

LOCATION MAP (NOT TO SCALE)

CAPital idea

Steel sheets may route crack away from canal

By Mike McCloy
The Phoenix Gazette

The U.S. Bureau of Reclamation is going to pound \$700,000 worth of steel sheets into the ground near Apache Junction to keep a crack in the soil from wrecking the Central Arizona Project canal.

"There's just a little hairline crack by the canal," Lowell Heaton, chief of the bureau's location and survey branch, said Friday.

But if the crack opens underneath the aqueduct as it has in front of Bob Junker's house a quarter-mile away, "we'd have a real major disaster," Heaton said.

It was during heavy rainstorms in July that Junker wound up with his own doorstep version of the Grand Canyon, 20 feet deep and 15 feet wide.

Heaton spotted the same fissure on an aerial inspection of the canal just after the rain.

"My thought was, 'Oh, no. We've got a problem,'" he recalled.

The fissure virtually disappears before it reaches the CAP canal, but Heaton fears the next heavy rain will erode the sides of the crack, and extend it under the aqueduct.

"We're going to drive sheet piling," he said. "It's sheets of steel with edges that interlock. It will go about 15 or 20 feet deeper than the lowest point of the canal, on both sides of the canal."

The sheets, driven across the fissure, should force desert runoff deep into the ground instead of allowing it to extend the crack by erosion.

The result, Heaton hopes, will be an earthen bridge supporting the canal.

"I bet that this would work," he said. "This is the first time we're aware of that we've had this problem, so we're experimenting."

The bureau planned for desert cracks on the canal south of Apache Junction, where years of ground-water pumping have caused the earth to sink several feet.

See ● CAP, A-4

● CAP

From A-1

In the Picacho area, the concrete lining will be reinforced with steel bars to keep the canal from collapsing into expected fissures, Heaton said.

"At the time we lined the canal (near Apache Junction) we were unaware of any fissures in the area," he said, so 200 feet of lining will have to be replaced with reinforced concrete.

"It's a lot of hand work," Heaton said. "As the sections come up, we're going to look for that hairline crack under the canal."

Ed Logan Contracting Inc. of Mesa submitted the lowest

of six bids for the job, at \$707,725.

Driving a 200-foot-long wall of steel across the crack should not only save the canal, but provide a method Junker and other property owners in the area can use to save their buildings, Heaton said.

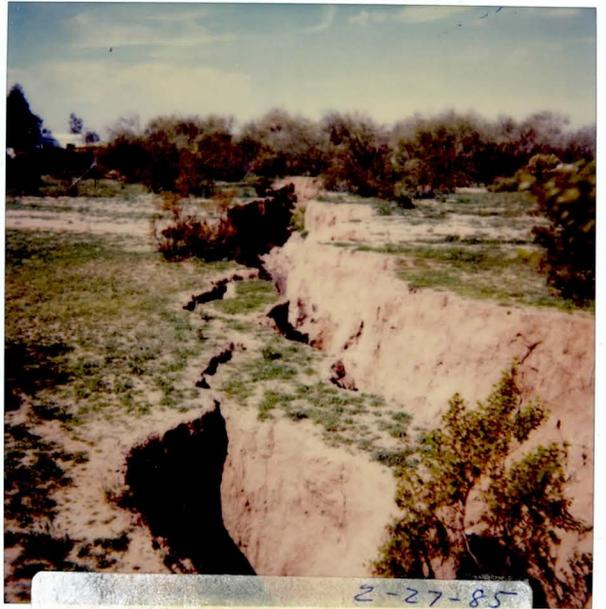
"It'll at least give us an answer whether this is the way to handle this," he said. "It may be a solution."

No water is expected to reach the Apache Junction area, on the Salt-Gila Aqueduct, until 1986. The \$3.5 billion CAP is scheduled to deliver Colorado River water to Phoenix in December and Tucson in 1991.



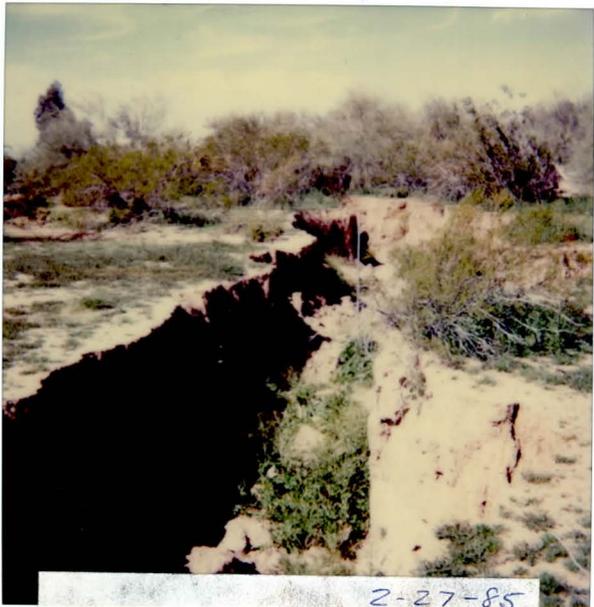
2-27-85
100' out from point # 4

Point # 5



2-27-85
100' out from point # 5

Point # 6



2-27-85
100' out from point # 6

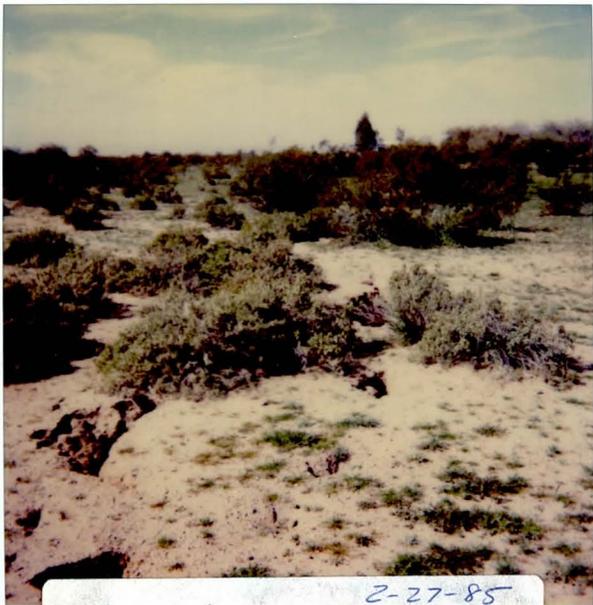
Point # 7



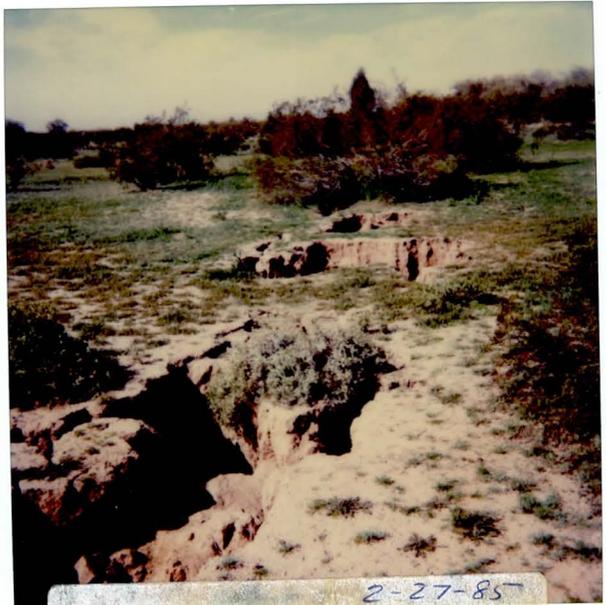
2-27-85
This point is South West of the
Ironwood Rd. bridge over the CAP
canal & alongside the relocated
portion of Baseline Rd.
Point # 1



2-27-85
100' out from the point # 1
Point # 2



2-27-85
100' out from Point # 2
Point # 3



2-27-85
100' out from Point # 3
Point # 4



7-26-85

Point #1



7-26-85

Point #2



7-26-85

Point #3



7-26-85

Point #4



7-26-85

Point #5



7-26-85

Point #6



7-26-85

Point #7



30' west from pt #7

7-26-85

Point #8

9-9-85



Point # 1, Looking 180°
from fissure. (Eastward)
Toward Powerline Dam.
In foreground, piling of CAP



On top of Powerline 9-4-85
Dam. 135' S of station 135+00.
Looking eastward, 180° from
fissure.



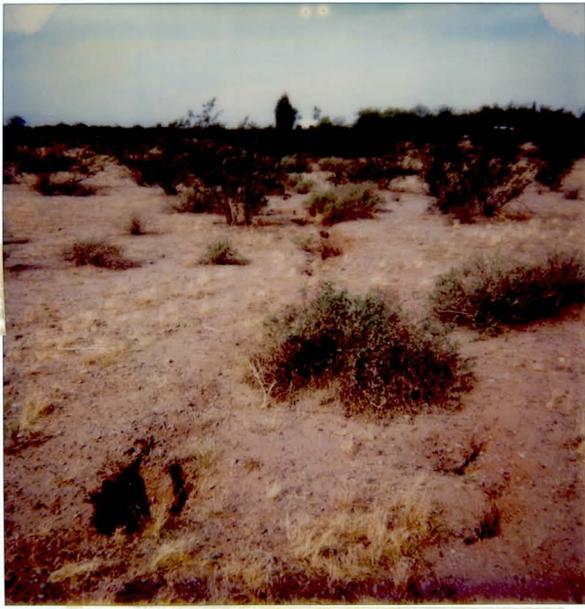
On top of Powerline 9-7-85
Dam. 135' S of station
135+00. Looking Westward
Toward fissure.



← Beginning of fissure
← holes 2' deep

10-4-85

Point #1



10-4-85

Point #2



10-4-85

Point #3



10-4-85

Point #4

10-4-85



10-4-85

Point #5



10-4-85

Point #6



10-4-85

Point #7

10-4-85



10-4-85
Point #6, turned 180°



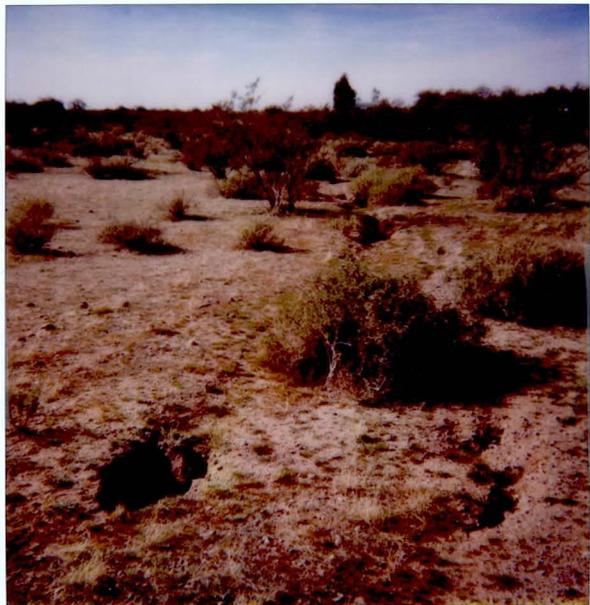
10-4-85
Point #6, looking down.
About 18' deep.

Point #6 appeared to be the deepest point, about 18' deep.
Also, there are ~~two~~ holes in the vicinity of point
#1 which do not show up in the photo, about 8' deep.



Point #1

1-2-86



Point #2

1-2-86



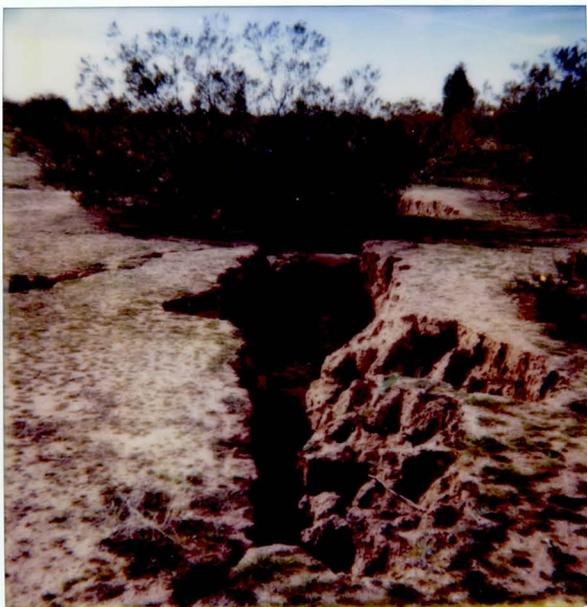
Point #3

1-2-86



Point #4

1-2-86



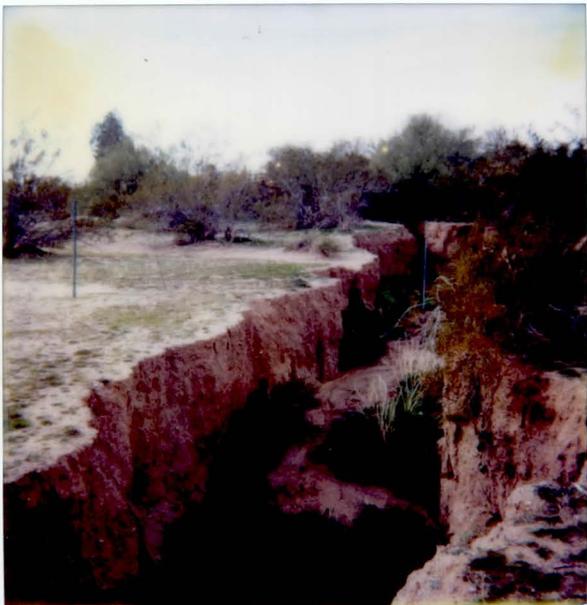
1-2-86

Point #5



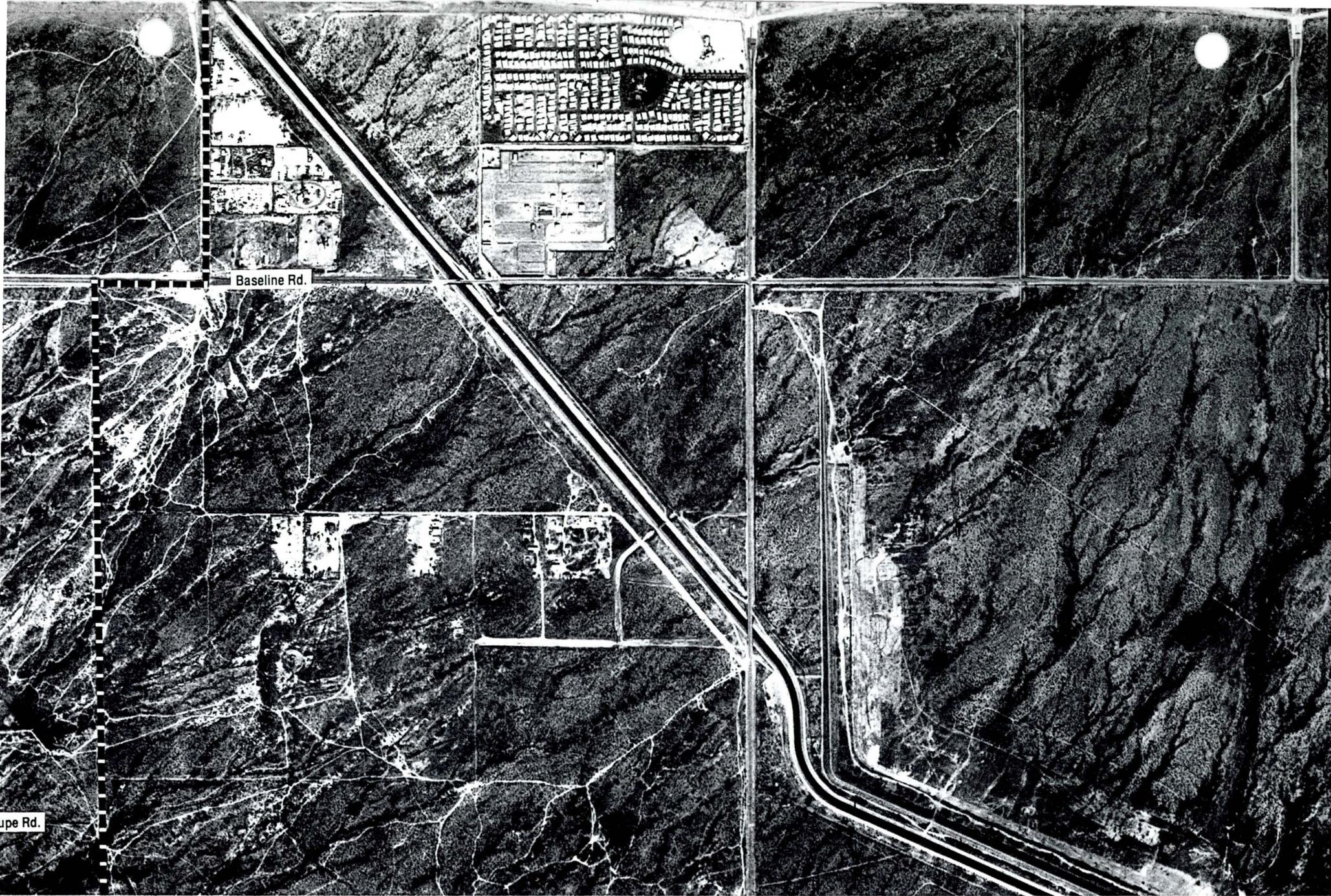
1-2-86

Point #6



1-2-86

Point #7



WITH RESPECT TO ANY
INCLUDING ANY WARRANTY
MED.

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PHOTO DATE: JANUARY 4, 1994
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PHOTO SCALE: 1" = 1200'

O-23

BASELINE RD.

C.A.P. CANYON

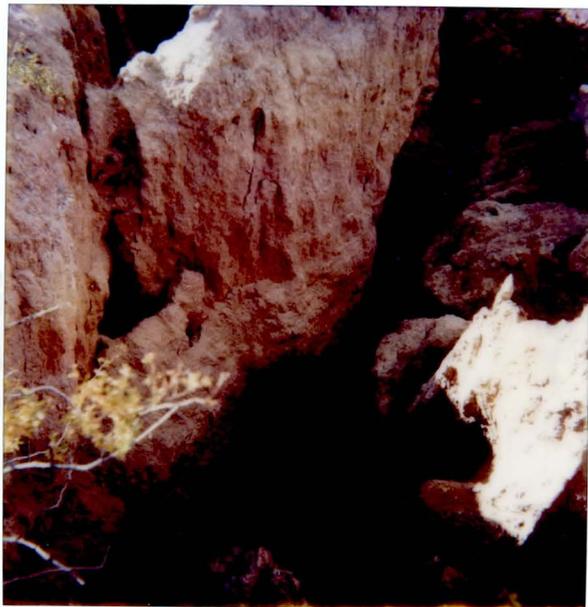
WHEAT RD.

SEE PAGE 603

1-2-86



1-2-86
Pt 6, turned 180°



1-2-86
Pt 6, looking down.



1-2-86
looking NE from
pt # 1. (turned 180°)



1-2-86
Pt 2+85



1-2-86
Pt 4, looking
down. \approx 8' deep.



1-2-86
Pt 5+70
 \approx 15' deep



Point #1

1-6-87



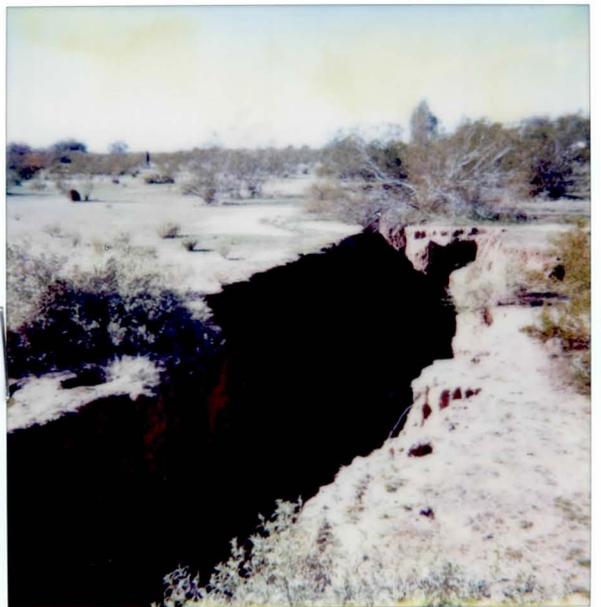
Point #2

1-6-87



Point #3

1-6-87



Point #4

1-6-87



Point # 5

1-6-87



Point #6

1-6-87



Point #7

1-6-87

1-6-87

SHEET PILING
@ CAP



PE # 1

1-6-87

TURNED 180°

FISSURE CONTINUES
ONTO PRIVATE PROPERTY



4'

⑦ 13'

⑥ 5'

⑤ 7'

④ 19'

③ 16'

② 17'

① 8'

7'

9'

1'-8"

②

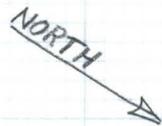
① 2'

7'-02"

⑧ 8'

FENCE
POSTS

RELOCATED
C.A.P. BASELINE



NOT TO SCALE

1-6-87
JMW