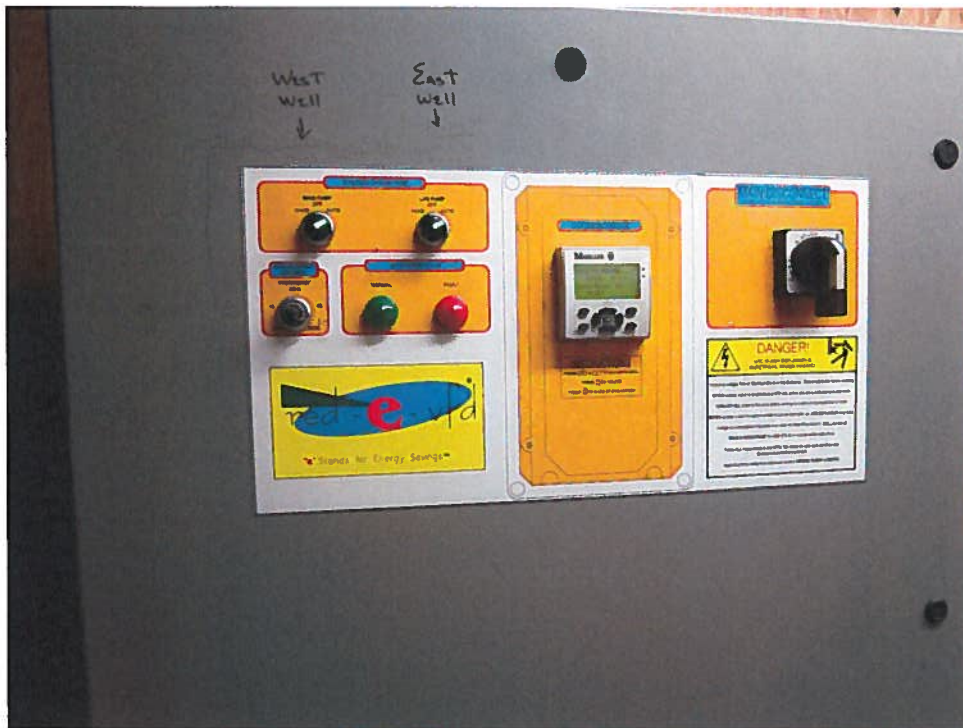
Pump House
Facing W



Mcrometer
for Well #1



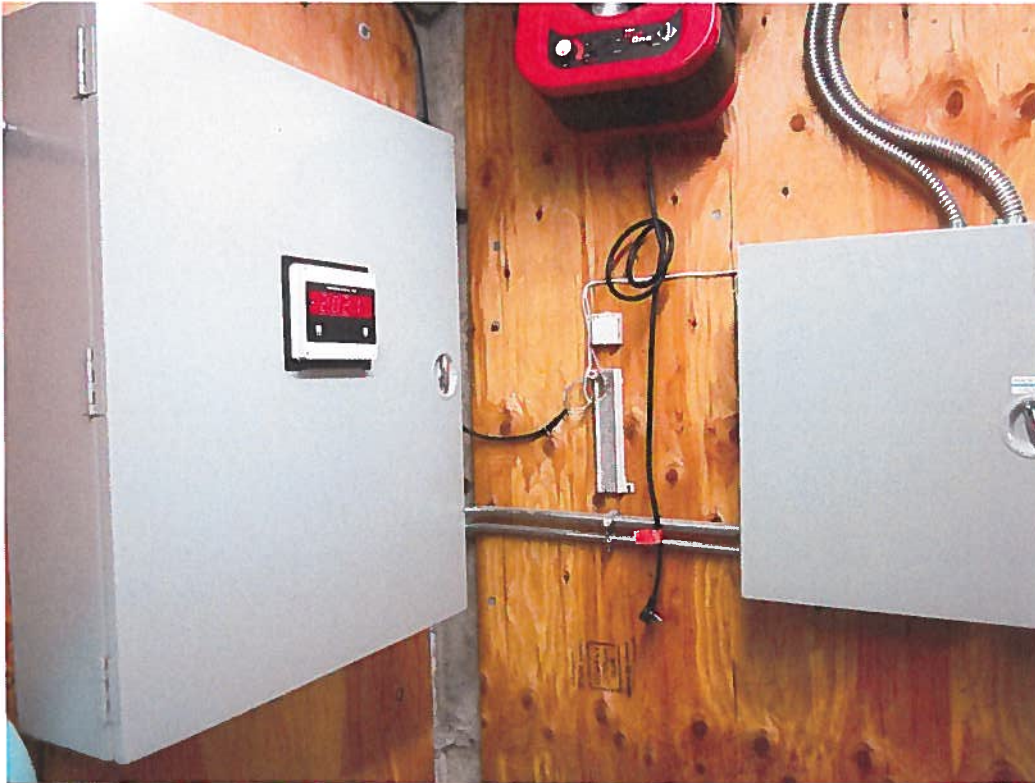
Mcrometer
for Well #2



Variable frequency drive



Control Panel



Telemetry
System that
kicks system
on based on
storage tank
levels



PSI Gage
for Well #1



PSI Gage
for Well #2

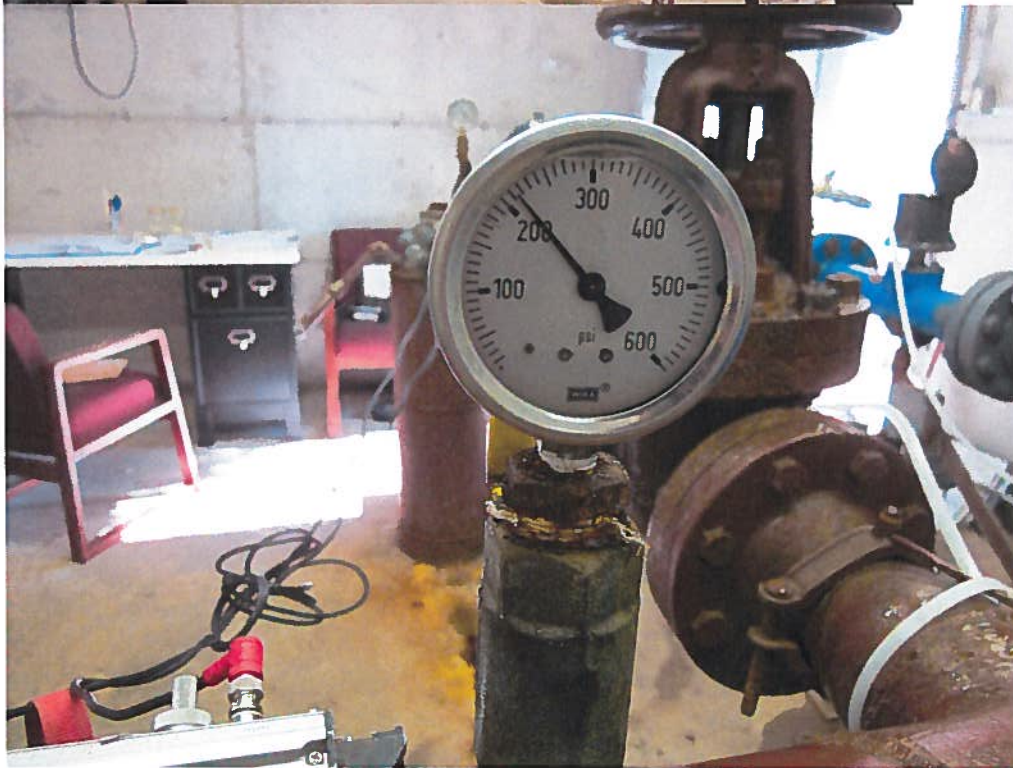


Mcrometer
for Well #1

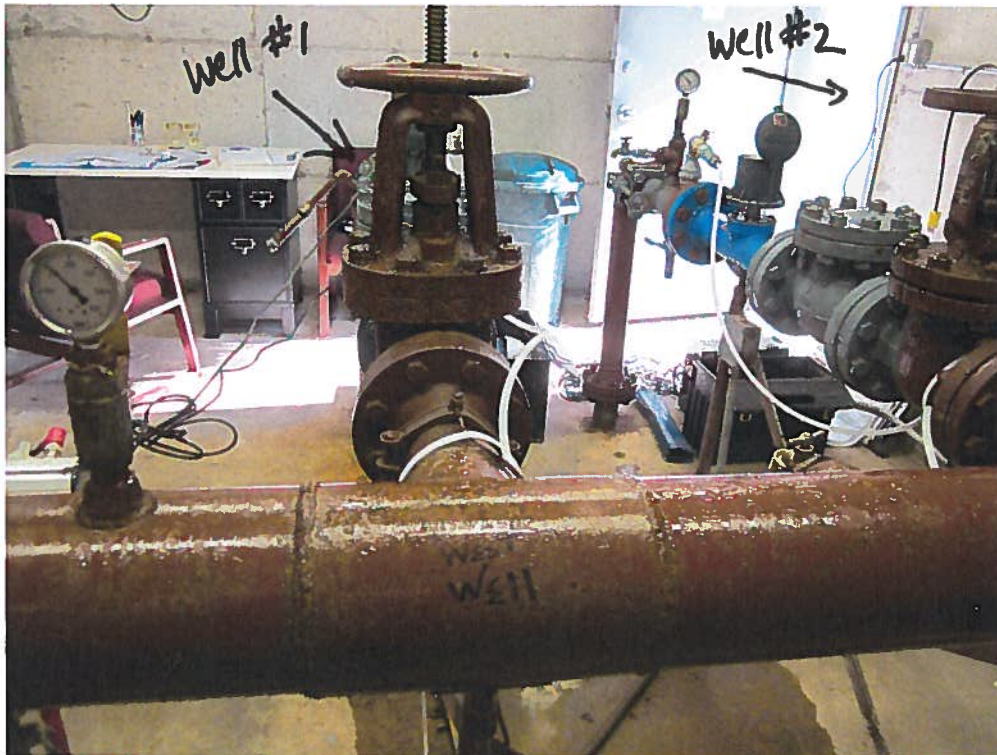


Chlorinators in blue tanks

PVC - 2" relief



PSI Gage on
common 6"
Pipe that goes
into the main





Attempted a
measurement w/
polysonic



"New" 150,000 gallon
Storage tank



overflow from
Storage tank



Telemetry system
facing South

Attempted Measurement

0.25 0004300 TH
4801.00 1. 212

2114.1 00000
102.79 1. 73

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Attempted Measurement

0.25 0004300 TH
4801.00 1. 212

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102.79 1. 73

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Attachment 1

37-8464

Palmer, Cherie

From: Michael De Chevrierux [mdech65@gmail.com]
Sent: Tuesday, July 24, 2012 9:30 PM
To: Palmer, Cherie
Subject: Additional Greenhorn information
Attachments: GREENHORN WATER SYSTEM INFO REQUESTED

Dear Cherie,

Thank you for meeting me this morning and for all of your patient explanations of the Licensing process. Following up on your requests the following information is provided.

The pump motors are 25 Horsepower each.

It will take a few days to find someone up here that can copy those old blueprint drawings of the water system. I will send you a copy of them as soon as I receive them for your files.

Attached to this e-mail are the per lot figures of extra irrigation acreage that was proven by the lot owners by the cut off date in(I believe) 1989.

Also in the attachment are the yearly gallon usage totals for the years that we recorded it.

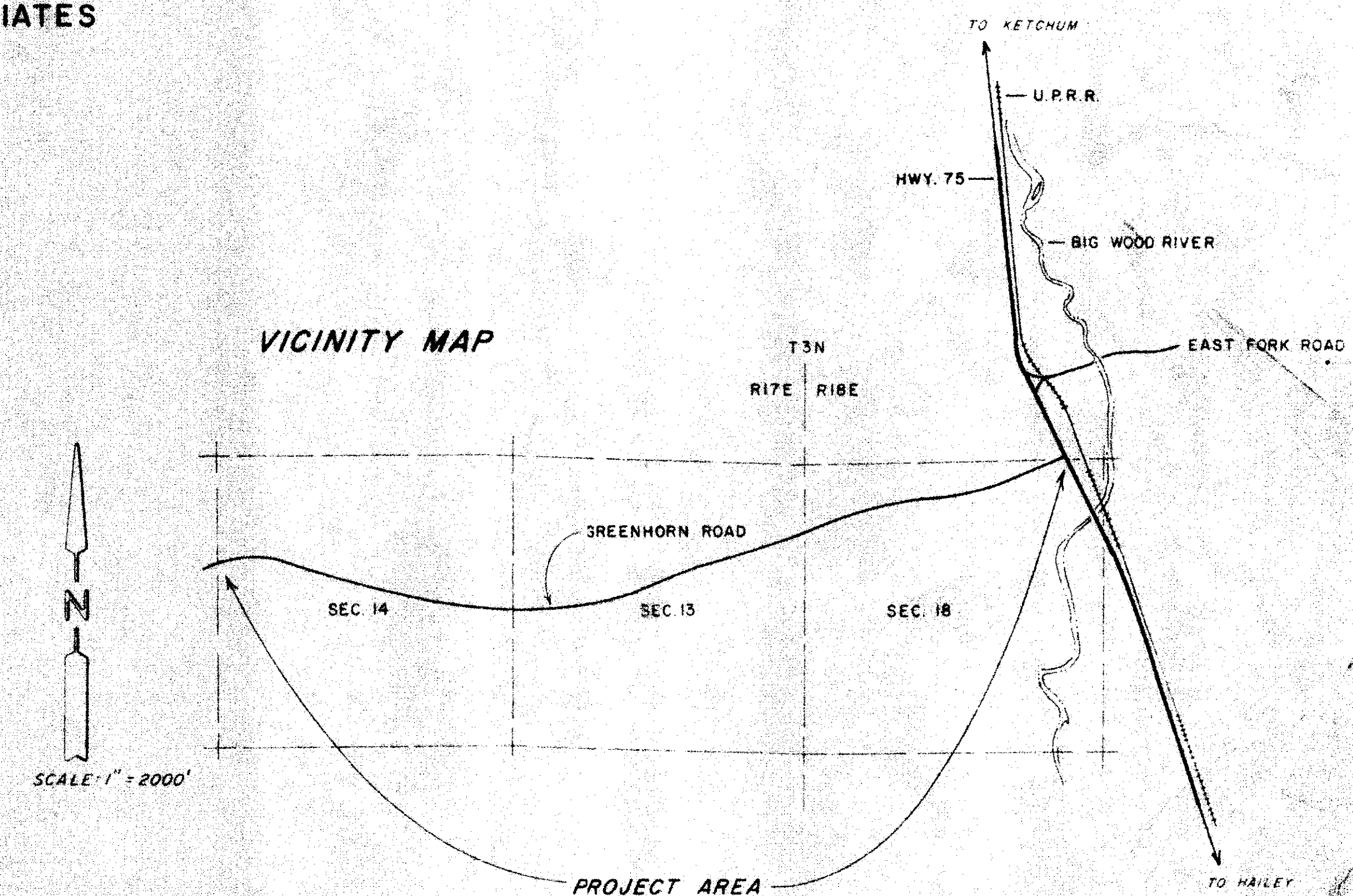
Please let me know if you require anything else.

Regards,

Michael De Chevrierux
Board Member
Greenhorn Homeowners Association

Attachment 2 (5 pages)
37-8464

SMOKY MOUNTAIN ASSOCIATES

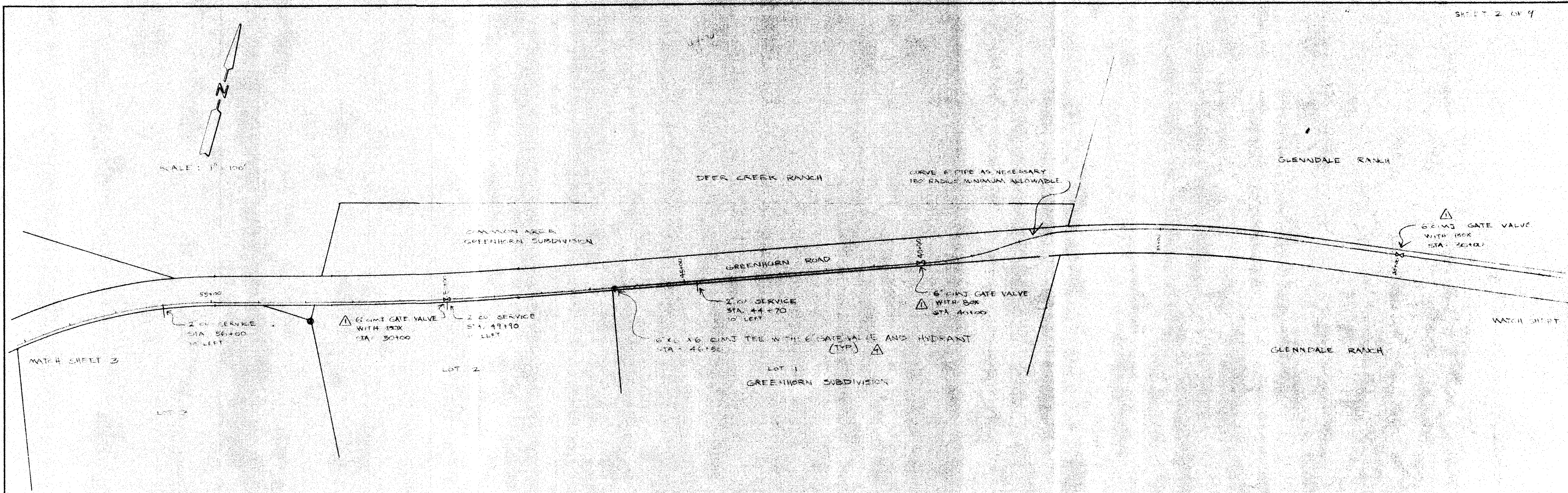


△ DRAWINGS OF RECORD AUGUST 7, 1983 C-11

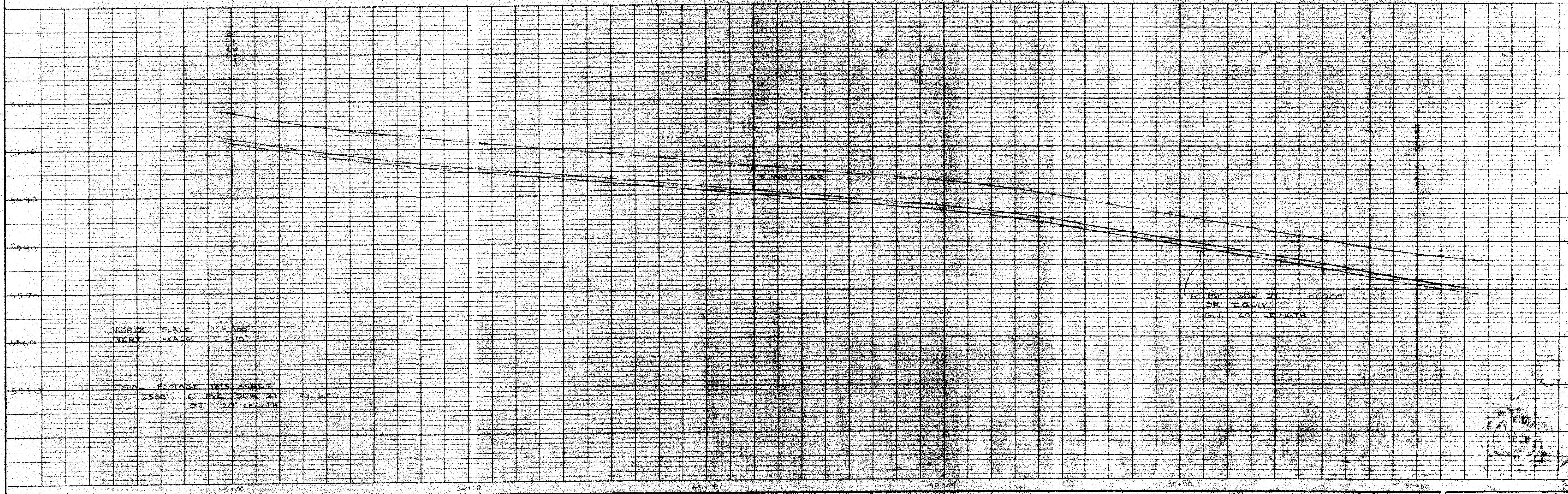
PREPARED BY
PHILIP F. PUCHNER
CONSULTING ENGINEER
KETCHUM, IDAHO
726 9512
JULY, 1981

PROFILE	SURVIVED	BY	DATE
NOTE BOOK	PLOTTED		
	GRADES CHECKED		
	B. M.'S NOTED		

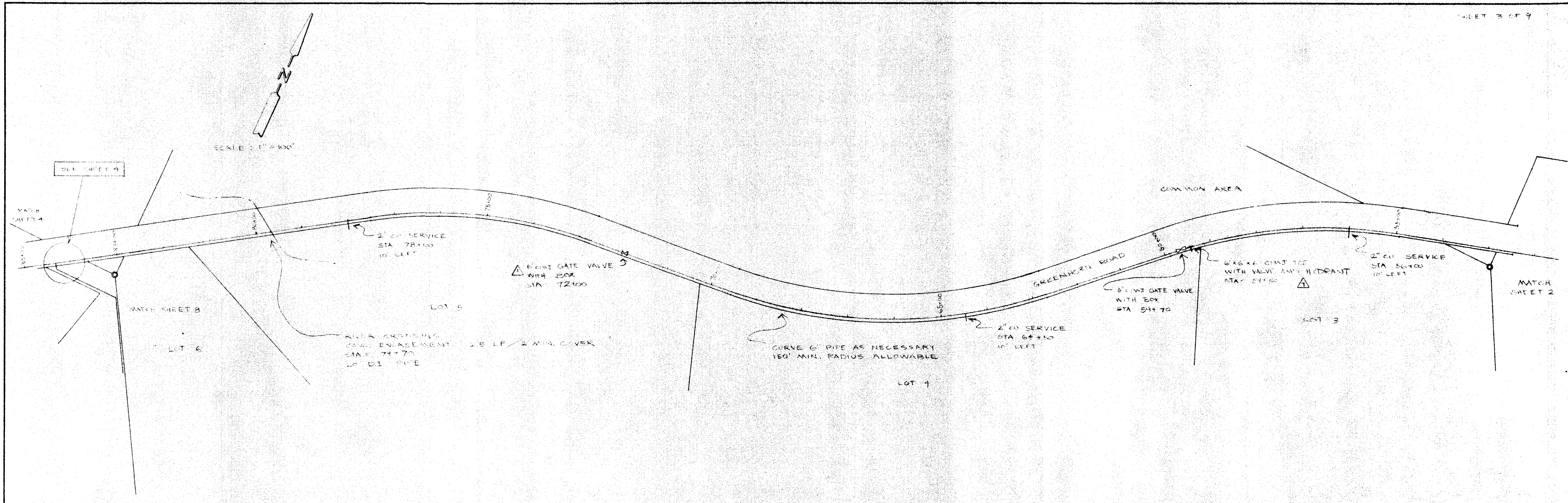
PLAN	DATE	
	BY	
	REVISION	
	NOTE BOOK	



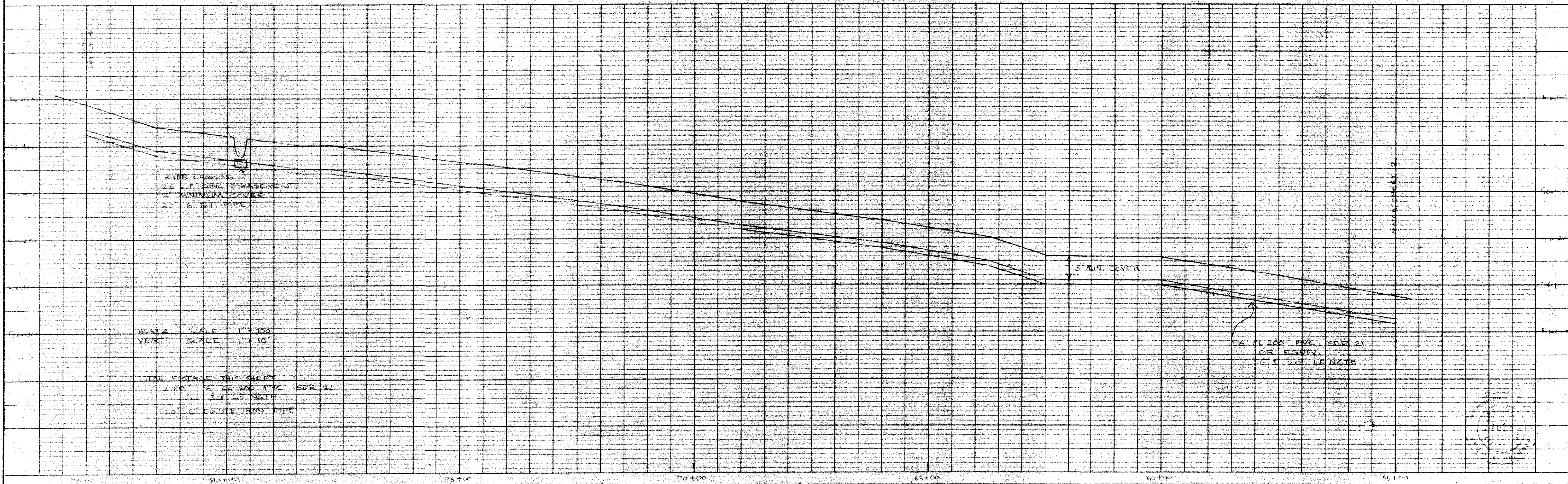
PROFILE	DATE	
	BY	
	REVISION	
	NOTE BOOK	



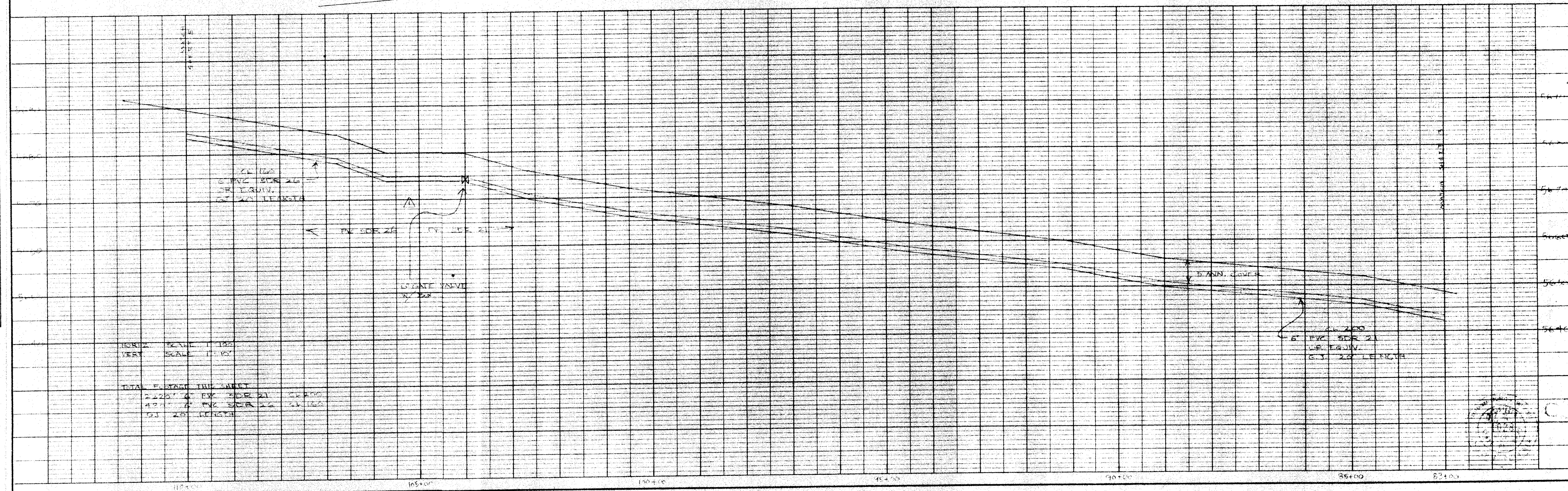
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	BY	
	REVIEWED	
	NOTED	
NOTE BOOK		
NO. OF WAY CHECKED		
No.		

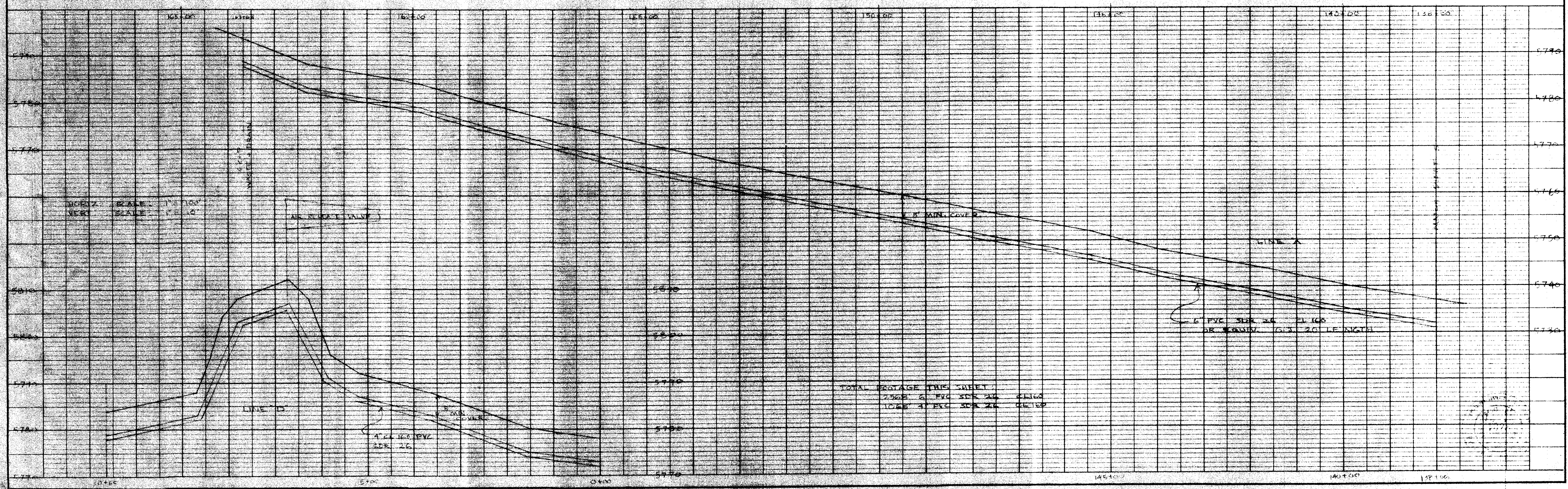
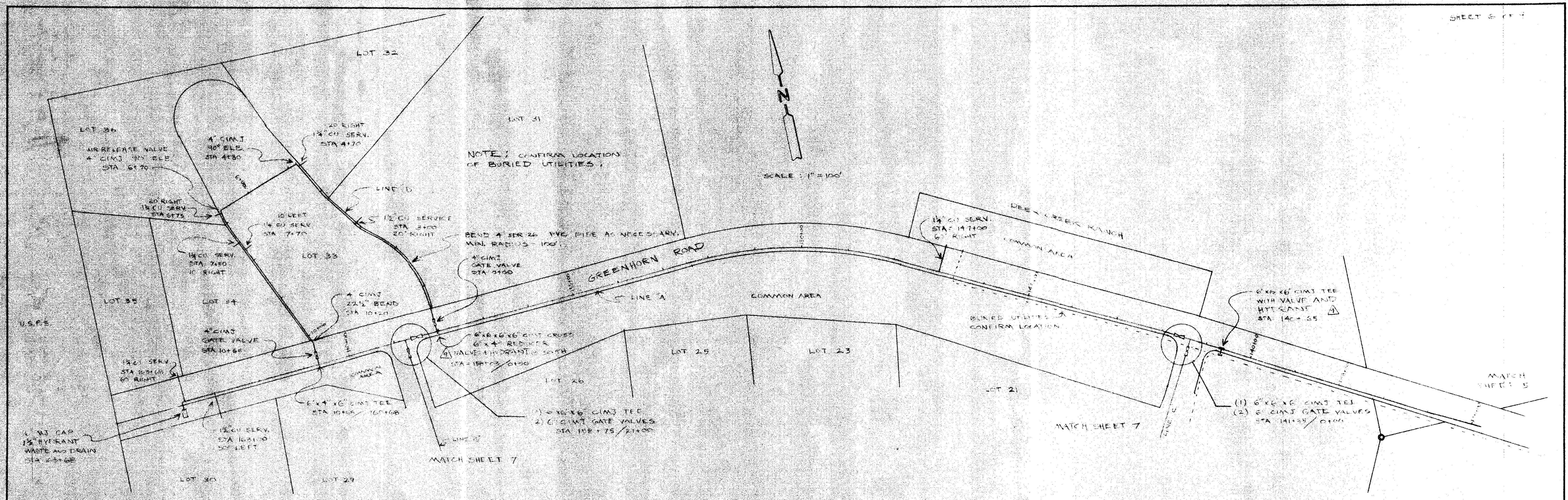


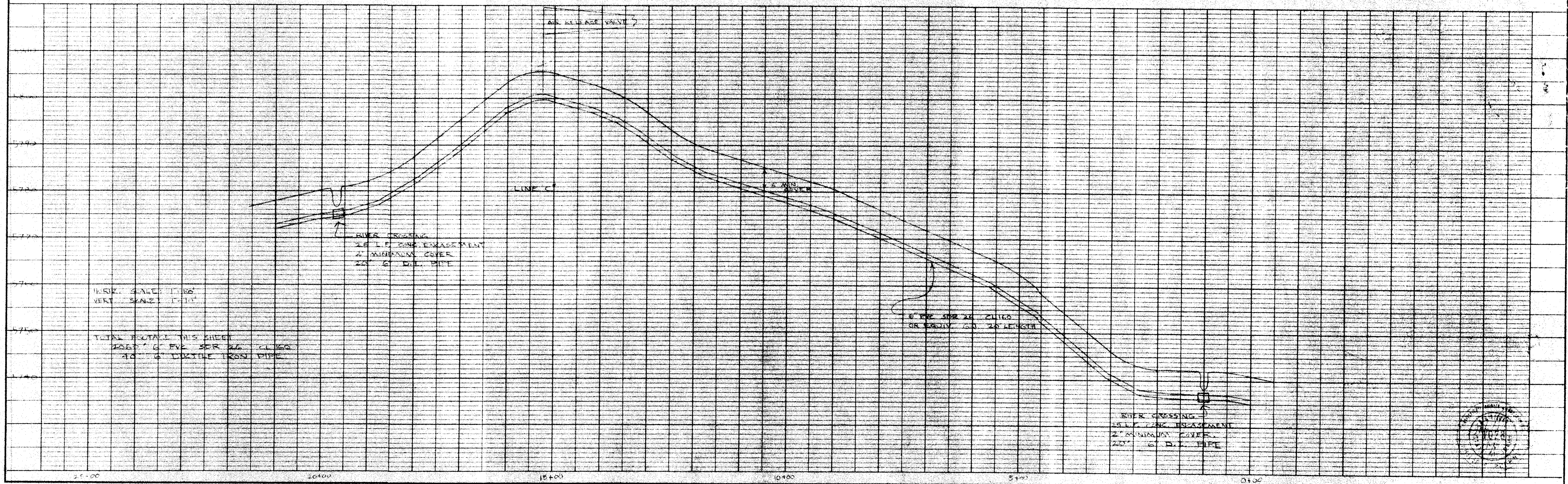
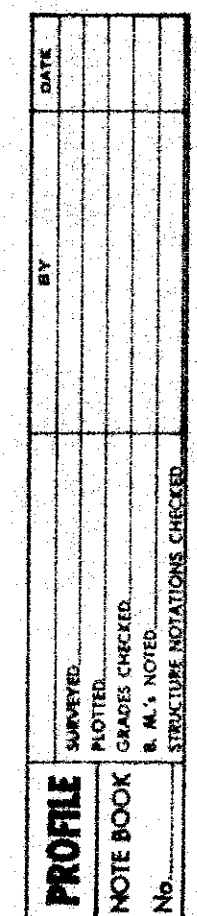
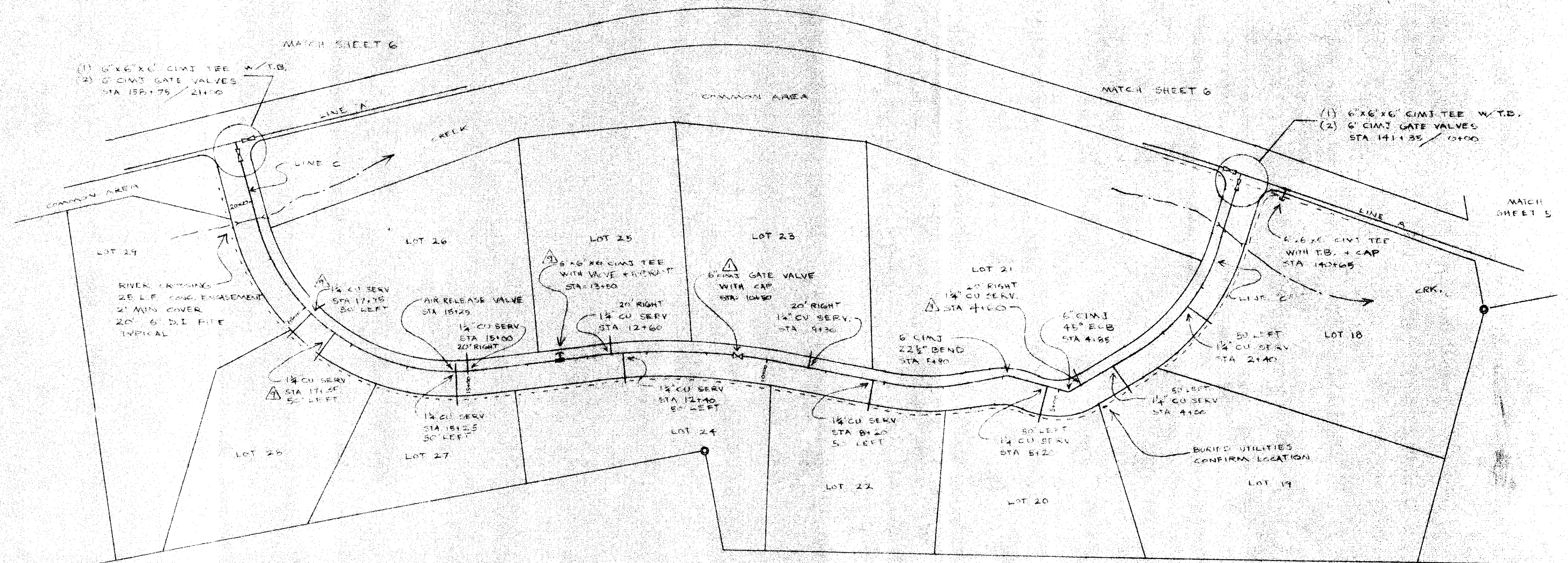
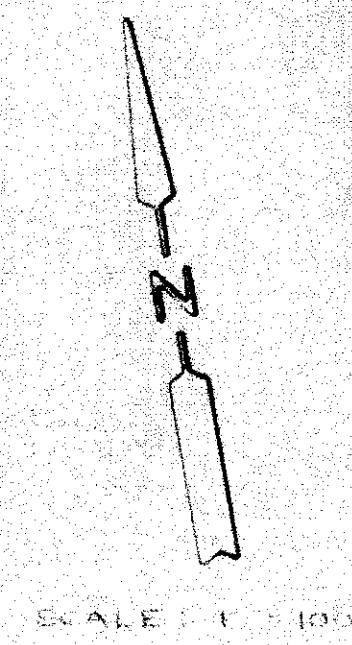
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NOTE BOOK		
NO. OF WAY CHECKED		
No.		



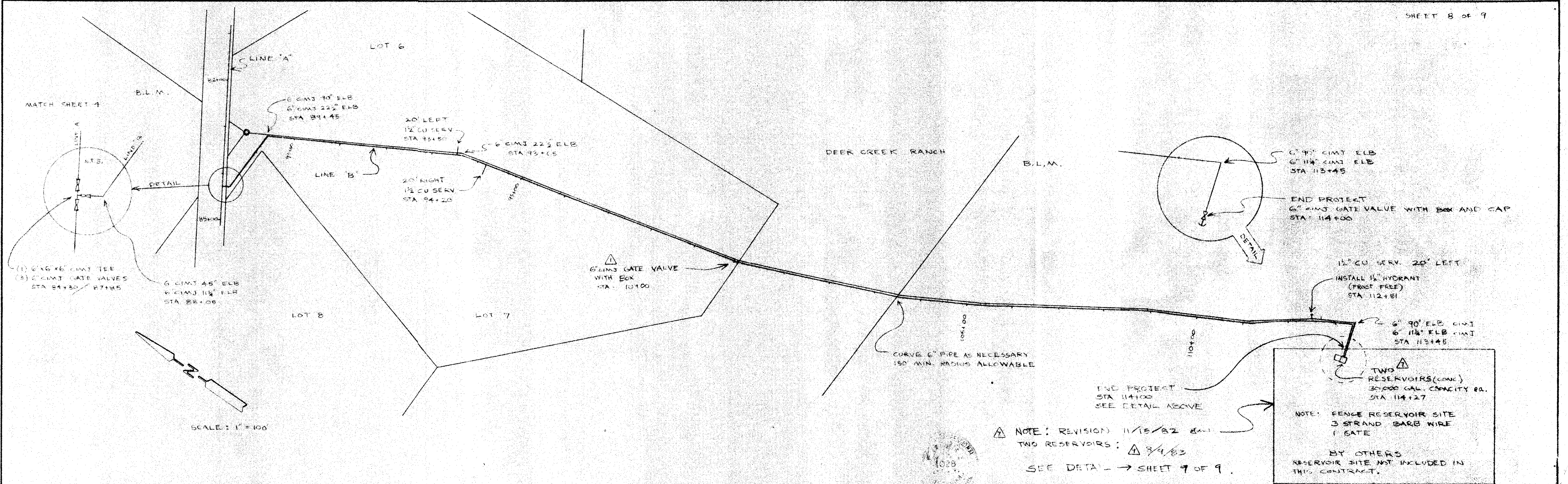
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PIOTEL			
GRABES CHECKED			
B. M.'S. NOTED			



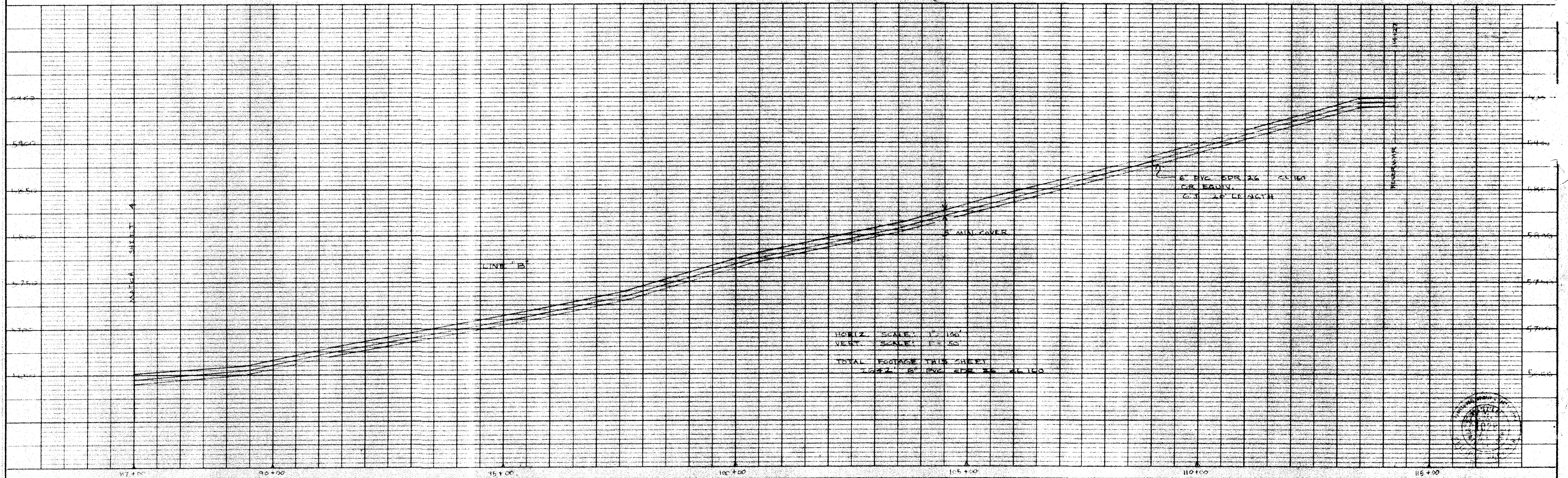


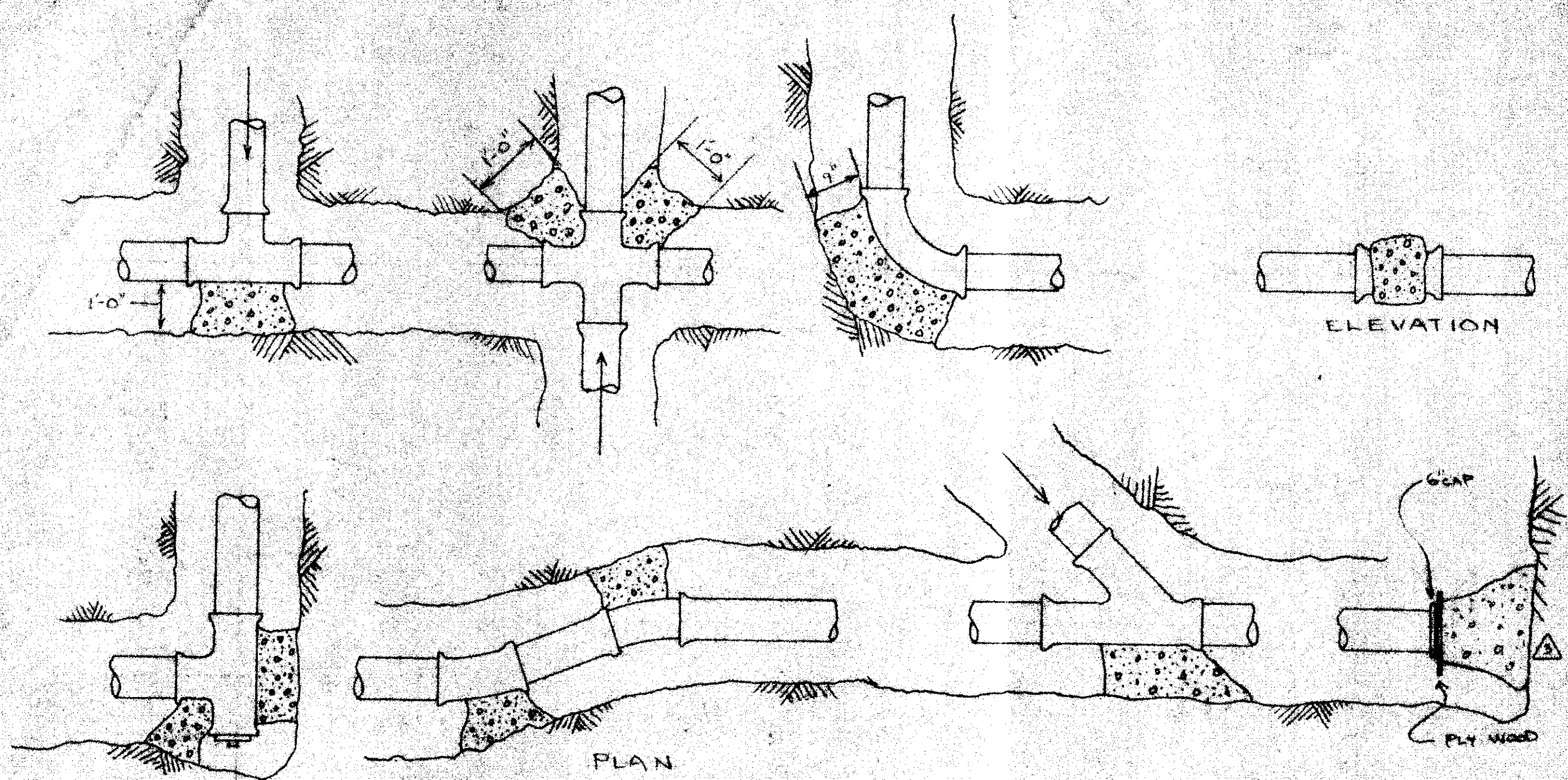


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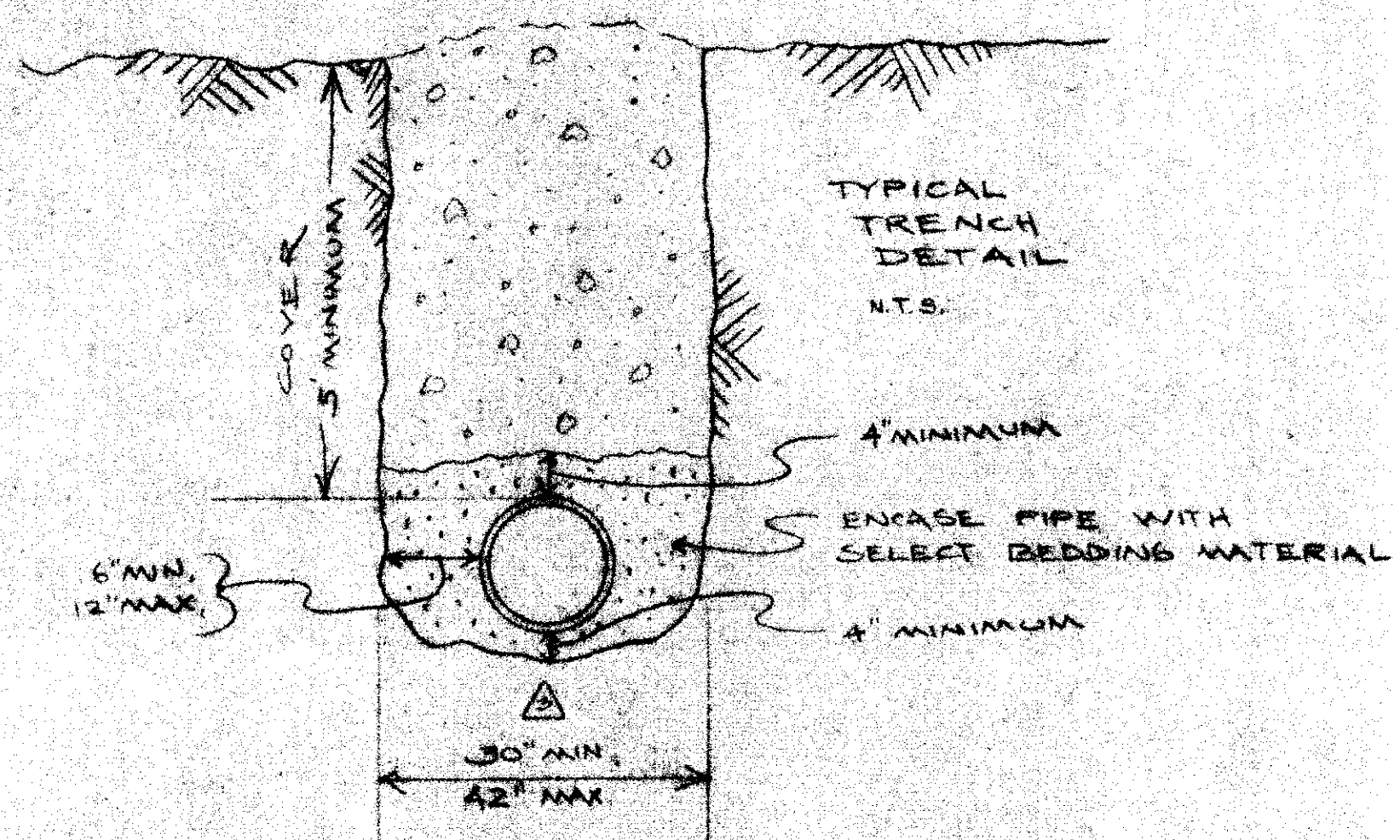


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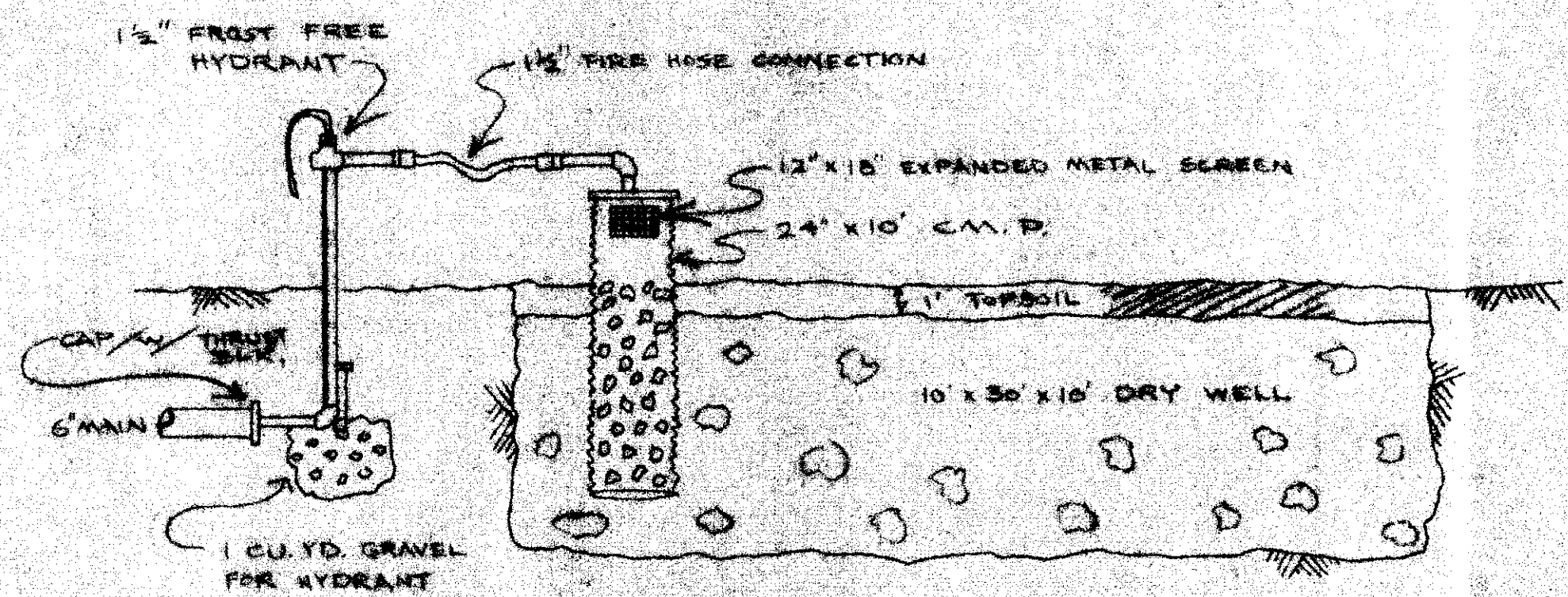




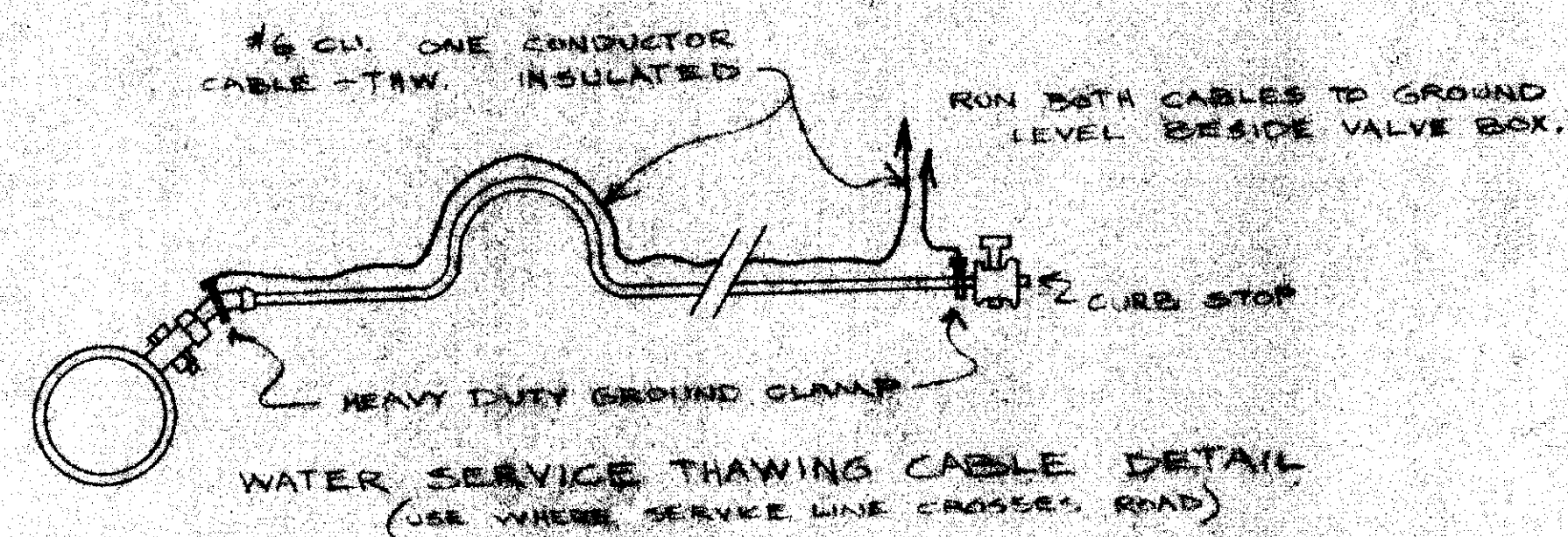
TYPICAL LOCATION THRUST BLOCKS
(N.T.S.)



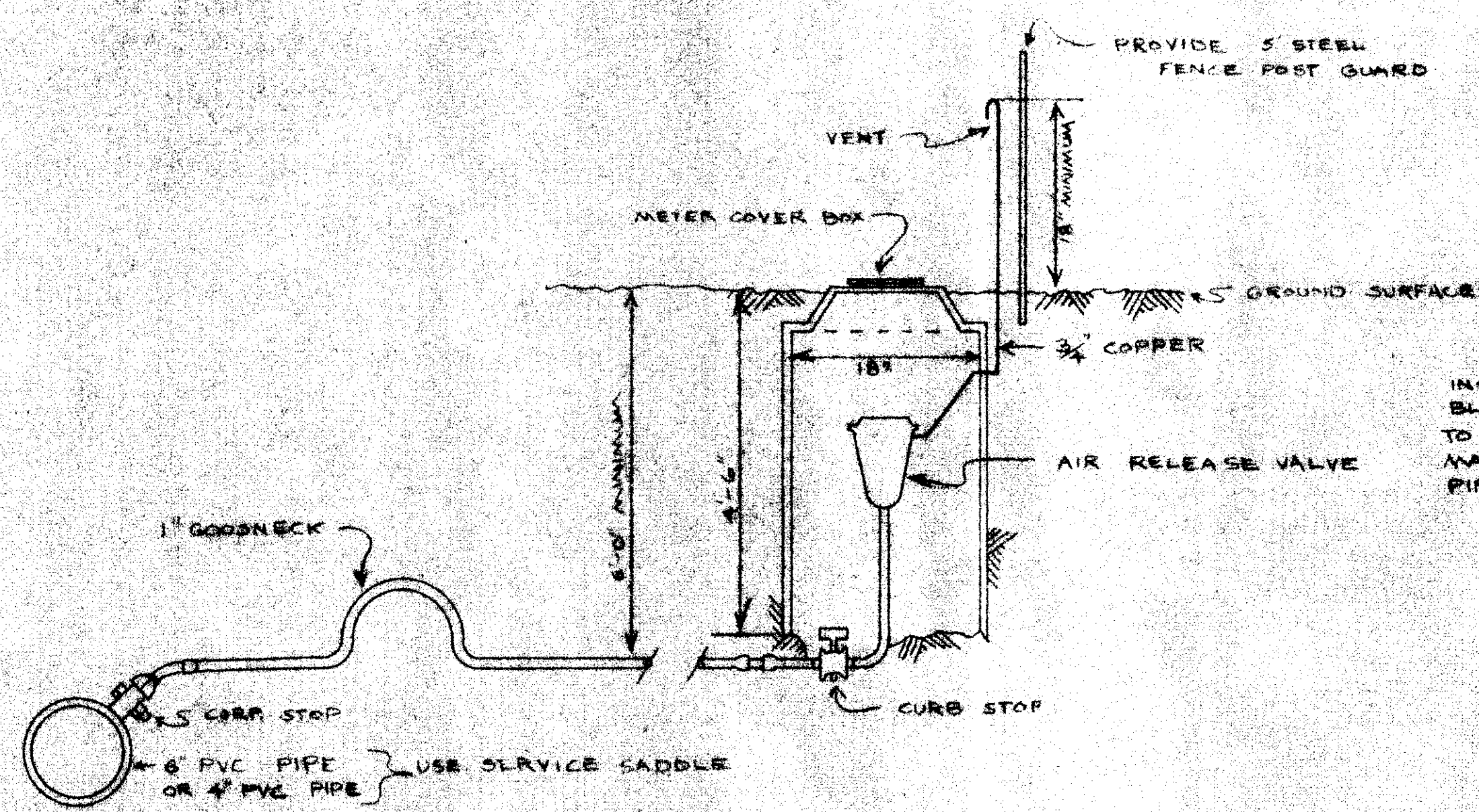
TYPICAL TRENCH
DETAIL
N.T.S.



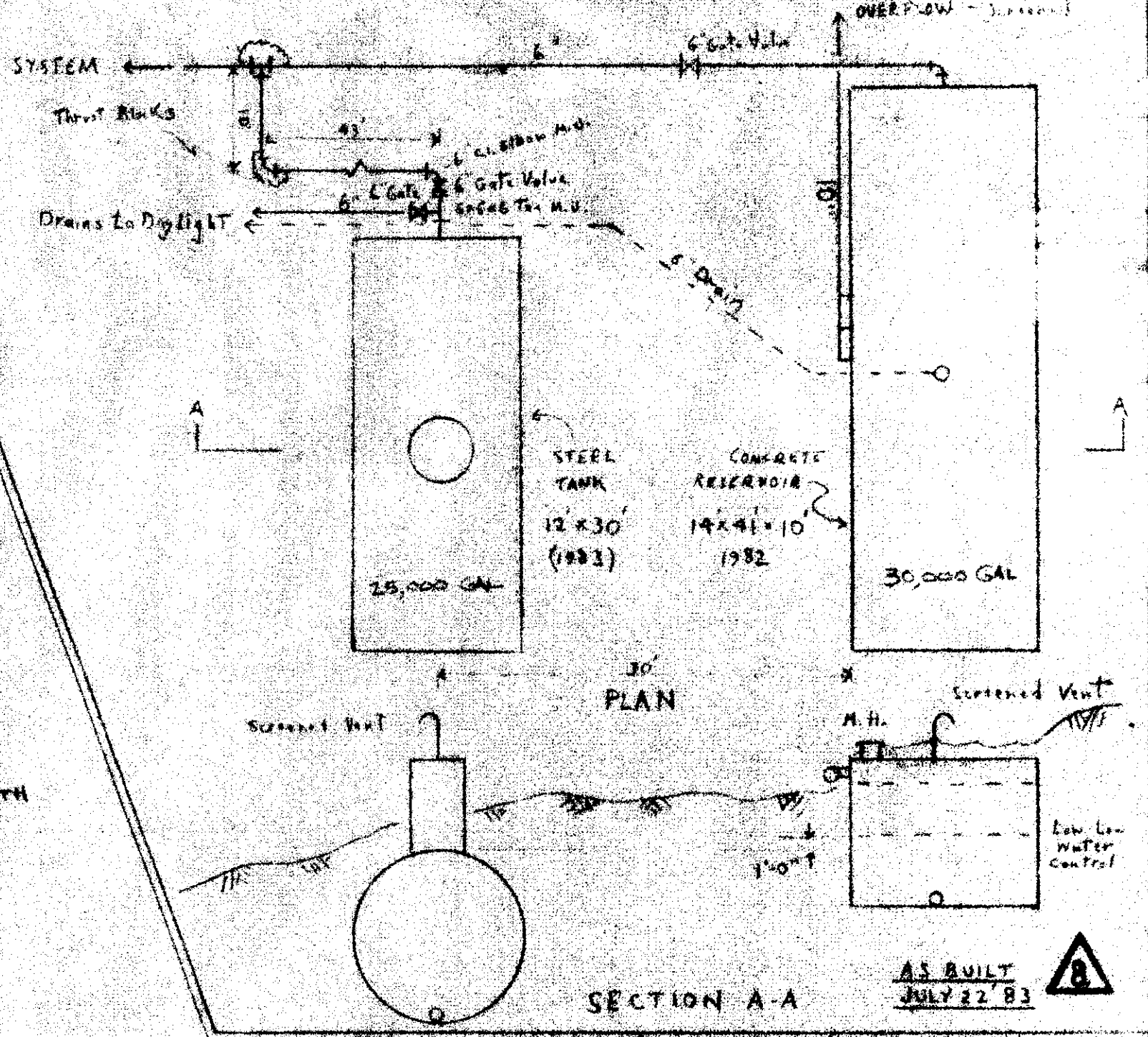
DETAIL: WASTE AND DRAIN



WATER SERVICE THAWING CABLE DETAIL
(USE WHERE SERVICE LINE CROSSES ROAD)

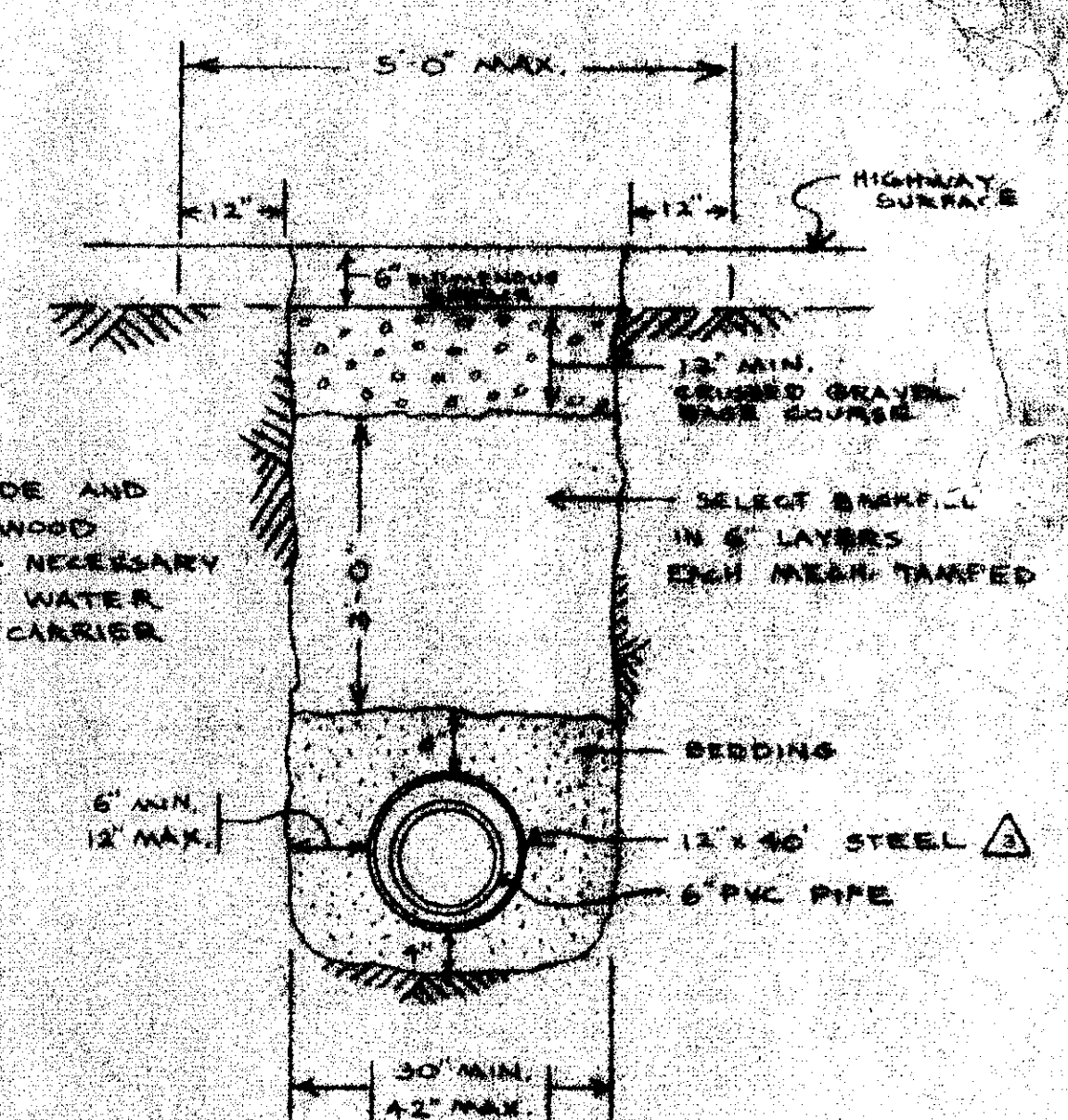


AIR RELEASE VALVE INSTALLATION



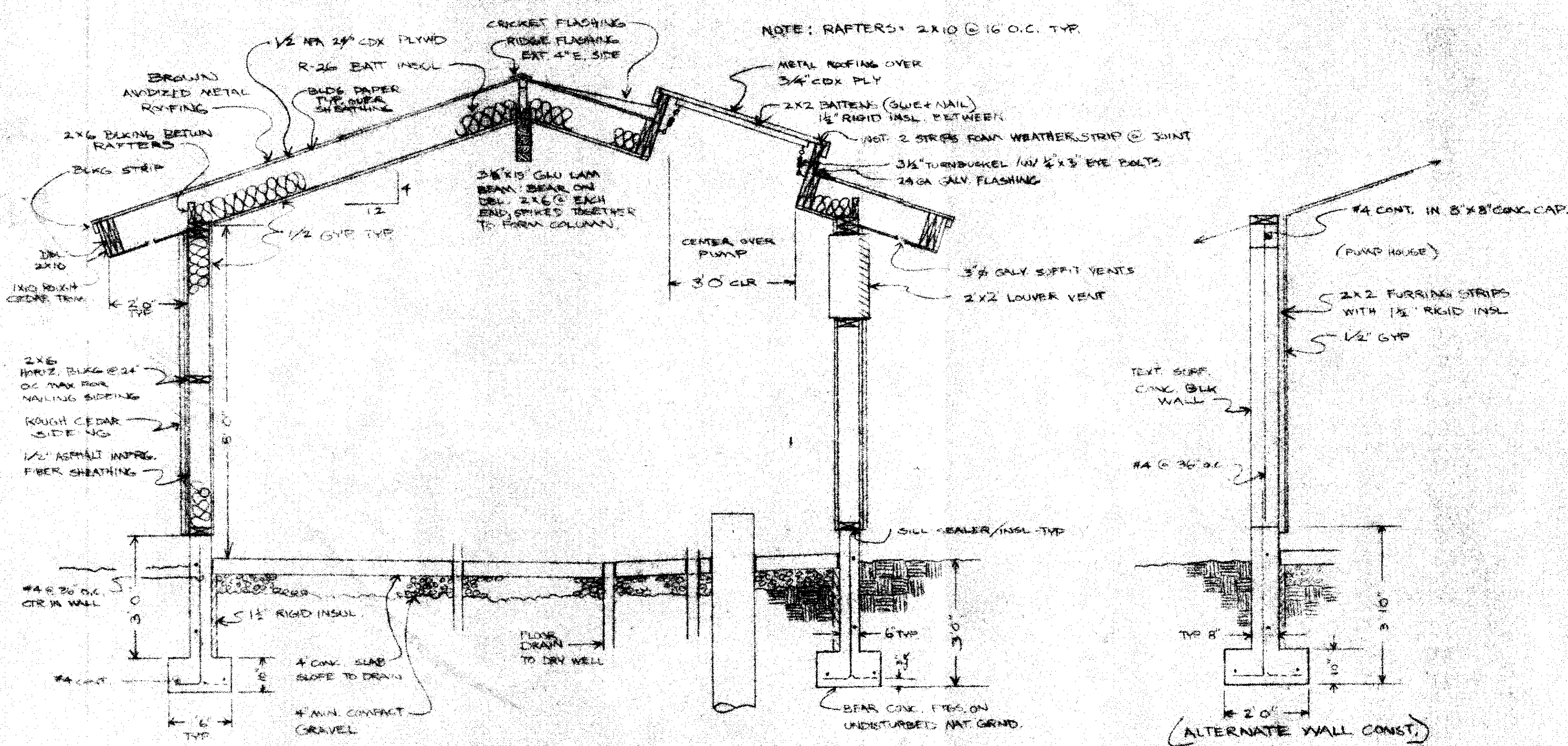
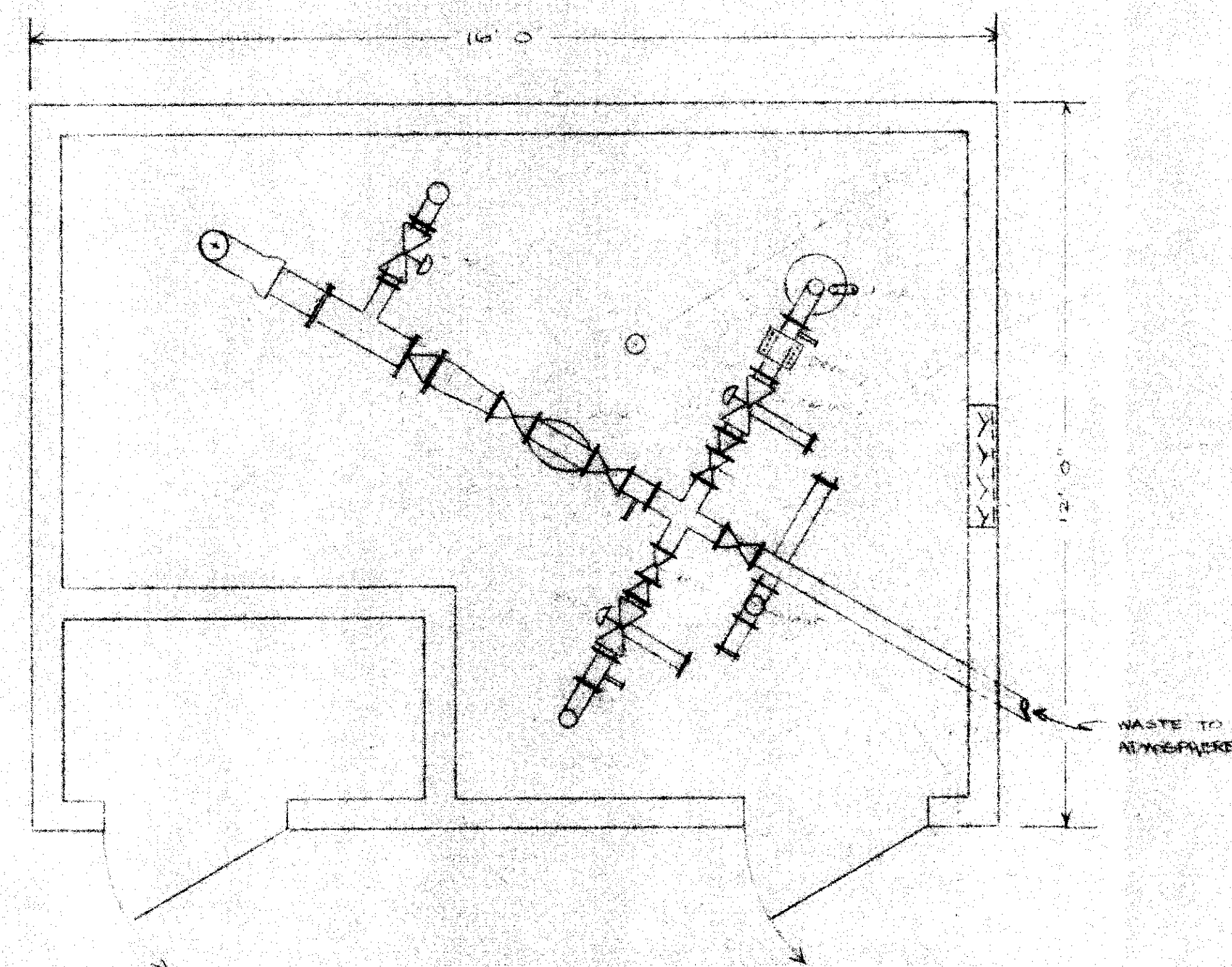
SECTION A-A

DETAIL: 6" TEE FOR HYDRANT
HYDRANT TO BE INST.
BY OTHERS.



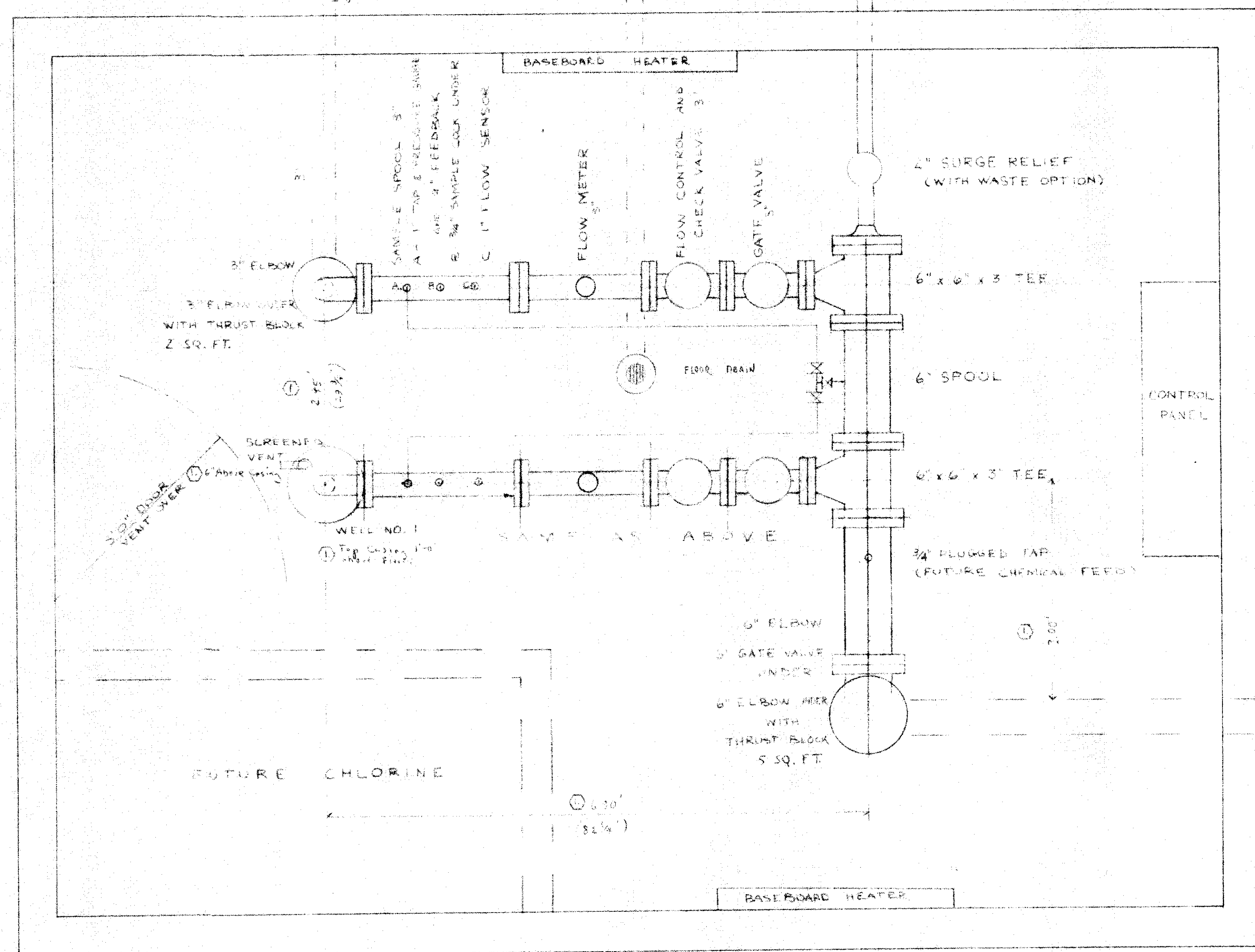
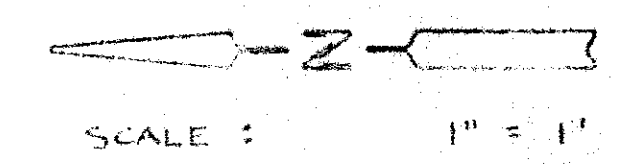
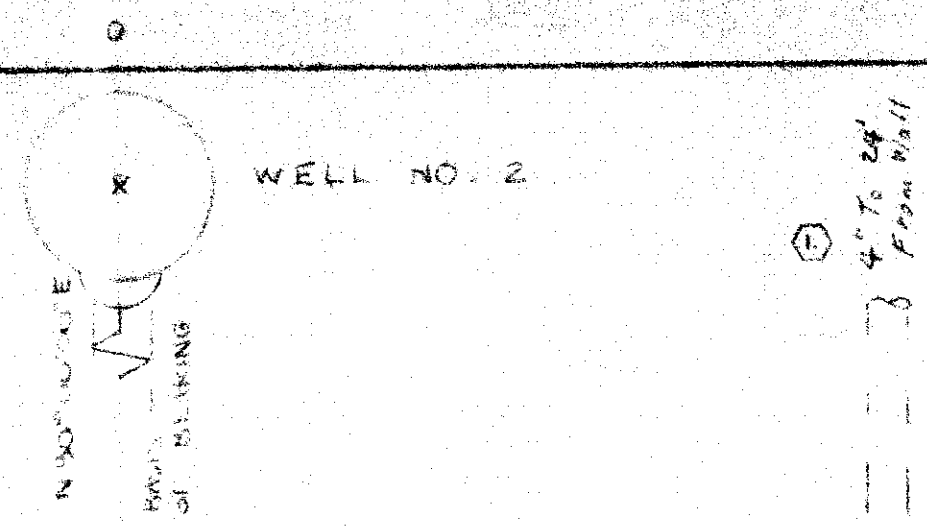
DETAIL: HIGHWAY CROSSING
N.T.S.





GREENHORN PUMP HOUSE

GREENHORN PUMP HOUSE



NOTE 1: ALL FITTINGS 250 P.S.I. OR BETTER.
 ② ELEVATION ALL HORIZONTAL PIPING IS 36" ABOVE FLO.



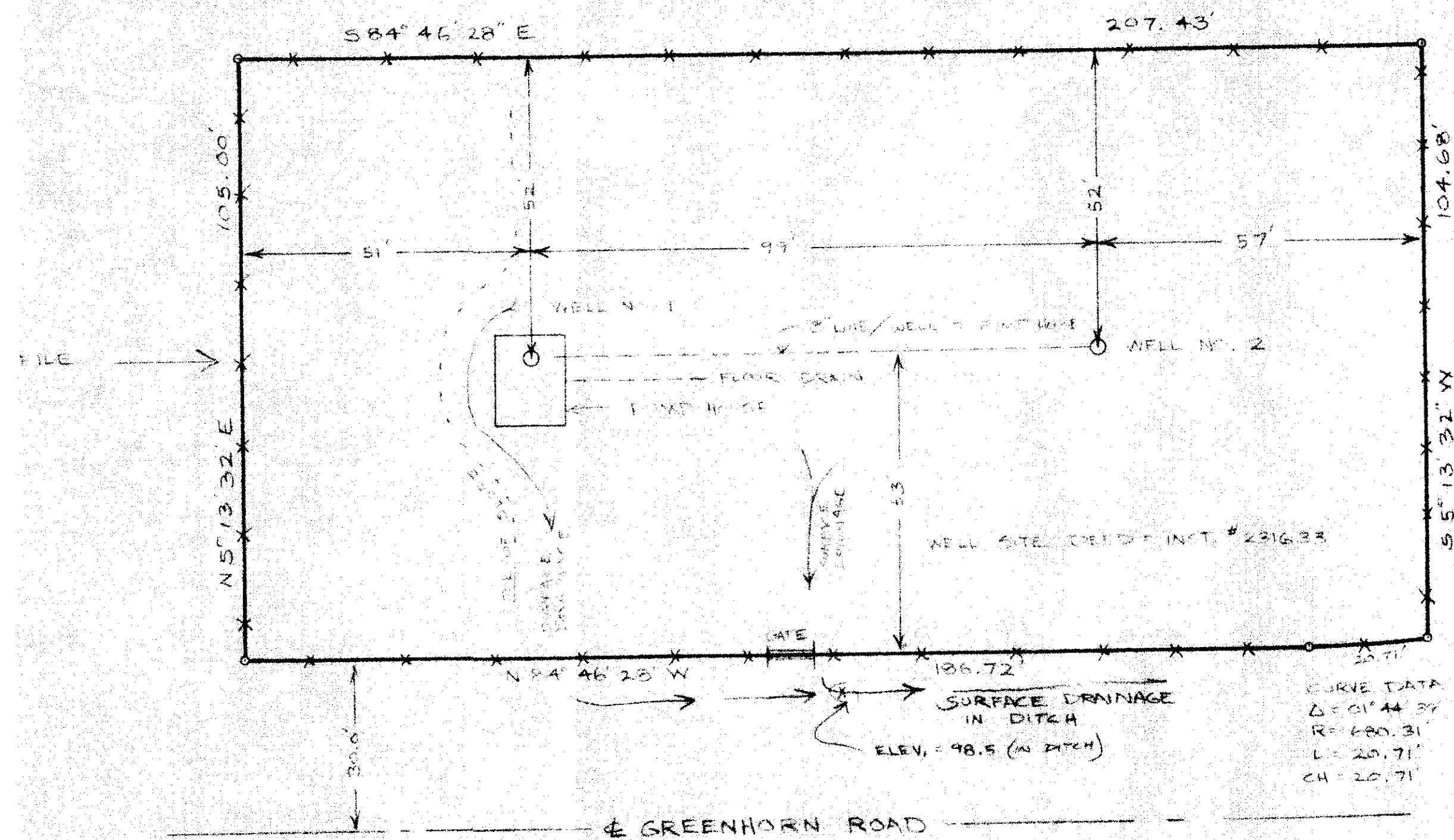
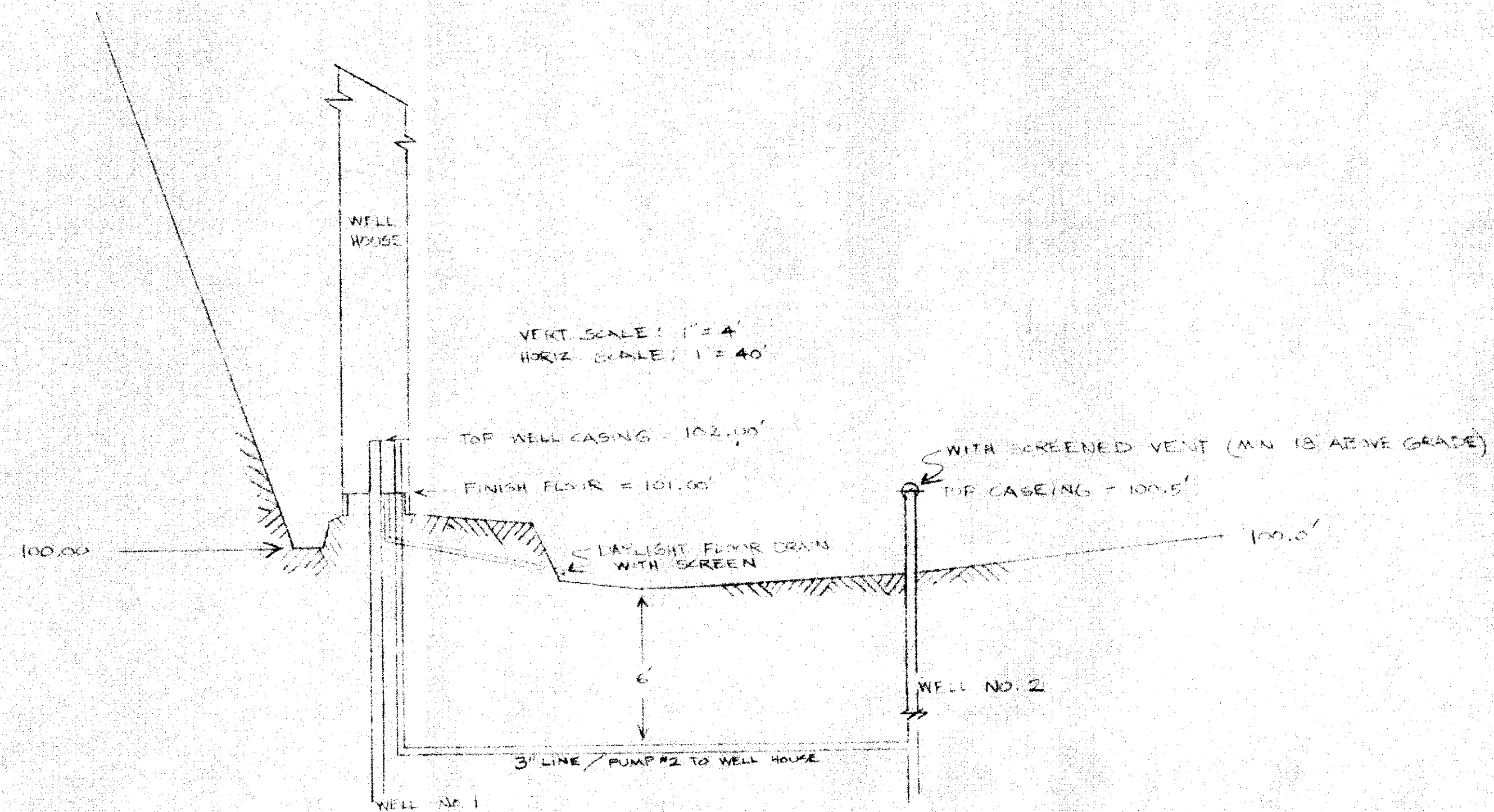
DRAWING OF RECORD

GREENHORN PUMPHOUSE
 SMOKY MOUNTAIN ASSOCIATES
 BLAINE COUNTY, IDAHO

PUCHNER ENGINEERING
 KETCHUM, IDAHO
 OCTOBER 1982

REVISIONS
 ① DIMENSIONS ADDED 10/23/82

GREENHORN PUMP HOUSE



GREENHORN WELL SITE

SEC. 12, T3N, R18E, B.M.
BLAINE COUNTY, IDAHO

ROCHNER ENGINEERING 11/3

Palmer, Cherie

From: Karen Roseberry [karenaroseberry@gmail.com]
Sent: Tuesday, July 24, 2012 3:31 PM
To: Mike DeChevrieux
Subject: GREENHORN WATER SYSTEM INFO REQUESTED
Attachments: GHA 2009-2010 WINTER WATER METER READINGS.xls; GHA 2008-2009 WINTER WATER METER READINGS.xls; GHA 2007-2008 WINTER WATER METER READINGS.xls

Michael,

Here is the info:

Water Usage by Gallons (summer meter readings).

5/28/11 – 10/4/11	16,130,481 gallons used by lot owners
5/11/10 – 10/1/10	14,239,980 gallons used by lot owners
5/13/09 – 10/2/09	14,947,006 gallons used by lot owners
5/1/08 – 10/2/08	21,753,480 gallons used by lot owners (1st year of new water rates charged during summer months)

Mike, attached are a couple of reports I found that have the Winter month water usage calculations for your review.

Supplemental Water Allocations: 1 unit = 1/2 acre

Lot #1	Drackett	4 units
Lot #3	Potter	3 units
Lot #4	Pigeon/Prudden	5 units
Lot #10	Service	1 unit
Lot #13	Hay/DeChevrieux	2 units
Lot #15	Reynolds	2 units
Lot #21	Bidart	1 unit
Lot #25	Henges	2 units
Lot #29	Dembergh	2 units
Lot #32	Meisenbach	1 unit
Lot #34/35	Lowe	1 unit

24 units TOTAL (in addition to 1/2 acre watering allocated to all owners, correct?)

Hope this helps. I will be in tomorrow, but gone on Thursday & Friday.

Karen

GHA 2009-2010 WINTER WATER METER READINGS.xls

Lot #	Owner	Meter Reading 10/2/2009	Meter Reading 5/11/2010	Gallons Used	Average Per Month 7.3 months	1/2 Acre Units Held
1	Drackett	27575710	27675250	99,540	13,580	5
2	Jennison	7444910	7495810	50,900	6,944	1
3	Potter	13184830	13243500	58,670	8,004	4
4	Pigeon	23817640	23905190	87,550	11,944	6
5	Turner	11970470	11992680	22,210	3,030	1
6	Swift	4376740	4430250	53,510	7,300	1
7	Ochi	0	0	0	0	1
8	Jennison, Peter	0	0	0	0	
9	Longe	3956940	4019120	62,180	8,483	1
10	Service	6171560	6230090	58,530	7,985	2
11	Jolliffe	3404070	3423200	19,130	2,610	1
12	DeChevrieux	10730930	10854620	123,690	16,874	3
13	DeChevrieux	1313910	1317880	3,970	542	0
14	DeChevrieux	0	0	0	0	1
15	Reynolds	10526690	10573880	47,190	6,438	3
16	King	5765700	5783940	18,240	2,488	1
17	Rubinfeld	3618800	3618800	0	0	1
18	Lufkin	5965740	5985420	19,680	2,685	1
19	Lufkin	0	0	0	0	1
20	Travers	1198430	1205680	7,250	989	1
21	Bidart	1627910	1628220	310	42	2
22	Davis	550303	663349	113,046	15,422	1
23	Hess	2714600	2723150	8,550	1,166	1
24	Huffaker	2643700	2689260	45,560	6,216	1
25	Henges	8834370	8863770	29,400	4,011	3
26	Grabowski	2579850	2592980	13,130	1,791	1
27	Shannon	3734330	3739510	5,180	707	1
28	Tomes	2777060	2820110	43,050	5,873	1
29	Dembergh	5635850	5666170	30,320	4,136	3
30	Dembergh	0	0	0	0	1
31	Edison	3086340	3141330	54,990	7,502	1
32	Meisenbach	2029840	2046510	16,670	2,274	2
33	Atherton	322713	376768	54,055	7,374	1
34	Lowe	0	0	0	0	1
35	Lowe	5080670	5105880	25,210	3,439	2
	SUBTOTAL			1,171,711	159,849	
Well	East Pump	1444560				
House	West Pump	258620				

GHA 2007-2008 WINTER WATER METER READINGS

Lot #	Owner	Meter Reading 9/5/2007	Meter Reading 5/2/2008	Gallons Used	Average Per Month 8 Months	1/2 Acre Units Held
1	Drackett	21398970	22224180	825,210	103,151	5
2	Jennison	5349860	5590100	240,240	30,030	1
3	Potter	9592260	10322160	729,900	91,238	4
4	Pigeon	19068900	20785370	1,716,470	214,559	6
5	Hardman	8466550	9008070	541,520	67,690	1
6	Swift	3008240	3164790	156,550	19,569	1
7	Ochi	0	0	0	0	1
8	Jennison, Peter	0	0	0	0	
9	Longe	0	1408550	1,408,550	176,069	1
10	Service	5010980	5122510	111,530	13,941	2
11	Jolliffe	2531780	2744490	212,710	26,589	1
12	DeChevrieux	7817680	8128010	310,330	38,791	3
13	DeChevrieux	891130	941150	50,020	6,253	0
14	DeChevrieux	0	0	0	0	1
15	Reynolds	7875630	8472940	597,310	74,664	3
16	King	4225820	4316910	91,090	11,386	1
17	Rubinfeld	3103350	3190730	87,380	10,923	1
18	Lufkin	4852330	4965020	112,690	14,086	1
19	Lufkin	0	0	0	0	1
20	Travers	636730	764100	127,370	15,921	1
21	Bidart	1512900	1555080	42,180	5,273	2
22	Davis	1409550	1408550	-1,000		1
23	Hess	1289910	1414570	124,660	15,583	1
24	Huffaker	1914980	2215570	300,590	5,273	1
25	Henges	6766240	7147810	381,570	47,697	3
26	Grabowski	2037590	2091840	54,250	6,781	1
27	Shannon	2919290	2967380	48,090	6,011	1
28	Tomes	2486150	2514690	28,540	3,568	1
29	Dembergh	4452040	4587530	135,490	16,936	3
30	Dembergh	0	0	0	0	1
31	Edison	2323520	2471210	147,690	18,461	1
32	Meisenbach	10121460	10340380	218,920	27,365	2
33	Atherton	0	0	0	0	1
34	Lowe	0	0	0	0	1
35	Lowe	4263070	4361610	98,540	12,318	2
	SUBTOTAL			8,898,390	1,080,126	
	East Pump	5433967	8585320	3,151,353	393,919	
	West Pump	5568213	9985730	4,417,517	552,190	

GHA 2008-2009 WINTER WATER METER READINGS

Lot #	Owner	Meter Reading 10/2/2008	Meter Reading 5/13/2009	Gallons Used	Average Per Month 7.3 Months	1/2 Acre Units Held
1	Drackett	25814510	26316310	501,800	68,458	5
2	Jennison	6632830	6853080	220,250	30,048	1
3	Potter	12081330	12191040	109,710	14,967	4
4	Pigeon	22290450	22880250	589,800	80,464	6
5	Turner	10865250	10974220	108,970	14,866	1
6	Swift	3850730	3935760	85,030	11,600	1
7	Ochi	0	0	0	0	1
8	Jennison, Peter	0	0	0	0	
9	Longe	2768530	2931340	162,810	22,211	1
10	Service	5612640	5676740	64,100	8,745	2
11	Jolliffe	3018700	3235230	216,530	29,540	1
12	DeChevrieux	9180010	9478260	298,250	40,689	3
13	DeChevrieux	1091090	1150420	59,330	8,094	0
14	DeChevrieux	0	0	0	0	1
15	Reynolds	9548140	9720820	172,680	23,558	3
16	King	4925930	4953350	27,420	3,716	1
17	Rubinfeld	3596240	3601640	5,400	737	1
18	Lufkin	5384060	5429730	45,670	6,231	1
19	Lufkin	0	0	0	0	1
20	Travers	1117630	1141480	23,850	3,254	1
21	Bidart	1581780	1582840	1,060	145	2
22	Davis	111920	230220	118,300	16,139	1
23	Hess	2026210	2172780	146,570	19,996	1
24	Huffaker	2434050	2456310	22,260	3,037	1
25	Henges	8058680	8094830	36,150	4,932	3
26	Grabowski	2369470	2399190	29,720	4,055	1
27	Shannon	3366190	3391590	25,400	3,465	1
28	Tomes	2634950	2644550	9,600	1,310	1
29	Dembergh	5264710	5325990	61,280	8,360	3
30	Dembergh	0	0	0	0	1
31	Edison	2807960	2836510	28,550	3,895	1
32	Meisenbach	1378580	1386030	7,450	1,016	2
33	Atherton	0	0	0	0	1
34	Lowe	0	0	0	0	1
35	Lowe	4719780	4761940	42,160	5,752	2
	SUBTOTAL			3,220,100	439,280	
Well	East Pump	545370	2601890	2,056,520	280,562	
House	West Pump	494180	2374010	1,879,830	256,457	

State law requires that this report be filed with the Director, Department of Water Resources, within 30 days after the completion or abandonment of the well.

RECEIVED

[illegible]

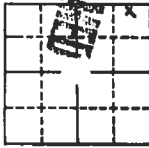
USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

West well

Well # 1

Attachment 3 (2 pages)

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUSE TYPEWRITER OR
BOLD PENState law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

1. WELL OWNER Name <u>Smokey Mountain Associates</u> Well # <u>2</u> Address <u>Box 2188 Sun Valley, ID 83353</u> Owner's Permit No. <u>37-9464</u>		7. WATER LEVEL Static water level <u>21'7"</u> feet below ground surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature <u>46</u> °F. Quality <u>Excellent</u>																																																											
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning) _____		8. WELL TEST DATA ☒ Pump ☐ Bailer ☐ Air ☐ Other _____ Discharge G.P.M. <u>289</u> Pumping Level <u>34'5"</u> Hours Pumped <u>8</u> Sand Free ☐																																																											
3. PROPOSED USE ☐ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☒ Other <u>Subdivision</u> (specify type) _____		9. LITHOLOGIC LOG <u>83374</u> <table border="1"><thead><tr><th rowspan="2">Hole Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th colspan="2">Water</th></tr><tr><th>From</th><th>To</th><th>Yes</th><th>No</th></tr></thead><tbody><tr><td>16</td><td>0</td><td>10</td><td>Overburden</td><td></td><td></td></tr><tr><td></td><td>10</td><td>35</td><td>Clay & gravel</td><td>T</td><td></td></tr><tr><td></td><td>35</td><td>45</td><td>Clay & Gravel</td><td>X</td><td></td></tr><tr><td>10</td><td>45</td><td>96</td><td>Clay & gravel</td><td></td><td></td></tr><tr><td></td><td>96</td><td>103</td><td>Black basalt or boulders</td><td></td><td></td></tr><tr><td></td><td>103</td><td>105</td><td>Clay & gravel</td><td>?</td><td></td></tr><tr><td></td><td>105</td><td>107</td><td>Broken rock</td><td></td><td></td></tr><tr><td></td><td>107</td><td>113</td><td>Black basalt</td><td></td><td></td></tr></tbody></table>		Hole Diam.	Depth		Material	Water		From	To	Yes	No	16	0	10	Overburden				10	35	Clay & gravel	T			35	45	Clay & Gravel	X		10	45	96	Clay & gravel				96	103	Black basalt or boulders				103	105	Clay & gravel	?			105	107	Broken rock				107	113	Black basalt		
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4. METHOD DRILLED ☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary ☒ Cable ☐ Dug ☐ Other _____		RECEIVED DEC 7 1982 Department of Water Resources																																																											
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table border="1"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>.250 Inches</td><td>10</td><td>1 1/2 feet</td><td>44 feet</td></tr><tr><td>.250 Inches</td><td>8</td><td>55 feet</td><td>107 feet</td></tr><tr><td>_____ Inches</td><td>_____</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ Inches</td><td>_____</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table> Was casing drive shoe used? ☒ Yes ☐ No Was a packer or seal used? ☒ Yes ☐ No Perforated? ☒ Yes ☐ No How perforated? ☐ Factory ☐ Knife ☒ Torch Size of perforation <u>6</u> Inches by <u>1/2</u> Inches Number <u>25</u> perforations <u>102</u> feet <u>107</u> feet _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet Well screen installed? ☒ Yes ☐ No Manufacturer's name <u>Johnson</u> Type <u>8 5/8</u> pipe Model No. <u>304SS</u> Diameter <u>85/8</u> Slot size <u>60</u> Set from <u>45</u> feet to <u>55</u> feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____ Placed from <u>45</u> feet to <u>55</u> feet Surface seal depth <u>20</u> Material used in seal: ☒ Cement grout ☐ Puddling clay ☐ Well cuttings Sealing procedure used: ☐ Slurry pit ☒ Temp. surface casing ☐ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port _____				Thickness	Diameter	From	To	.250 Inches	10	1 1/2 feet	44 feet	.250 Inches	8	55 feet	107 feet	_____ Inches	_____	_____ feet	_____ feet	_____ Inches	_____	_____ feet	_____ feet																																						
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_____ Inches	_____	_____ feet	_____ feet																																																										
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Greenhorn Bulch Lot No. _____ Block No. _____ County <u>Blaine</u> <u>NE</u> 1/4 <u>NE</u> 1/4 Sec. <u>18</u> , T. <u>3</u> N. R. <u>18</u> E. 40		10. Work started <u>8/2/82</u> finished <u>9/23/82</u>																																																											
		11. DRILLERS CERTIFICATION <u>DO</u> I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>Walker Water Systems, Inc.</u> Firm No. <u>15</u> Address <u>624 Pierce Street</u> Date <u>10/25/82</u> Signed by (Firm Official) <u>Ludwick B. Wall</u> and (Operator) <u>Bernard Brighton</u>																																																											

USE ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT

East well

well #2