

APPENDIX M
SEWER LINE VIDEO SURVEY REPORT



Sanitary Sewer

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Date: 10/19/00 Investigator: P. Kellum Video Tape #: 002 1 of 10

Area: Ravenna Sub-Area: Load Line #1 Video Footage: —

Complaint Address & Date: MH 210/209 Weather: Sunny 68°

Upstream MH Address: MH 210 Type of Pipe: VIT

Downstream MH Address: MH 209 Pipe Size: 8" SAN

Line Location: Off Rd. Topo#: — Pipe Length: 4'0"

Surface Cover: Woods - Etc. TVd Distance: 190'

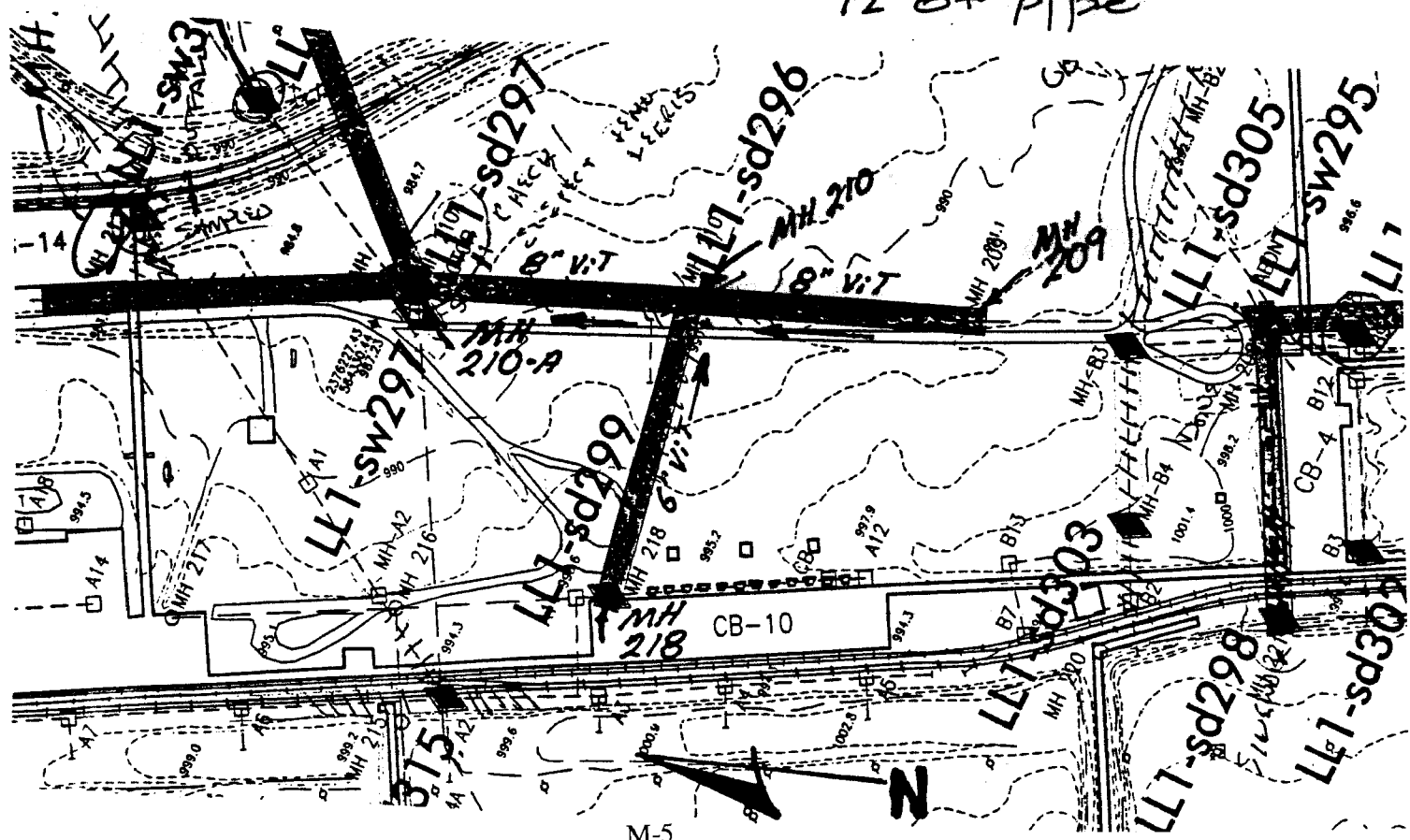
PHYSICAL MEASUREMENTS:

Section Ground Distance: — MANHOLE DEPTHS: USMH: 14'2" to Bottom
OSMH: 5'5" to top

Condition Being Investigated: General Condition MH 210 ↑ at drop

Footage	Remarks	Footage	Remarks
27	MH 211 U.S. to MH 209 <i>(Note: MH 211 should be MH 210)</i>	71	Lt. Roots
27	Lt. Roots	75	Offset Jt / Slight Crack
40	Hairline Crack	77	Mortar Dep @ Jt.
43	Dip in Line	80	Deposit @ Jt.
50	Calcium / Mortar Dep.	84	Deposit @ Jt.
62	Calcium / Mortar Dep	86	Deposit
68	Slight Offset Jt.	184	Heavy Roots

✶ 190 Too MANY ROOTS
 COULD NOT PASS
 ROOTS COVER OVER
 1/2 of pipe

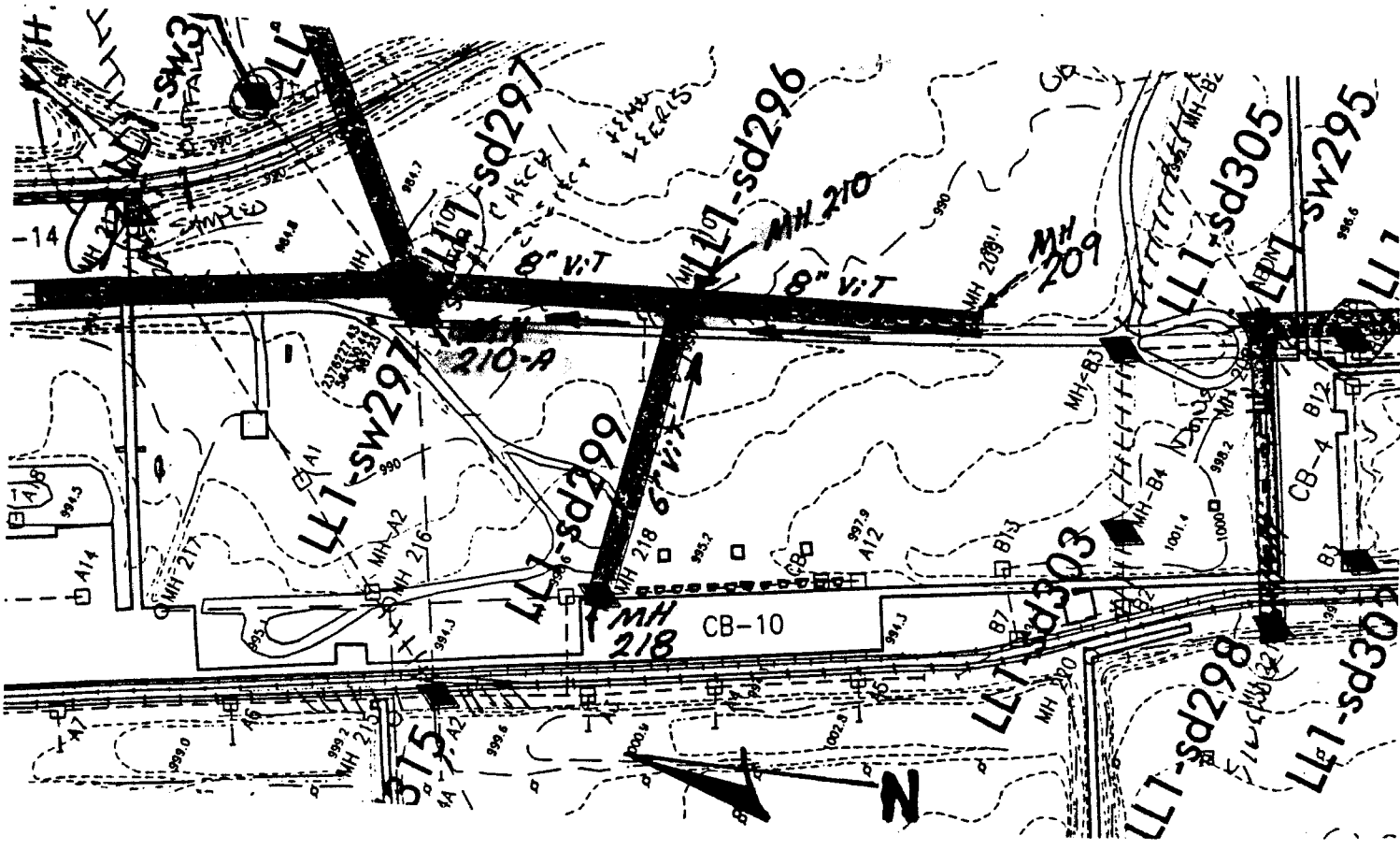


Date: 10/19/00	Investigator: D. Kellum	Video Tape #: -	2 of 10
Area: Pennera	Sub-Area: LOAD LINE #1	Video Footage:	
Complaint Address & Date: MIT 210/210A		Weather: Sunny 68°	
Upstream MH Address: MIT 210		Type of Pipe: VIT	
Downstream MH Address: MH 210A		Pipe Size: 8" SAN	
Line Location: Off Rd.	Topo#: N/A	Pipe Length: 4'0"	
Surface Cover: Woods - Etc		TVd Distance: 6'	

PHYSICAL MEASUREMENTS:	MANHOLE	USMH:
Section Ground Distance:	DEPTHS	DSMH:

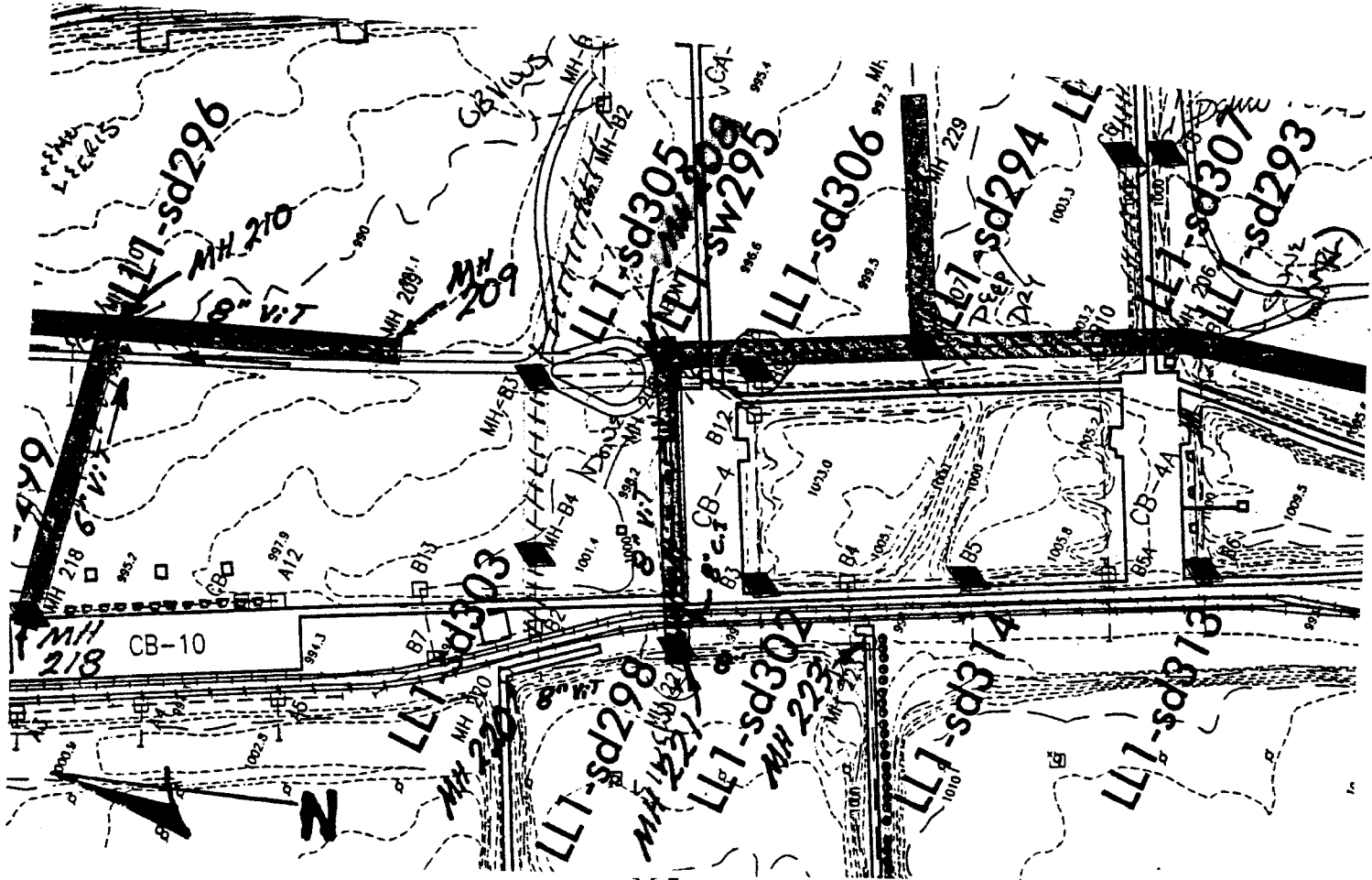
Condition Being Investigated: *General Condition*

Footage	Remarks	Footage	Remarks
0	MH 210 DS to 210A	0	MH 210 to 218
3	2" offset st.	2	6" LINE - this is
6	3" offset st. 3" HIGH		a high line
	COULD NOT GO		could not do
	FURTHER		



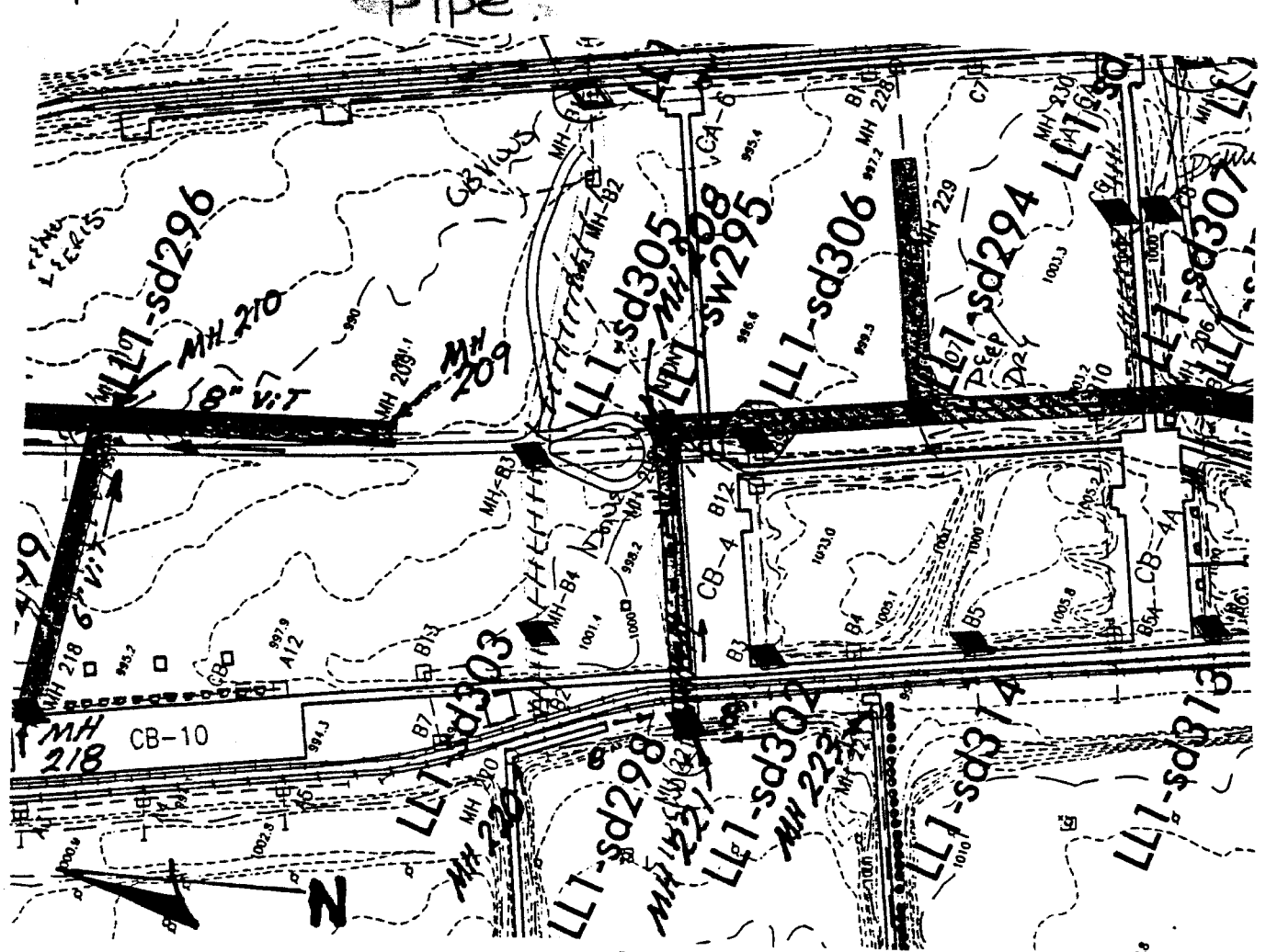
Date: 10/19/00	Investigator: PETE KELLUM	Video Tape #: 002 3 of 10
Area: Ravenna	Sub-Area: LOAD LINE 1	Video Footage:
Complaint Address & Date: MH 221/208	Weather: Sunny 68°	Type of Pipe: Cast Iron & Clay
Upstream MH Address: MH 221	Pipe Size: 8" SAN.	Pipe Length: 4'0"
Downstream MH Address: MH 208	Pipe Location: Off Rd.	Topo#:
Surface Cover: Woods	TVd Distance: 55'	
PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH: 6'0"
Section Ground Distance:	DSMH:	
Condition Being Investigated:	General Condition ↑ 221	

Footage	Remarks	Footage	Remarks
032	MH 221 - 208		
32	Cast Iron Changes from Cast Iron to Clay		
38	Morton Deposits		
45	Morton Deposits		
55	— Decided to stop tape - seen enough.		



Date: 10/19/00	Investigator: P. Kellum	Video Tape #: 002 4 of 10
Area: Rawana	Sub-Area: LOAD LINE 1	Video Footage: -
Complaint Address & Date: MH 221 / 222	Weather: Sunny 68°	
Upstream-MH Address: MH 221	Type of Pipe: VIT (Clay)	
Downstream MH Address: MH 222	Pipe Size: 8" SAN	
Line Location: Off Rd.	Topo#:	Pipe Length: 4' 0"
Surface Cover: Woods - Etc		TVd Distance: 50
PHYSICAL MEASUREMENTS:		MANHOLE USMH: 6' 0"
Section Ground Distance:		DEPTHS DSMH: 7' MH 221
Condition Being Investigated: General Condition		

Footage	Remarks	Footage	Remarks
0	MH 221 to MH 222 (MH-223)		
16	Slight Cracks		
22	Mortar Deposits		
41	Offset Str / Cracks		
50	STOP TV'ing - Decided we had seen enough Pipe.		



TELE-VAC TV INVESTIGATION

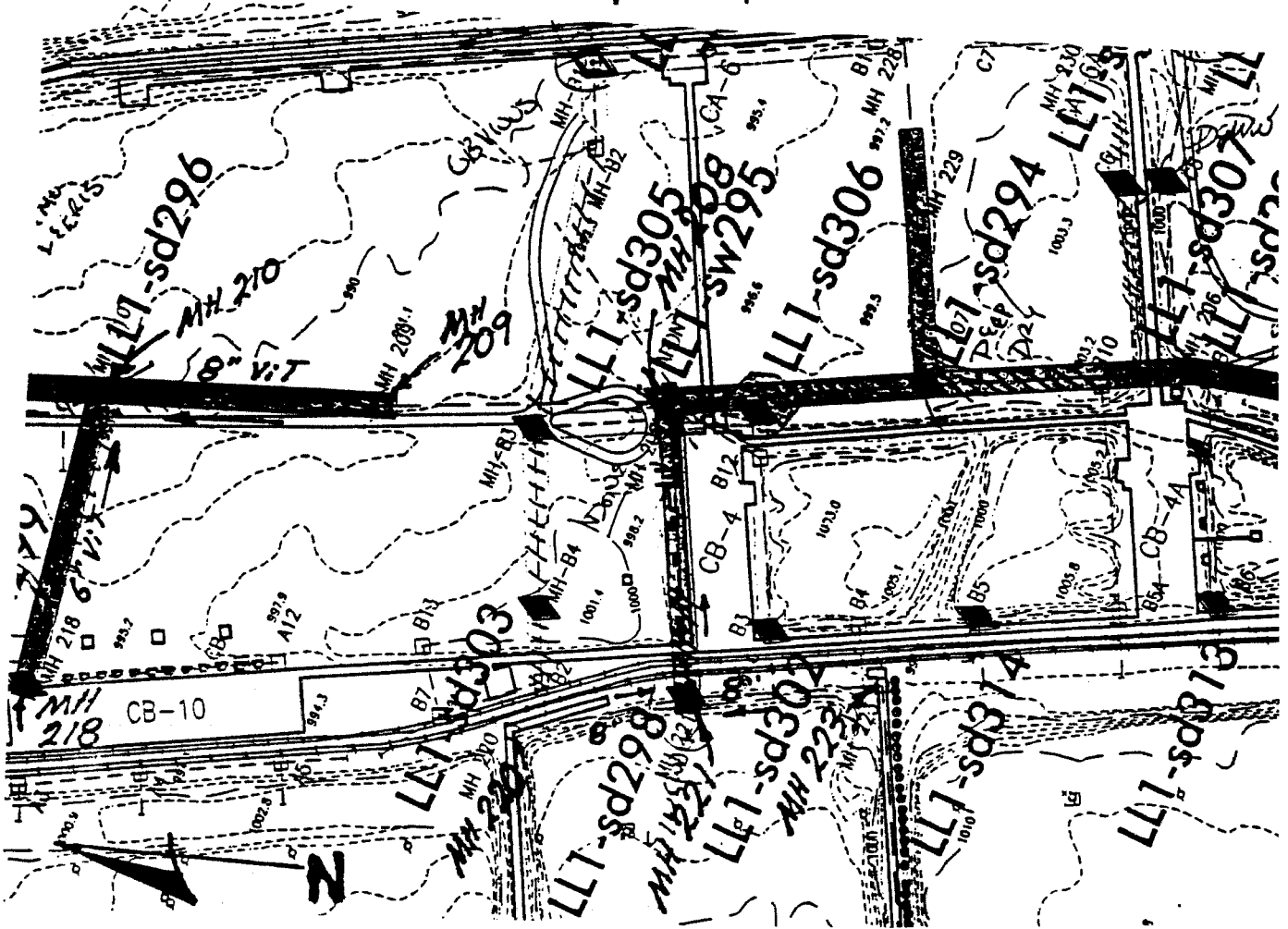
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LOAD LINE #1

Date: 10/19/00	Investigator: P. Kellum	Video Tape #: # 002 5 of 10
Area: Ravenna	Sub-Area: LOAD LINE #1	Video Footage:
Complaint Address & Date: 221/220	Weather: Sunny 68°	Type of Pipe: VIT (Clay)
Upstream MH Address: 221	Pipe Size: 5" SAN.	Pipe Length: 4'0"
Downstream MH Address: 220	TVd Distance: 6'	
Line Location: Off Rd.	Topo#:	
Surface Cover: Woods - Etc.		
PHYSICAL MEASUREMENTS:		MANHOLE USMH: 215' 6"0"
Section Ground Distance:	DEPTH:	BSMH:
Condition Being Investigated: General Condition 227 221		

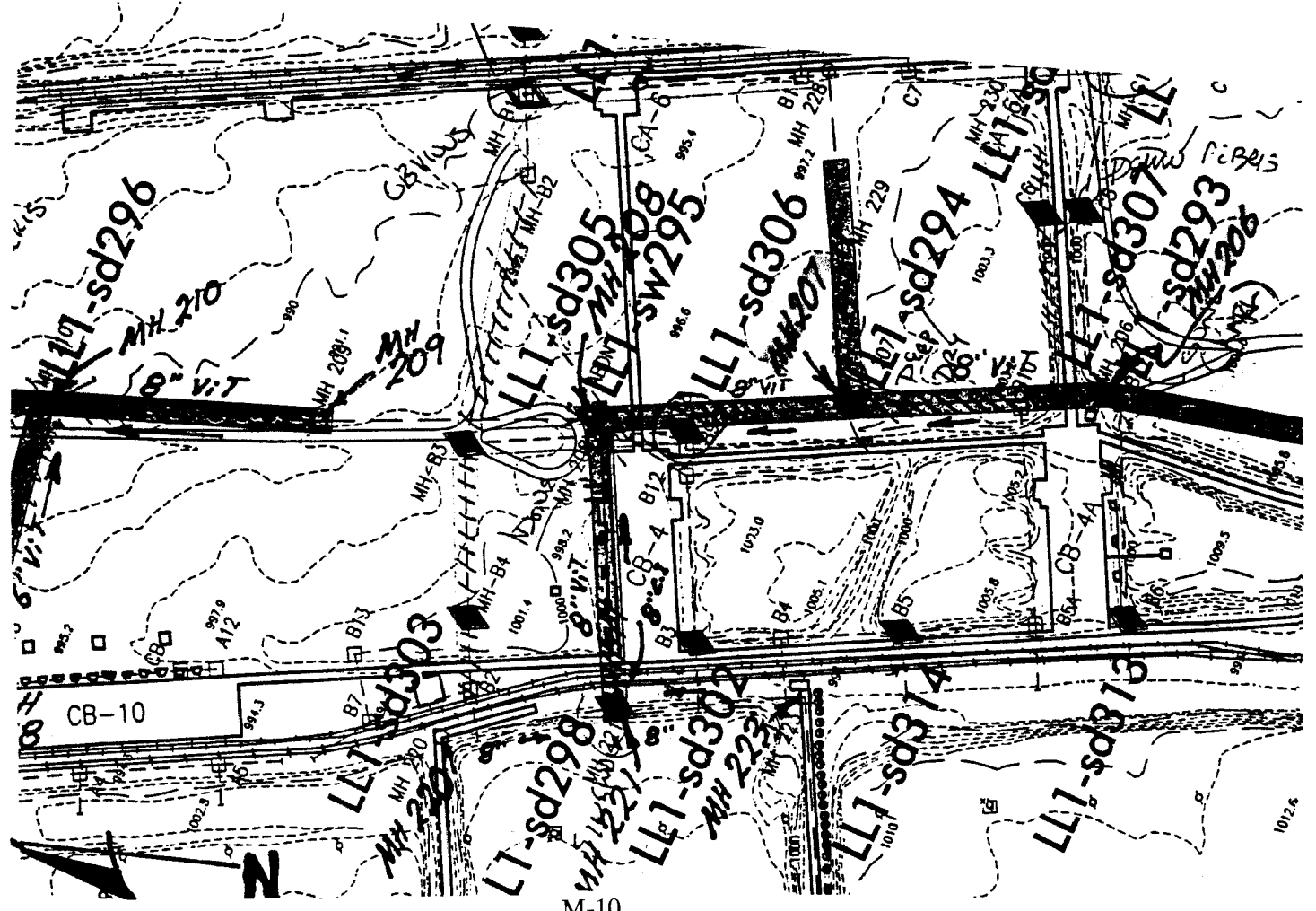
Footage	Remarks	Footage	Remarks
0	MH 221 / 220		
1	Roots		
15	Heart Debris - Pulled out could not go any further		



Date: 10/19/00 Investigator: P. Kellum Video Tape #: 002 6 of 10
 Area: Zenneca Sub-Area: LOAD LINE #1 Video Footage: -
 Complaint Address & Date: 267/206 Weather: Sunny 68°
 Upstream MH Address: 207 Type of Pipe: VIT (Clay)
 Downstream MH Address: 206 Pipe Size: 8" SAN
 Line Location: Off Rd Topo#: Pipe Length: 4'0"
 Surface Cover: Woods - Etc. TVd Distance: 6

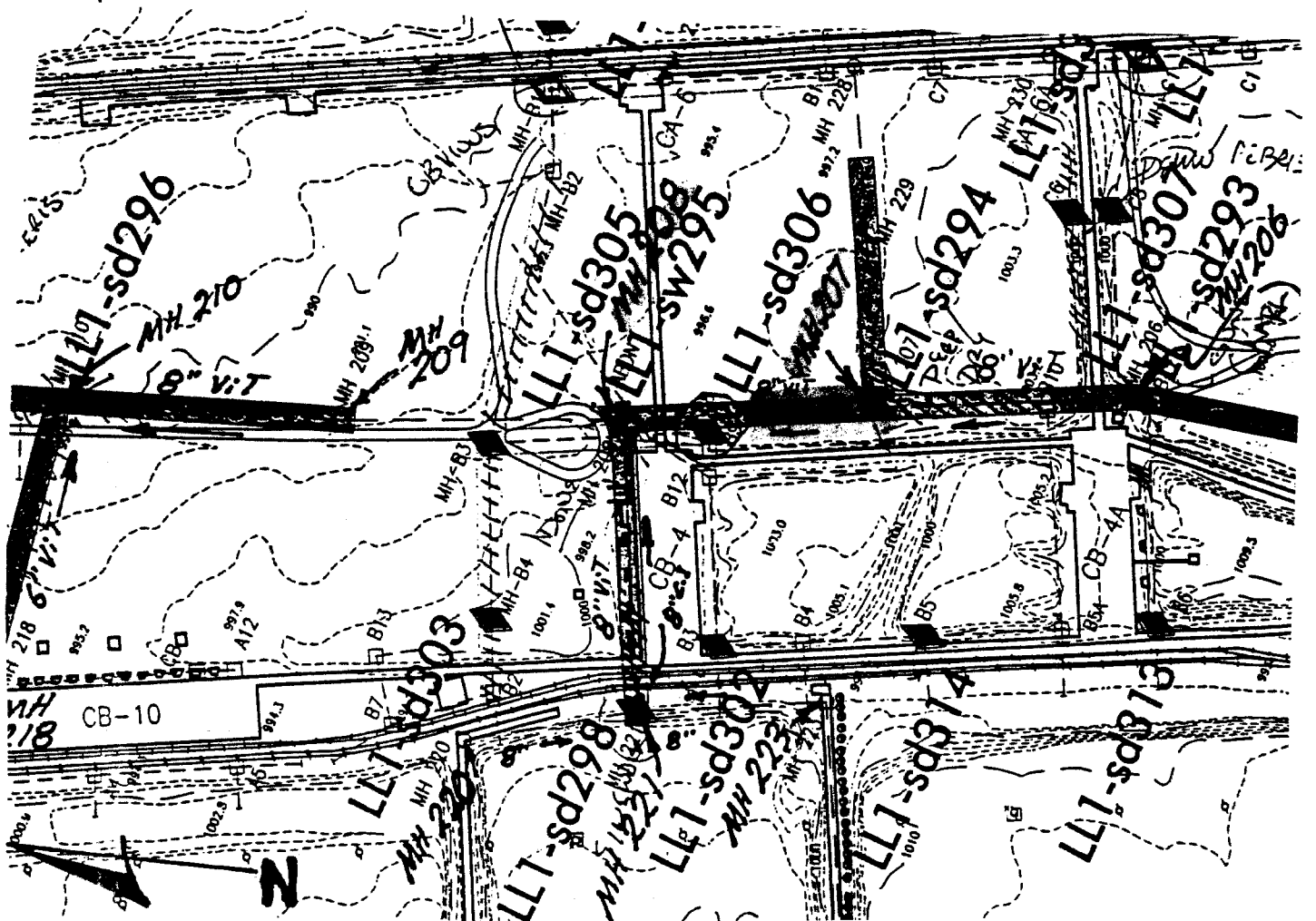
PHYSICAL MEASUREMENTS: MANHOLE USMH: 21.5"
 Section Ground Distance: DEPTH: 86MH:
 Condition Being Investigated: General Corrosion (MH 207)

Footage	Remarks	Footage	Remarks
0-6	MH 207 U.S. to 206		
	Too much debris		
	LOST CONNECTION		



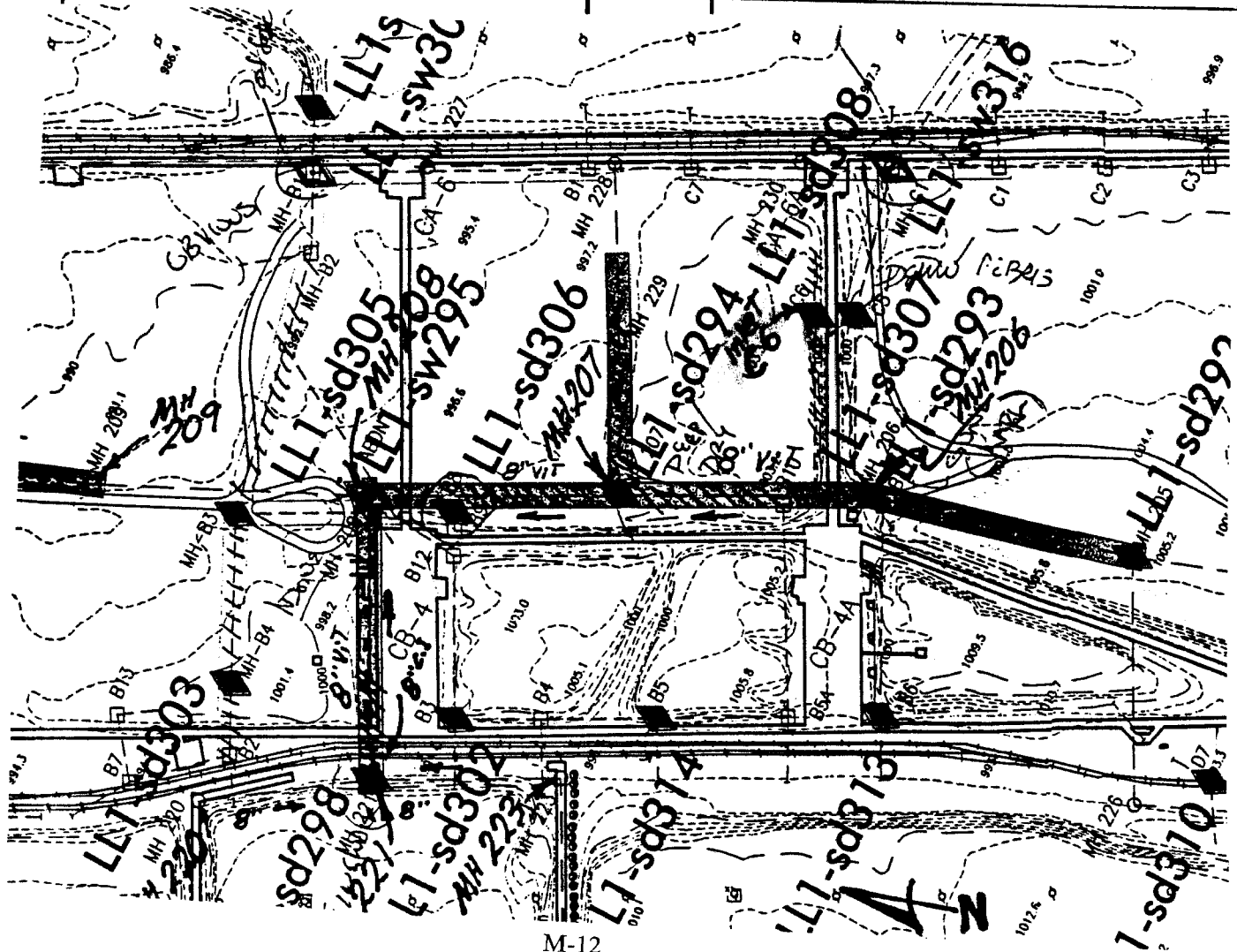
Date: 10/19/00	Investigator: P Kellum	Video Tape #: 002 7 of 10
Area: Ravenna	Sub-Area: LEAD LINE #1	Video Footage: -
Complaint Address & Date: 207/208	Weather: Sunny 68°	
Upstream MH Address: 207	Type of Pipe: vit Clay	
Downstream MH Address: 208	Pipe Size: 8" SAN.	
Line Location: Off Rd. Topo#:	Pipe Length: 4'0"	
Surface Cover: Woods - Btz.	TVd Distance: 105'	
PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH: 21.5"
Section Ground Distance:		DSMM: ↑
Condition Being Investigated: General Condition		MH 207

Footage	Remarks	Footage	Remarks
8	MH 207 DS to 208	97	Mortar @ Jt.
10	Mortar Deposit		STOP
51	Belly / Dip in Line		Decided we had
52	Medium Debris		seen enough
56	Medium Debris		
76	Medium Debris		
82	Heavy Debris		



Date: 10/19	Investigator: P. Kellum	Video Tape #: - 002 8/10
Area: Ravenna	Sub-Area: LEAD LINE	Video Footage: 0
Complaint Address & Date: Inlet C6 / Bldg CBAA	Weather: Sunny 68°	Type of Pipe: V9 (clay)
Upstream MH Address: Inlet C6	Pipe Size: 8" STORM	Pipe Length: 4/10"
Downstream MH Address: Bldg CBAA	TVd Distance: 5	
Line Location: off Rd. Topo#:		
Surface Cover: Woods - etc		
PHYSICAL MEASUREMENTS:		MANHOLE USMH: 3'5"
Section Ground Distance:		DSMH:
Condition Being Investigated: General Condition Inlet C6		

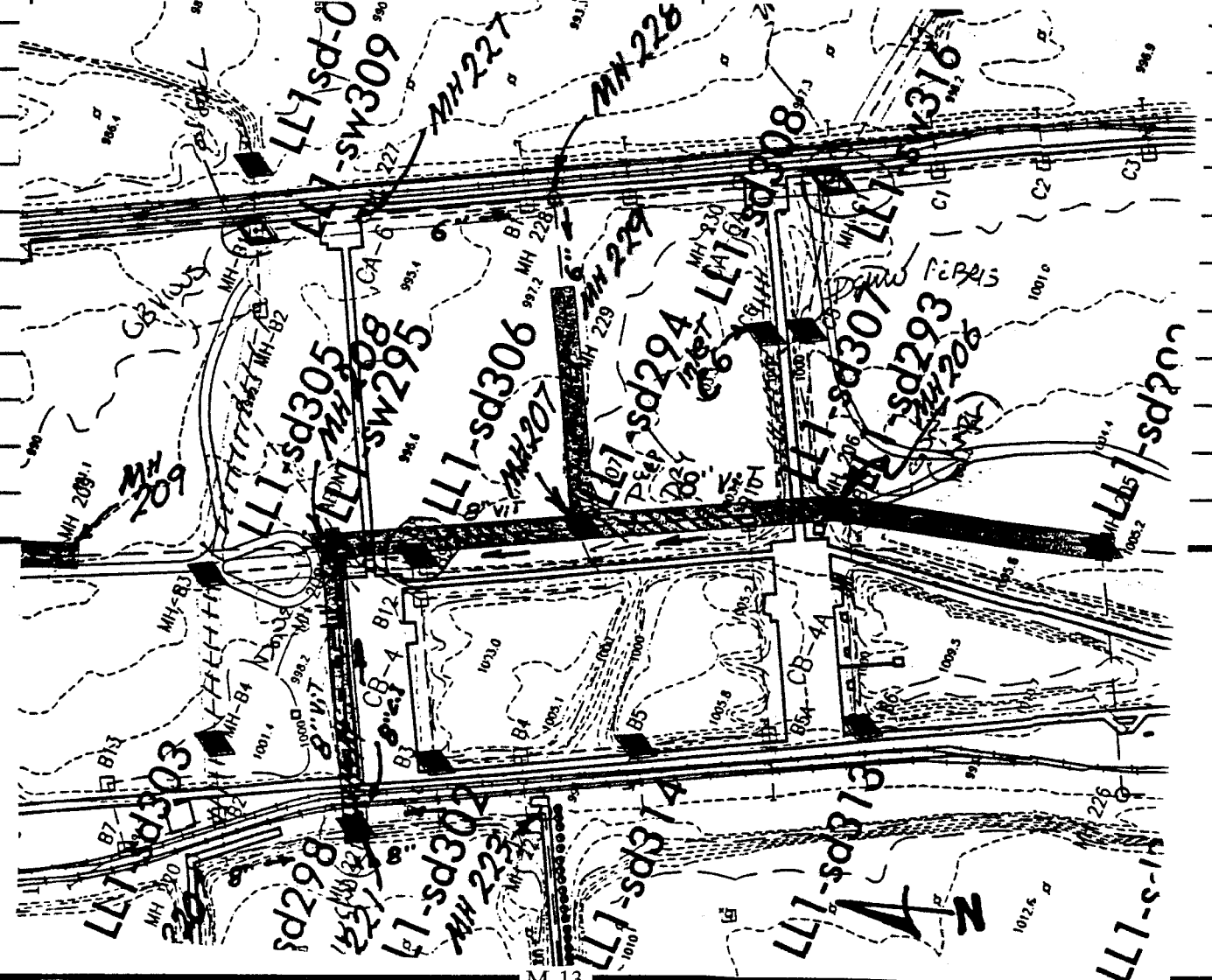
Footage	Remarks	Footage	Remarks
0	Inlet C6 to CBAA		
5	COULD NOT CONTINUE TRASH DEBRIS		



Date: 10/19/00	Investigator: P. Kellum	Video Tape #: 002 9 of 10
Area: Rowenna	Sub-Area: LOAD LINE # 1	Video Footage: -
Complaint Address & Date: 228/229	Weather: Sunny 68°	Type of Pipe: VIT (CA)
Upstream MH Address: 228	Pipe Size: 6" SAN	Pipe Length: 3'0"
Downstream MH Address: 229	TVd Distance: 3	
Line Location: Off Rd.	Topo#:	
Surface Cover: Woods		

PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH:
Section Ground Distance:		DSMH:
Condition Being Investigated: General Condition		

Footage	Remarks	Footage	Remarks
0	MH 228 headed west to MH 229		
3'	THREE BRICK OR ROCK		
	COULD NOT PASS		



INVESTIGATION (11/20/21) LEAD WORK

Date: 10/19/20 Investigator: P. Kellum page 1 of 1

Area: Ravenscroft Sub-Area: LEAD WORK

Complaint Address & Date: 228/227 Video Tape #: 002 10 of 10

Upstream MH Address: 228 Headed North to Video Footage:

Downstream MH Address: 227 Weather: Sunny 68°

Line Location: Off Rd. Topo#: NH Type of Pipe: VIT (Clay)

Surface Cover: C Woods Pipe Size: 6" SAN.

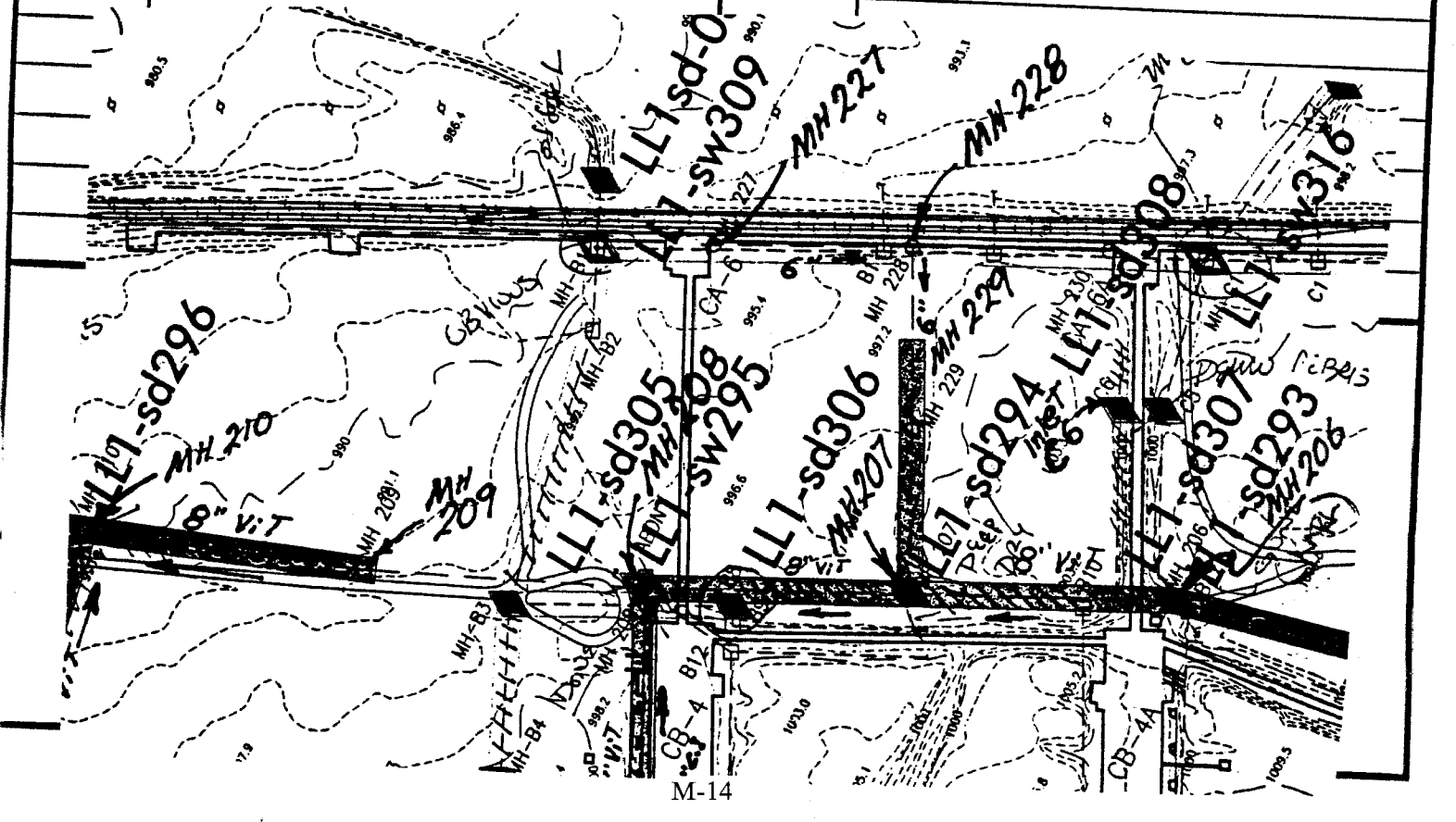
PHYSICAL MEASUREMENTS: Pipe Length: 3'0"

Section Ground Distance: MANHOLE USMH: TVd Distance: 52

Condition Being Investigated: DEPTHS DSMH:

General Condition

Footage	Remarks	Footage	Remarks
0	MH 228 headed north to MH 227		
1	- Large amount of debris built up in invert		
32	Mortar Deposit		
45	Mortar Deposit		
52	Mortar Deposit		
	- Could NOT PUSH SMALL CAMERA ANY FURTHER -		

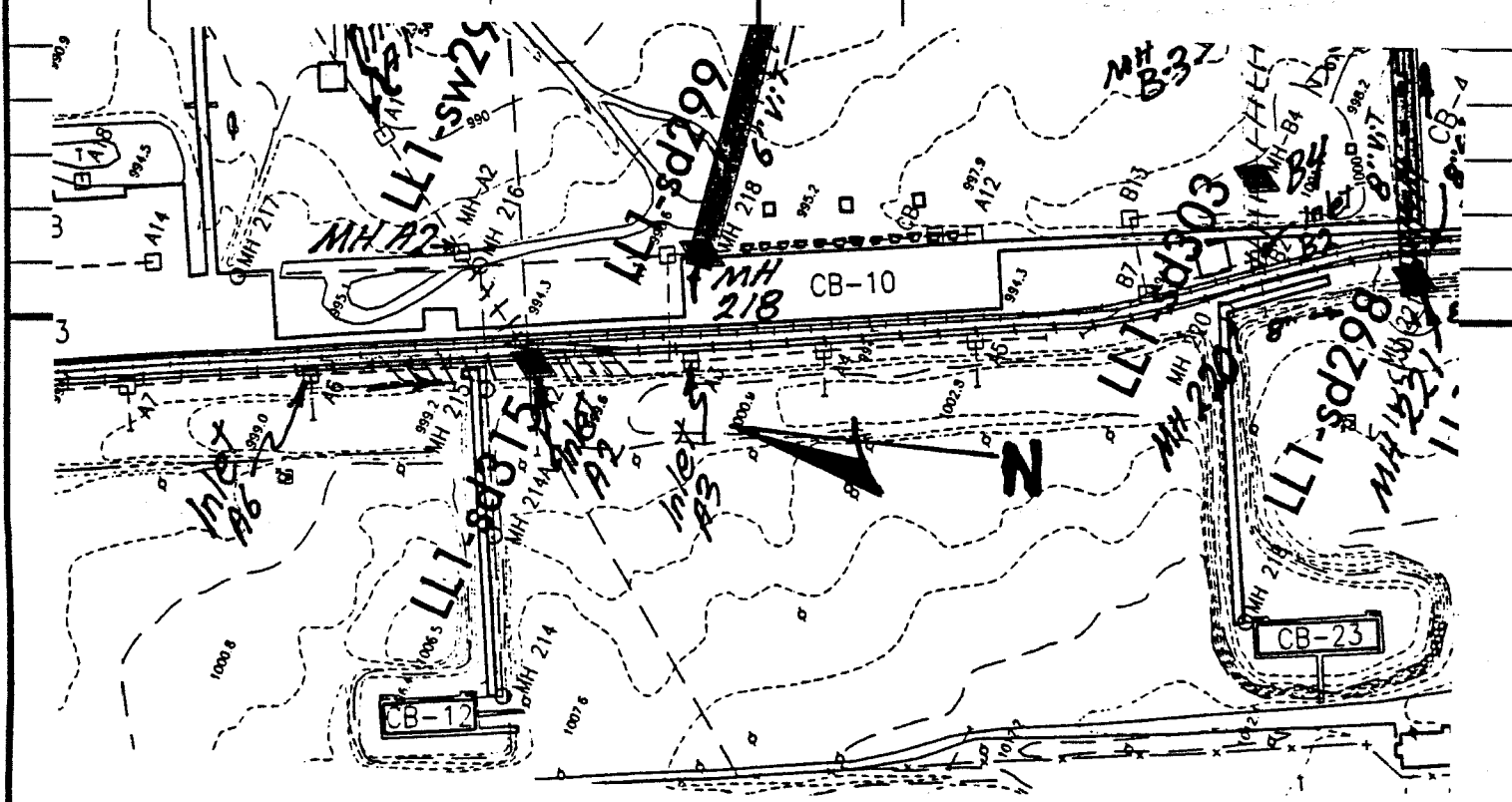


Storm Sewer

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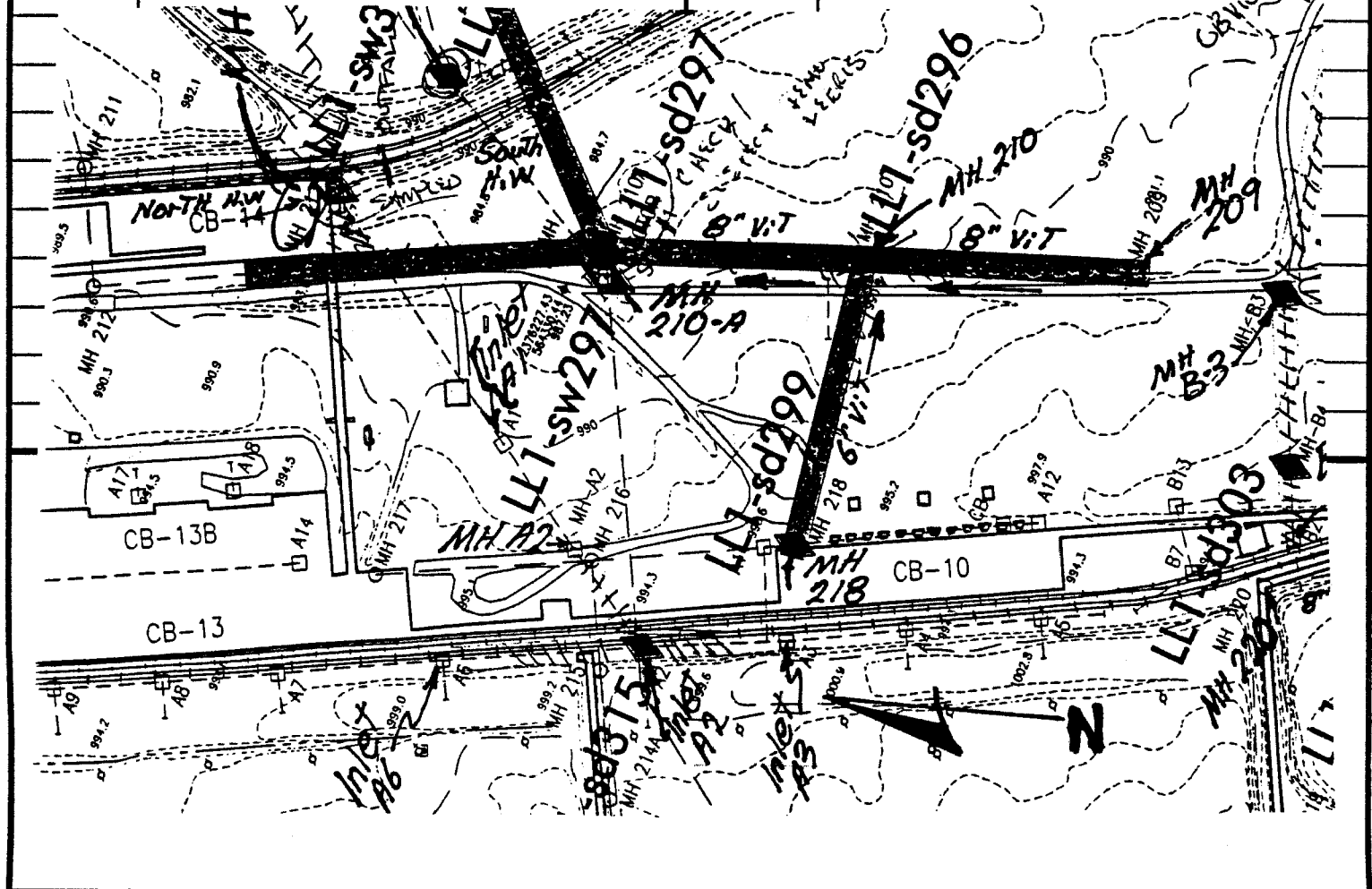
Date: 10/2/00	Investigator: P. Kellan	Video Tape #: 003 1 of 15
Area: Ravenna	Sub-Area: LEAD LINE #1	Video Footage: -
Complaint Address & Date: Inlet A2 - Inlet A6	Weather: Sunny 68°	
Upstream MH Address: Inlet A6	Type of Pipe: VIT	
Downstream MH Address: Inlet A2	Pipe Size: 15" STORM	
Line Location:	Topo#:	Pipe Length:
Surface Cover:		TVd Distance:
PHYSICAL MEASUREMENTS:		MANHOLE USMH: 4' 3"
Section Ground Distance:		DEPTHS DSMH:
Condition Being Investigated:		Inlet A-2

Footage	Remarks	US	Footage	Remarks
0	Inlet A2 to Inlet A6			
10	Large Debris			
24	STRESS CRACK			
35	Medium Debris			
42	Medium Debris			
52	STRESS CRACK			
61	Metal in Pipe			
64	STRESS CRACK			
118	STRESS CRACK			
131	STRESS CRACK			
156	Inlet A6			



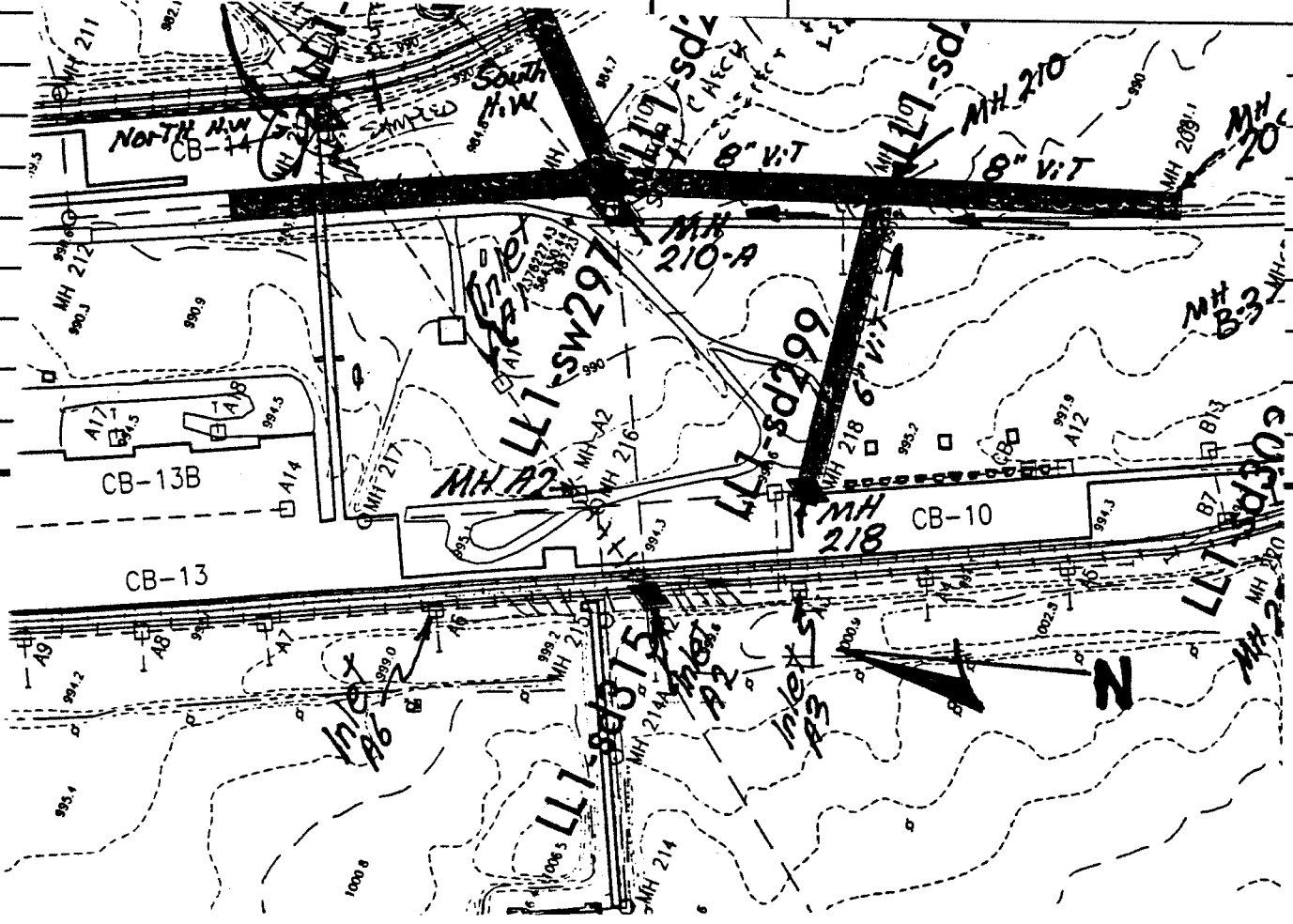
Area: Ranfenna	Sub-Area: LOAD LINE	Video Footage:
Complaint Address & Date: Inlet A2 U.S. to		Weather: Sunny 68°F
Upstream MH Address: Inlet AB	Type of Pipe: VIT	
Downstream MH Address: Inlet A2	Pipe Size: 15" Storm	
Line Location:	Topo#:	Pipe Length:
Surface Cover:	TVd Distance:	
PHYSICAL MEASUREMENTS:		MANHOLE USMH: 4' 3"
Section Ground Distance:	DEPTHS	DSMH: ↑
Condition Being Investigated:		Inlet A2

Footage	Remarks	Footage	Remarks
0	Inlet A2 US to Inlet A3		
10	STRESS CRACK		
86	Pipe Missing/Void *		
101	Flap left - w/wood *		
	STUCK INSIDE		



Date: 10-20-00		Investigator: P. Kellum	Video Tape #: 003 3 of 15
Area: Ravenna		Sub-Area: Load Line #1	Video Footage:
Complaint Address & Date: Inlet A2 - MH A2		Weather: Sunny 68°F	
Upstream MH Address: Inlet A2		Type of Pipe: VIT	
Downstream MH Address: MH A2		Pipe Size: 15"	
Line Location:		Topo#:	Pipe Length:
Surface Cover:		TVd Distance:	
PHYSICAL MEASUREMENTS:		MANHOLE USMH: 4'3"	
Section Ground Distance:		DEPTHS DSMH: 7	
Condition Being Investigated: General Condition - Inlet A-2			

Footage	Remarks	Footage	Remarks
0	Inlet A2 D-S to MH A2		
18	Light CRACK		
20	Light CRACK		
49	Light CRACK		
100	Mineral Deposit SEEN ENOUGH		

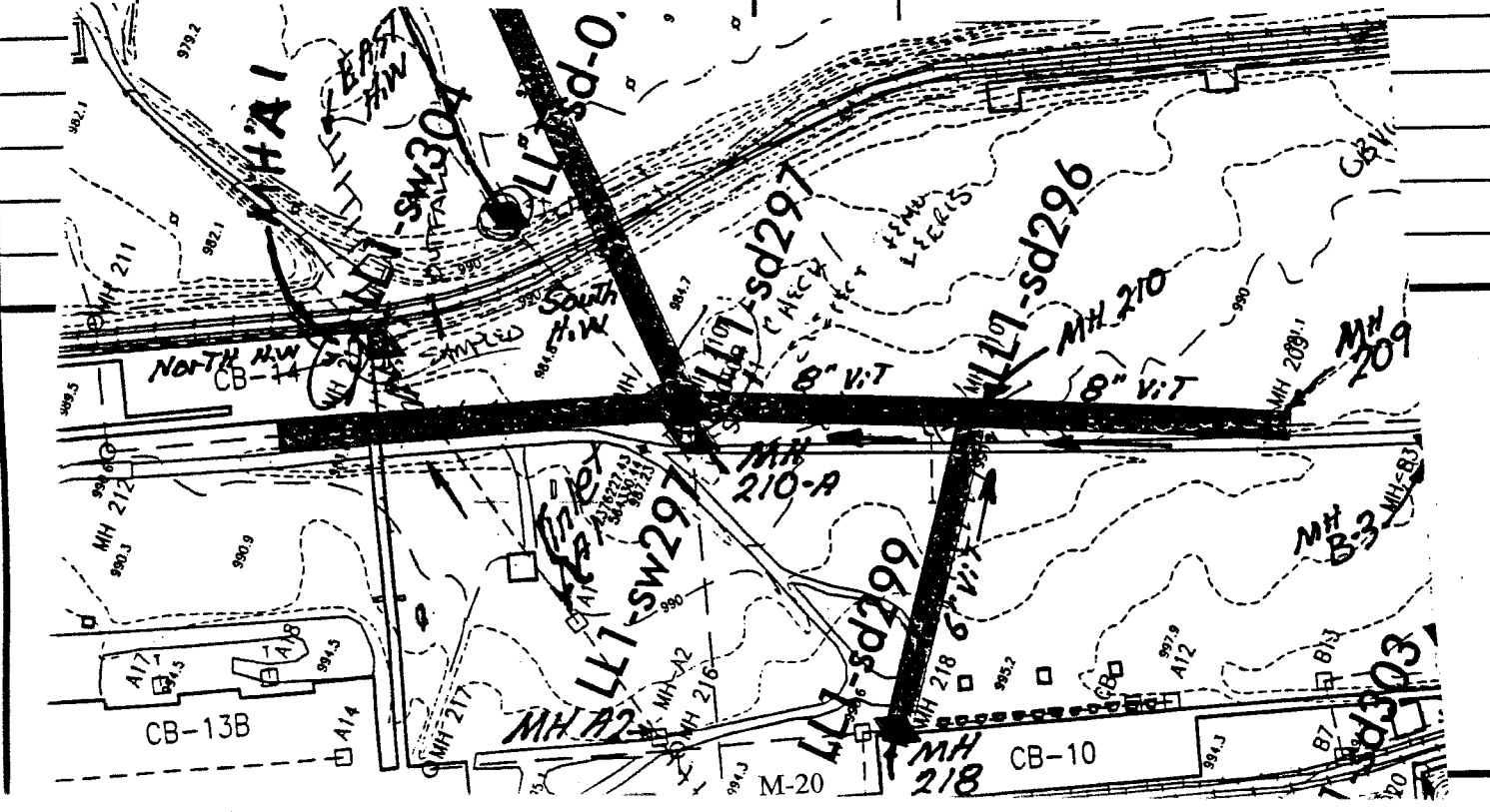


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Date: 12-20-00 Investigator: P. Kellum Video Tape #: 003 4 of 15
 Area: Ravenna Sub-Area: Lead Line #1 Video Footage:
 Complaint Address & Date: A1 (Inlet MH) to Inlet A1 Weather: Sunny 68°F
 Upstream MH Address: Inlet A1 Type of Pipe: VIT
 Downstream MH Address: MH A1 Pipe Size: 15"
 Line Location: Topo#: Pipe Length:
 Surface Cover: TVd Distance:

PHYSICAL MEASUREMENTS: MANHOLE USMH: 5'5"
 Section Ground Distance: DEPTHS DSMH:
 Condition Being Investigated: MH A1

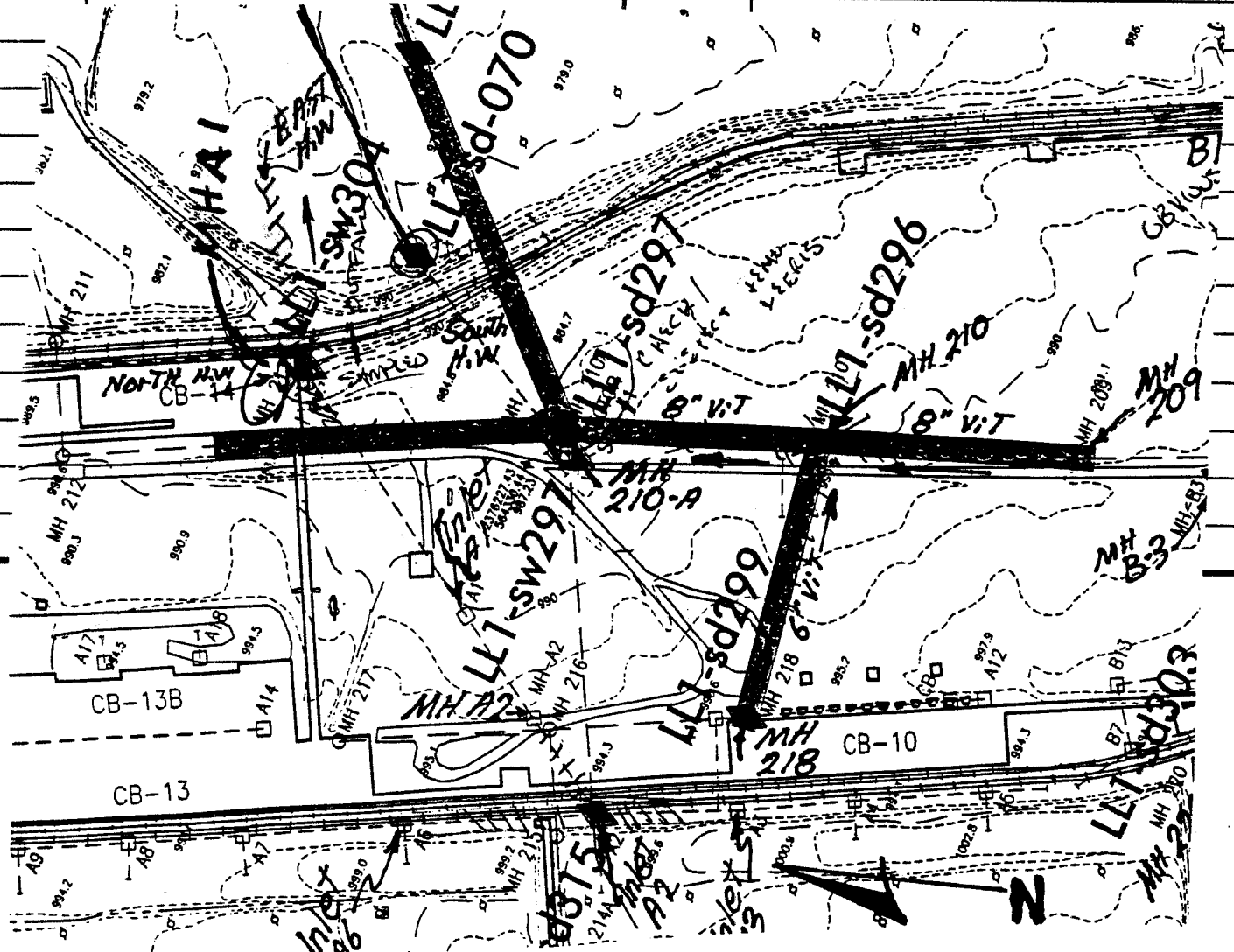
Footage	Remarks	Footage	Remarks
	MH A1 45' TO Inlet A1		
0	Inlet A1 to MH A1		
11	STRESS CRACK		
32	STRESS CRACK		
41	STRESS CRACK		
82	STRESS CRACK		
87	Mortar Deposit		
102	Light Debris		
102	Large CRACK		
107	STRESS CRACK		
150	STOP		
	Good Pipe		



Date: 10-20-00	Investigator: P. Kellum	Video Tape #: 003	5415
Area: Ravenna	Sub-Area: Lead Line #1	Video Footage:	
Complaint Address & Date: MHA1 East to Headwall		Weather: Sunny 68°F	
Upstream MH Address: MHA1		Type of Pipe:	
Downstream MH Address: Outlet @ HW		Pipe Size: 38 36"	
Line Location:	Topo#:	Pipe Length:	
Surface Cover:		TVd Distance:	

PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH: 5'5"
Section Ground Distance:	DSMH:	
Condition Being Investigated: MHA-1		

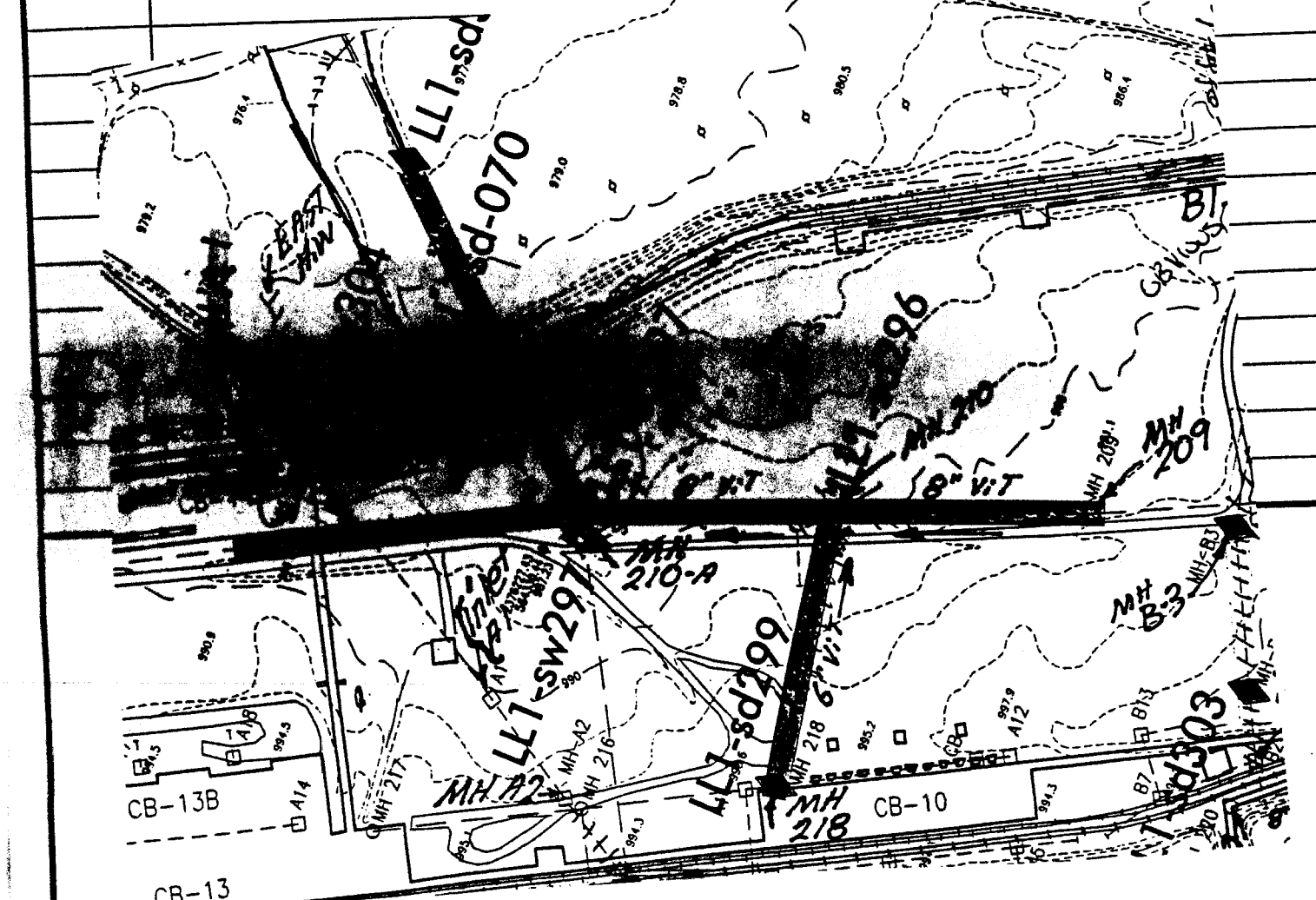
Footage	Remarks	D.S.	Footage	Remarks
0	MHA1 East to Headwall			
8	Heavy Debris			
48	Broken Pipe	*		
100	Headwall			



Date: 10/20/00 Investigator: P. Kelham Video Tape #: 003 6415
 Area: Ravenna Sub-Area: Video Footage:
 Complaint Address & Date: A1 to Headwall SW 1st Weather: Sunny 80°F
 Upstream MH Address: A1 / MH Type of Pipe:
 Downstream MH Address: Headwall Pipe Size: 24"
 Line Location: Off Rd. Topo#: Pipe Length:
 Surface Cover: Grass Woods - Ek TVd Distance:

PHYSICAL MEASUREMENTS: MANHOLE USMH: 5'5"
 DEPTHS DSMH: 7'
 Section Ground Distance: ← Mt A1
 Condition Being Investigated: General Condition

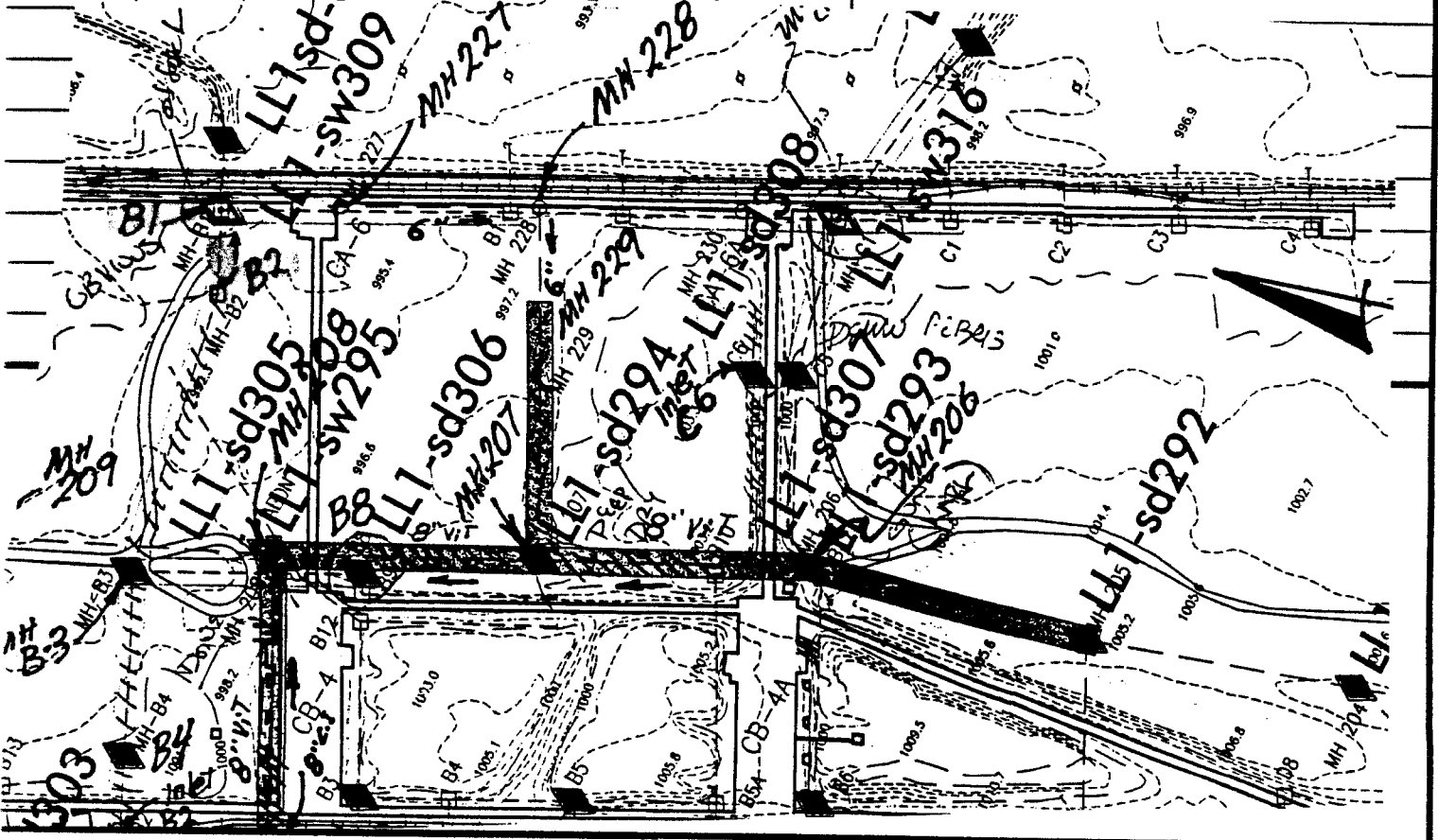
Footage	Remarks	US	South	Footage	Remarks
0	A1 to Headwall 24"			0	A1 to Headwall 24"
8	Tap Left			3	Headwall
16	Crack w Bottom				
80	Headwall				



Date: 10/20/00	Investigator: P. Kellum	Video Tape #: 003 7d 15
Area: Rewanna	Sub-Area:	Video Footage: 003
Complaint Address & Date: MH B2/B1		Weather: Sunny 68°
Upstream MH Address: MH B2		Type of Pipe: VIT Clay
Downstream MH Address: MH B1		Pipe Size: 30"
Line Location: Off Rd	Topo#:	Pipe Length: 4'0"
Surface Cover: Weeds/Gravel Etc		TVd Distance: 7'0"

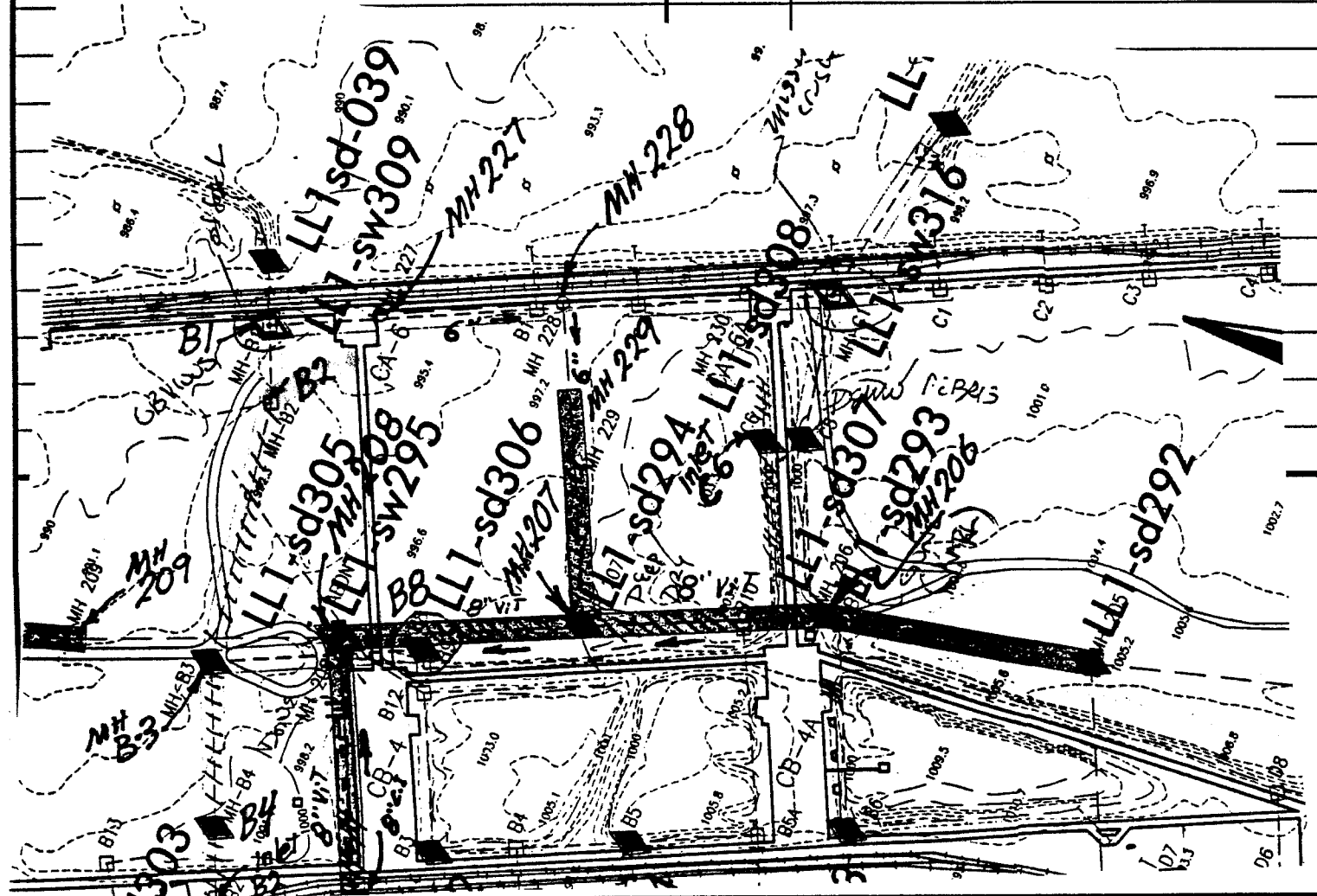
PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH: 7'0"
Section Ground Distance:		DSMH:
Condition Being Investigated: General Condition		70" MH

Footage	Remarks	Footage	Remarks
0	MH B2 / MH B1		
7	HEAVY HEAVY DEBRIS COULD NOT CONTINUE		
*	NOTE MH B2 and outlet were both unaccessible - too much Debris		



Date: 10/20/00	Investigator: Pete Kelton	Video Tape #: 003 8-15
Area: Reserve	Sub-Area: Local Line #1	Video Footage:
Complaint Address & Date: MH B2/B3		Weather: Sunny 68°
Upstream MH Address: B3		Type of Pipe: VIT (clay)
Downstream MH Address: B2		Pipe Size: 30" STORM
Line Location: Off Rd.	Topo#:	Pipe Length: 4'0"
Surface Cover: Woods - Dirt Rd - etc		TVd Distance: 152'
PHYSICAL MEASUREMENTS:		MANHOLE USMH: MH 7'0"
Section Ground Distance:		DEPTHS DSMH: B1
Condition Being Investigated: General Corrosion		

Footage	Remarks	Footage	Remarks
96	MH B2 U.S. to B3		
100	Changes to Brick		Pipe crossing
150	Changes back Clay		above 30" line
	STOP		
	SEEN ENDOFT		

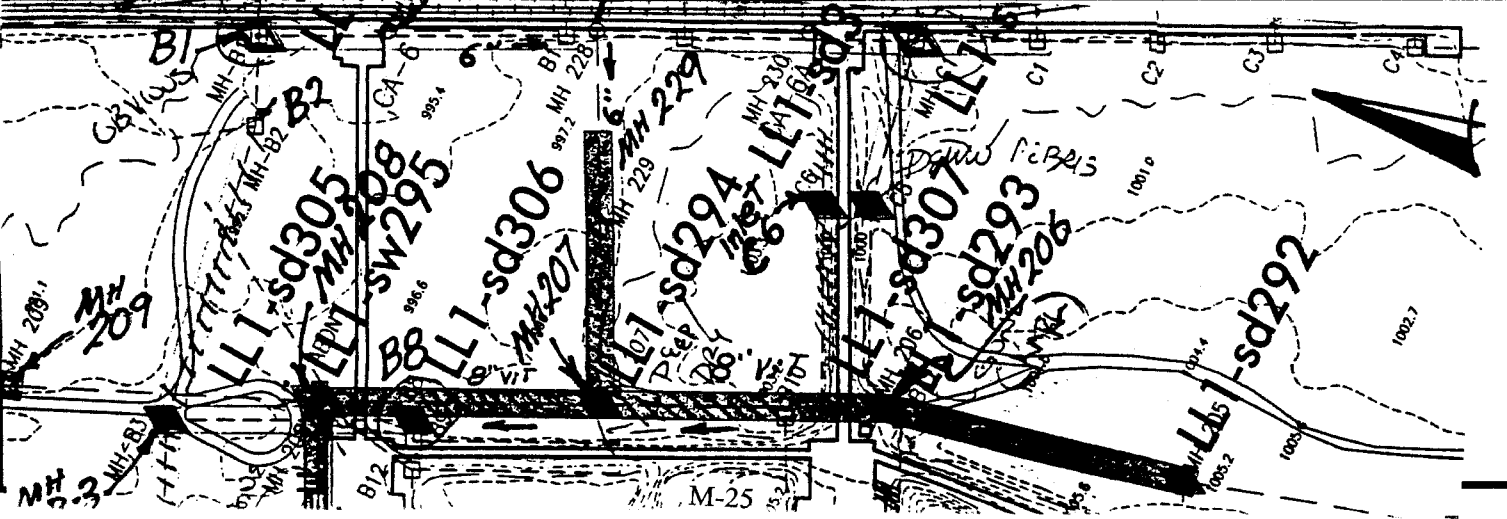


ELE-VAC TV INVESTIGATION (513)398-4521 Load Line 1 page / of 1

Date: 10/20/00	Investigator: P Kellum	Video Tape #: 003 9/15
Area: Retenna	Sub-Area:	Video Footage:
Complaint Address & Date: B3 DS to B2		Weather: Sunny 70°
Upstream MH Address: B3		Type of Pipe: vit
Downstream MH Address: B2		Pipe Size: 30" 90cm
Line Location: Off Rd. Topo#:		Pipe Length: 40'
Surface Cover: Woods - etc		TVd Distance: 250'

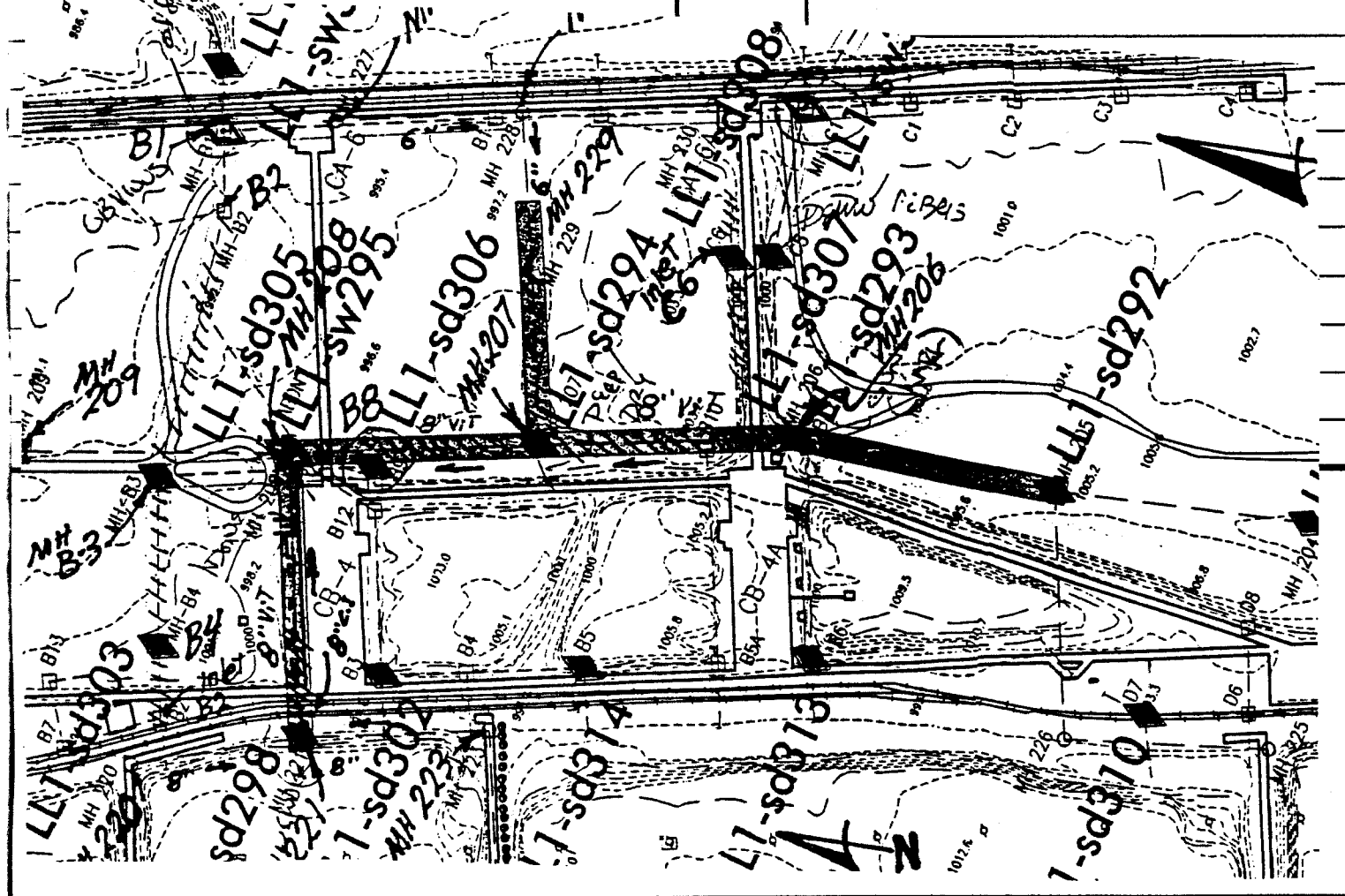
PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH: 8'0"
Section Ground Distance:	DSMH:	
Condition Being Investigated:	General Condition. B3	

Footage	Remarks	Footage	Remarks
0	B3 DS to B2		
12	Cracks / Heavy Pcbng		
18	Cracks		
21	"		
30	4 pt Crack		
32	Loss of Shape		
20	Cracks / Bottom		
113	Crack / Infiltration		
122	" "		
176	Mortar Dep		
195	Crack @ Bottom		
219	Mortar Dep		
350	M Met where we left off @ B2/B3		
	Total Distance 400 ft.		



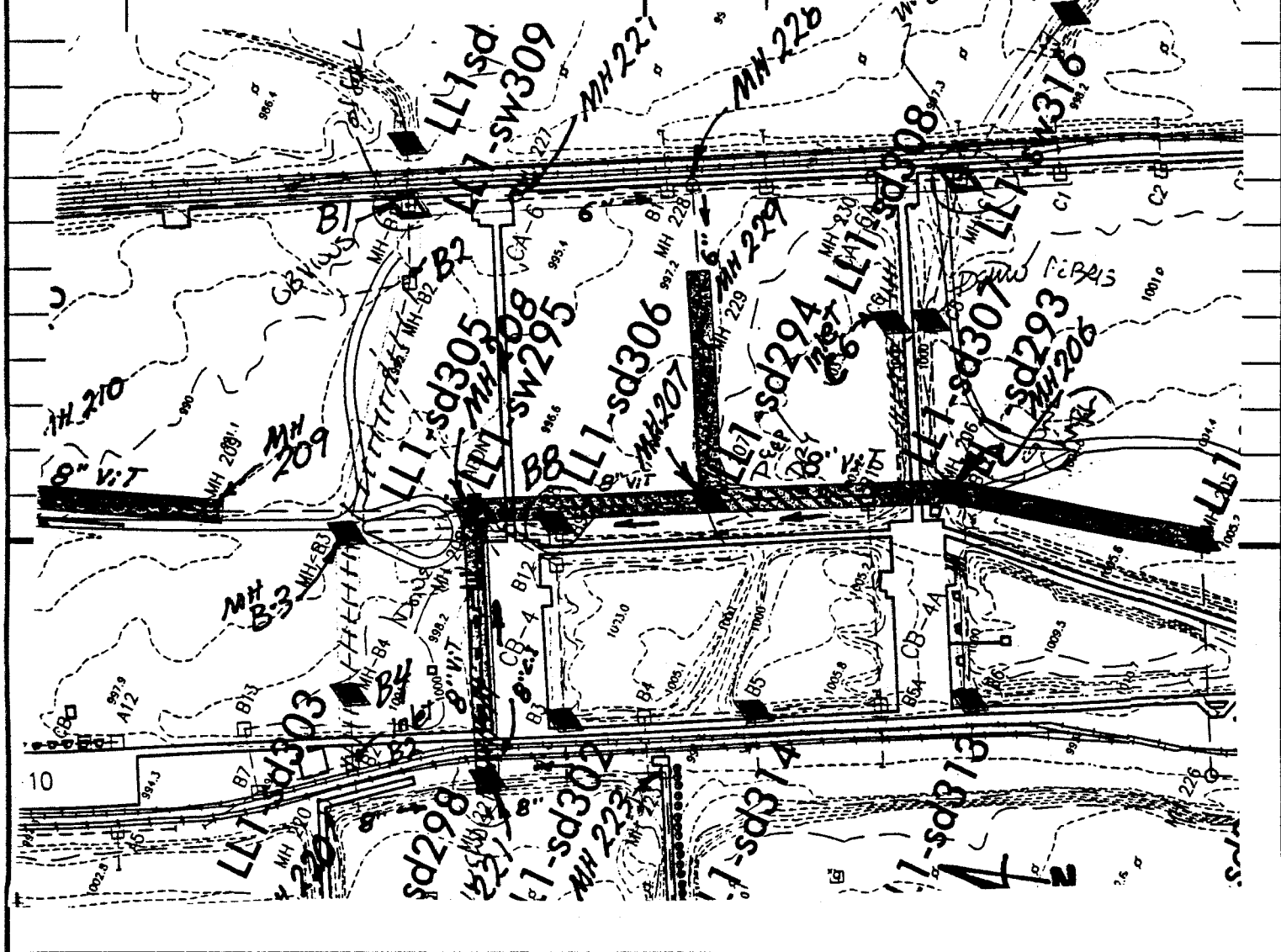
Date: 10/20	Investigator: P. Kellum	Video Tape #: C03 10 of 15
Area: Revenue	Sub-Area: Lead Line #1	Video Footage: 003
Complaint Address & Date: B3/B4		Weather: Sunny 70°
Upstream MH Address: B4		Type of Pipe: VIT (Sec)
Downstream MH Address: B3		Pipe Size: 30"
Line Location: Off Rd.	Topo#:	Pipe Length: 410'
Surface Cover: Woods - Etc		TVd Distance: 22'
PHYSICAL MEASUREMENTS:		MANHOLE USMH: 8'0"
Section Ground Distance:		DEPTHS DSMH:
Condition Being Investigated: General Corrosion		B-3

Footage	Remarks	Footage	Remarks
6	B3 U.S. to B4		
22	Too Much DEBRIS		



Date: 10/20/00	Investigator: P. Kellum	Video Tape #: 003 11/15
Area: Patenna	Sub-Area: Lead Line #1	Video Footage:
Complaint Address & Date: B3 / B6	Weather: Sunny 70°	
Upstream MH Address: B6	Type of Pipe: 15" STORM CULV	
Downstream MH Address: B8	Pipe Size: 15" STORM	
Line Location: OFF RD. Topo#:	Pipe Length: 4'0"	
Surface Cover: Woods - Ek	TVd Distance: 31	
PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH: 5'10" High Line DSMH:
Section Ground Distance:	Condition Being Investigated: General Condition MH B3	

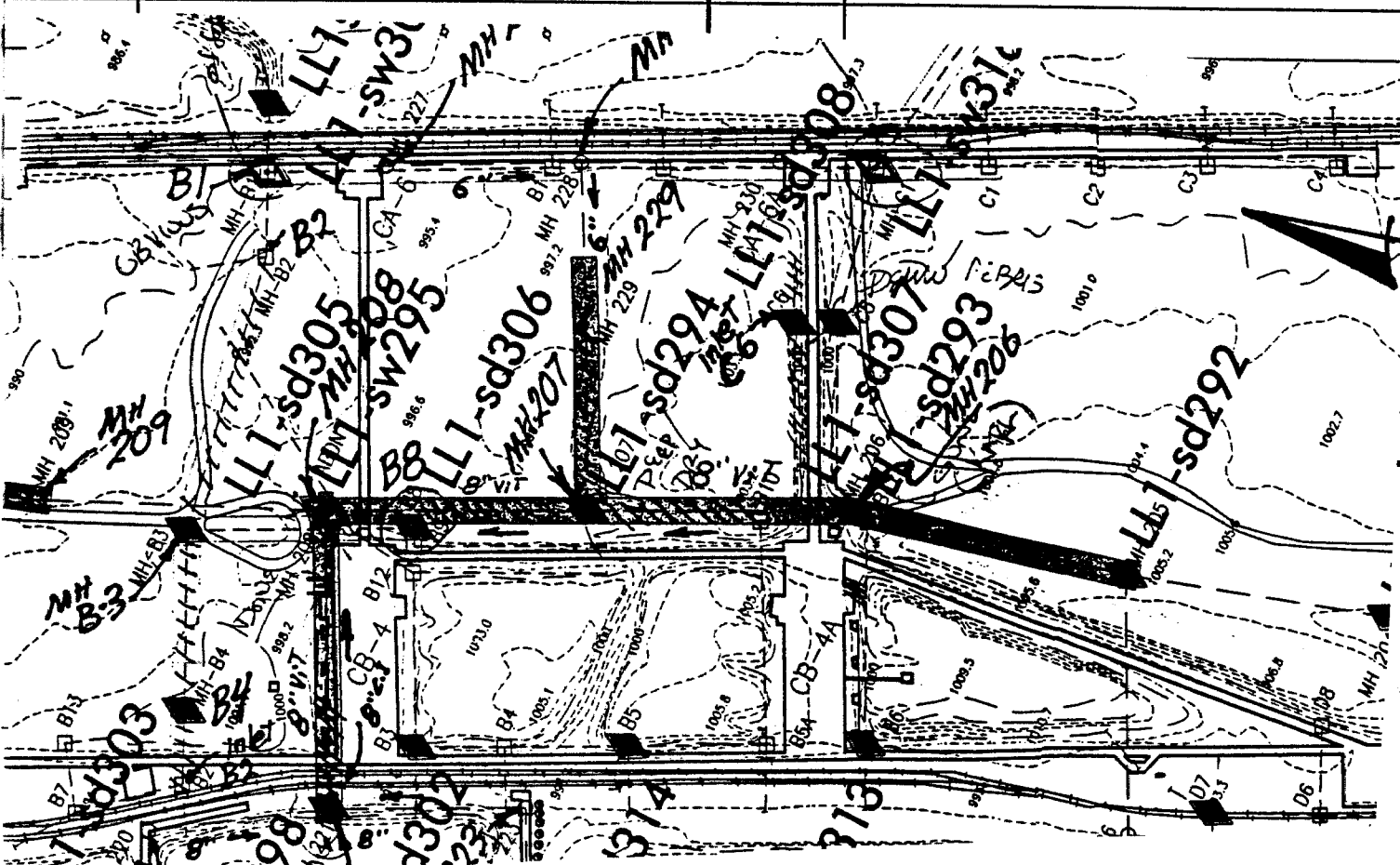
Footage	Remarks	Footage	Remarks
0	MH B3 US to Ink + B8 B8		
3	HEAVY DEBRIS - BROKEN DOWN PIPE		



Date: 12/2/00	Investigator: P. Kellum	Video Tape #: 003 12 of 15
Area: Persimma	Sub-Area: Load Line #1	Video Footage:
Complaint Address & Date: B4/B3		Weather: Sunny 70°
Upstream MH Address: B4		Type of Pipe: VIT (Cky)
Downstream MH Address: B3		Pipe Size: 30" STORM
Line Location: Off Rd	Topo#:	Pipe Length: 4'0"
Surface Cover: Woods Etc		TVd Distance: 190'

PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH: 9'5"
Section Ground Distance:		DSMH: ↗
Condition Being Investigated: <i>General Condition</i> MH B-A		

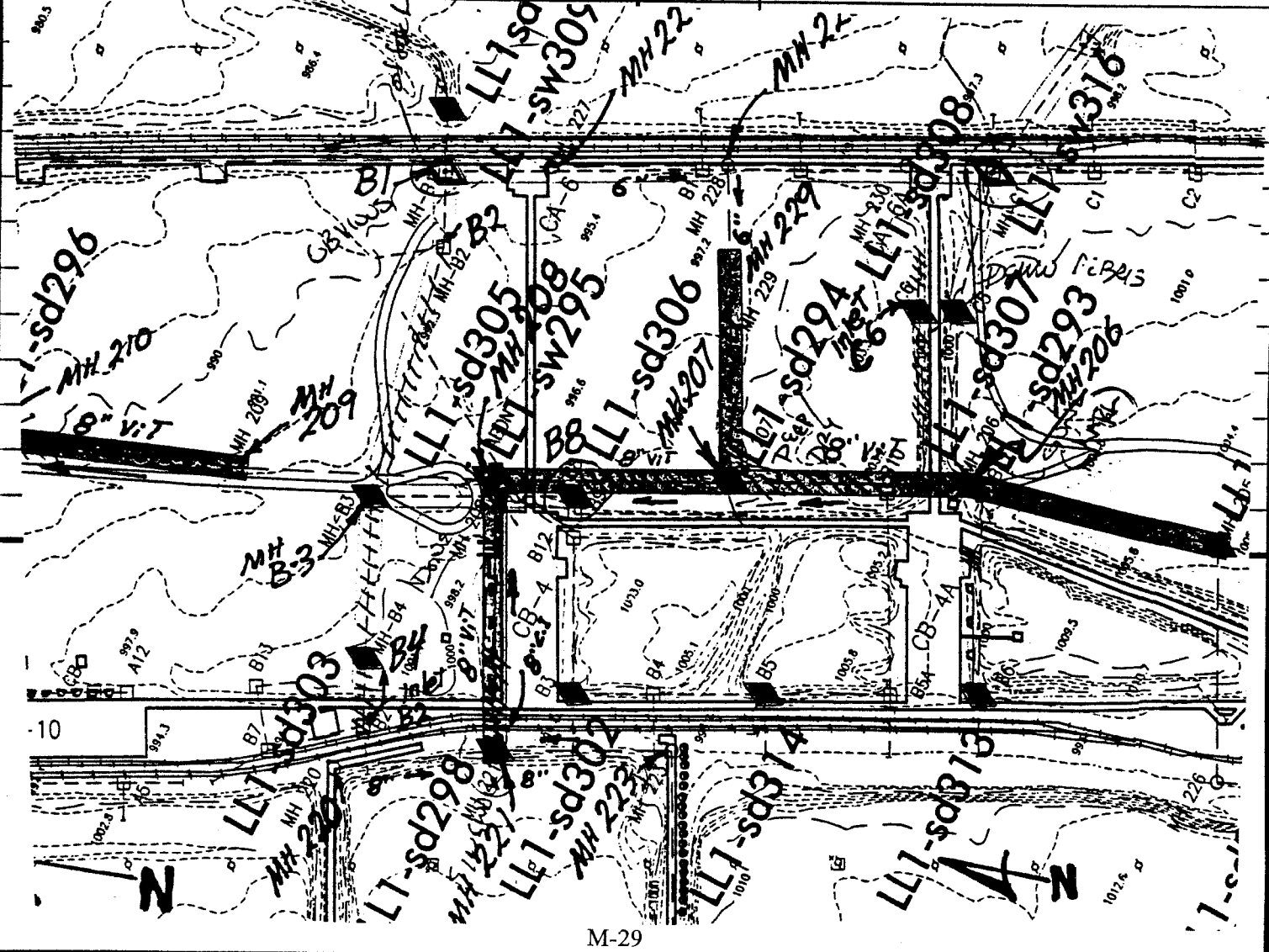
Footage	Remarks	Footage	Remarks
0	MH B4 @ S to B3		
62	Light Crack		
67	Light Crack		
186	HEAVY DEBRIS		
190	COULD NOT GO ANY FURTHER		



Date: 10/20	Investigator: P. Keller	Video Tape #: 003 13 of 15
Area: Ravenna	Sub-Area: Local Line #1	Video Footage: -
Complaint Address & Date: B4 Inlet B2	Weather: Sunny 70°	Type of Pipe: clay
Upstream MH Address: B Inlet B2	Pipe Size: 30" STORM	Pipe Length: 410'
Downstream MH Address: B4-MH	TVd Distance: 30'	
Line Location: Off Rd.	Topo#:	
Surface Cover: Across gravel		

PHYSICAL MEASUREMENTS:	MANHOLE DEPTHS	USMH:
Section Ground Distance:		DSMH:
Condition Being Investigated: General Condition		

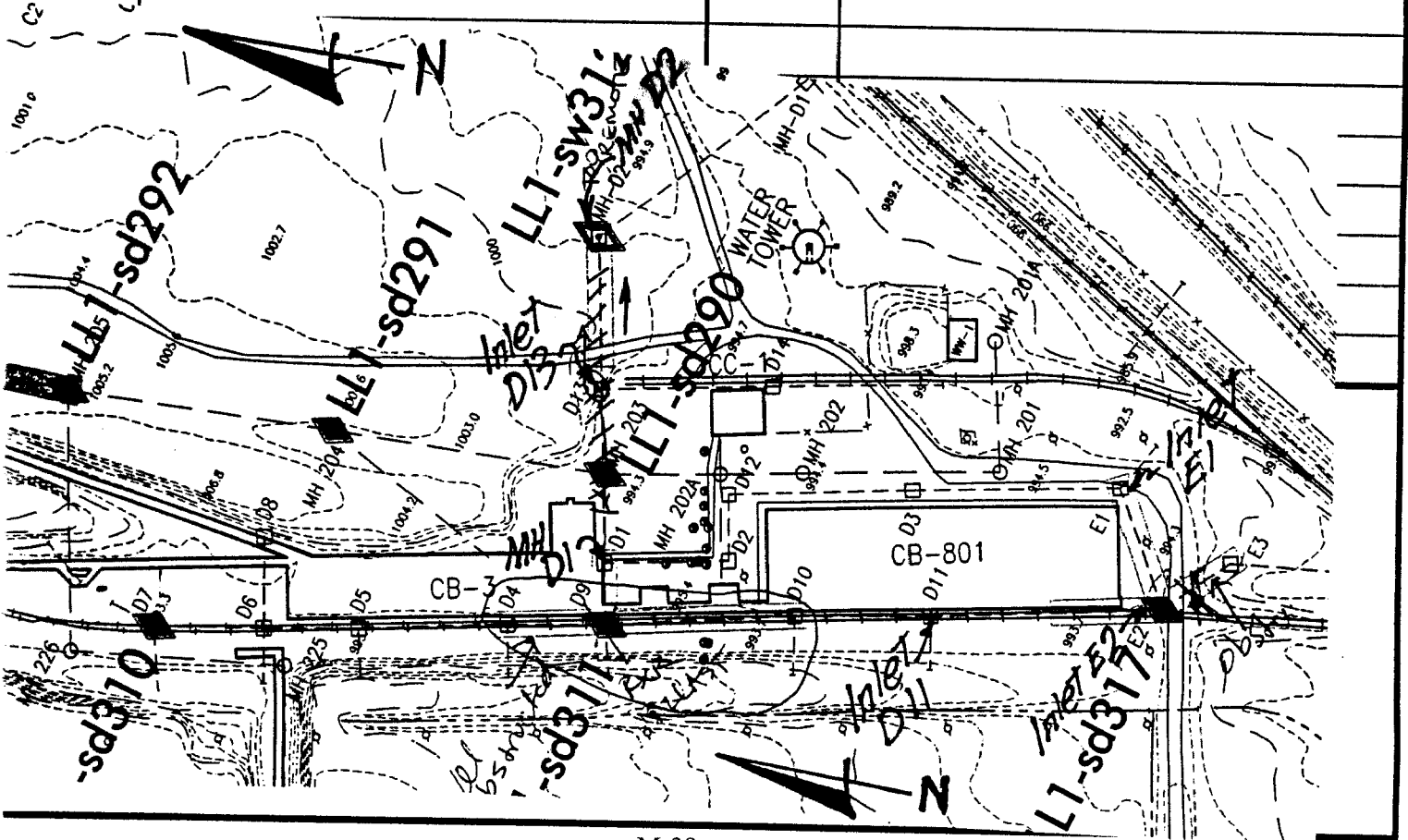
Footage	Remarks	U.S.	Footage	Remarks
0	B4-west to Inlet B2			
30	to Inlet B2			



Date: 10/20/00 Investigator: P Kellum Video Tape #: 003 14/15
 Area: Ravenna Sub-Area: Local Line 4 Video Footage:
 Complaint Address & Date: Weather: Sunny 68°
 Upstream MH Address: D13 (Inlet) Type of Pipe: VIT (Clay)
 Downstream MH Address: D2 Pipe Size: 30"
 Line Location: Off-Road Topo#: Pipe Length: 40'
 Surface Cover: Woods TVd Distance: 7'

PHYSICAL MEASUREMENTS:
 Section Ground Distance: MANHOLE DEPTHS USMH:
 Condition Being Investigated: DSMH:
 General Condition

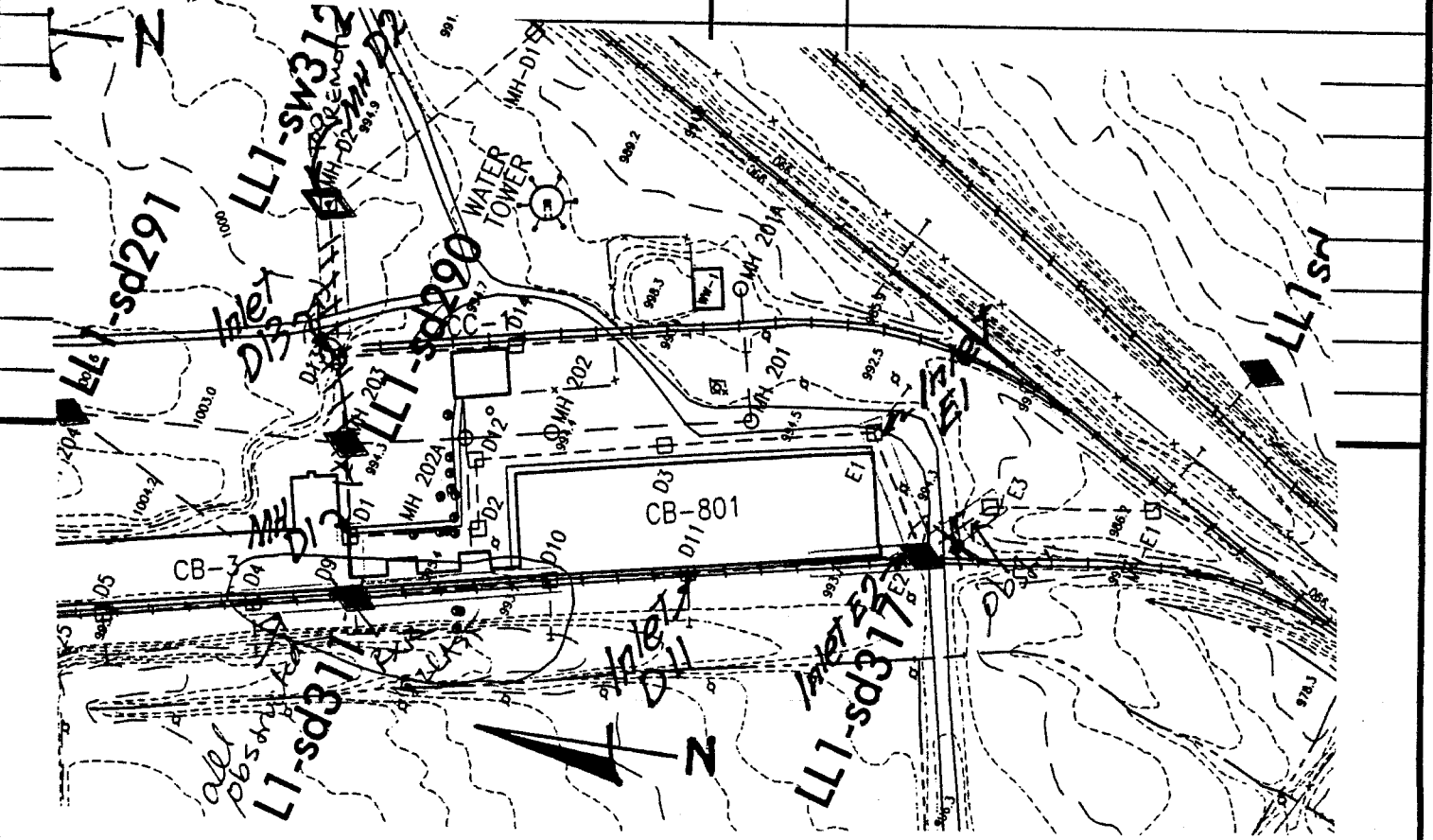
Footage	Remarks	Footage	Remarks
0	Inlet D13 to MH D2	0	D13 U.S. to D1
10	Could not pass BIG ROCK	20	Lt Crack
20		30	Med Crack
		43	Cracks - offset 2
		100	Lt Cracks
		120	3 PT CRACK
		172	HEAVY DEBRIS could not pass



Date: 10/20/00	Investigator: P. G. Miller	Video Tape #: 003 154 15
Area: Ravenna	Sub-Area: LEAD LINE	Video Footage:
Complaint Address & Date: Inlet E2/E1		Weather: Sunny 70°
Upstream MH Address: E1		Type of Pipe: VIT (Clay)
Downstream MH Address: E2		Pipe Size: 12" STORM
Line Location: Off Rd.	Topo#:	Pipe Length: 4'0"
Surface Cover: Woods -		TVd Distance: 50' @ 50'

PHYSICAL MEASUREMENTS:	MANHOLE USMH:
Section Ground Distance:	DEPTHS DSMH:
Condition Being Investigated: General Condition	

Footage	Remarks	Footage	Remarks
	16 E2 H.S. U.S.		E1 U.S. TO D11
0	Inlet E2 to E1	0	E1 DS to D11
29	Lt. Creek	50	STOP
38	Lt. Creek		LOOKS GOOD
50	STOP		
	LOOKS GOOD		



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