

3R - 300

**GENERAL
CORRESPONDENCE**

YEAR(S):

1995



PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

Bill Olson
RECEIVED
FARMINGTON
MARCH 10 1995

March 7, 1995

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

Undesirable Event - Water Spill
32-7 Water Pipeline Leak

Dear Sirs:

Attached are two copies of a Notification of Fire, Breaks, Spills, Leaks and Blowouts Form for the recent coal seam produced water pipeline leak in Phillips Petroleum's 32-7 Unit. Detailed information concerning the spill is attached. The spill occurred on private surface.

If you have any questions or need further information, please contact me at (505) 599-3460.

Sincerely,

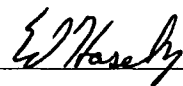
PHILLIPS PETROLEUM COMPANY

Ed Hasely
Environmental Engineer

cc: BLM - Farmington
NMED - Surface Water - Jim Piatt
Bureau of Reclamation - Durango

SF 3/10/95

NOTIFICATION OF FIRE, BREAKS, SPILLS, LEAKS, AND BLOWOUTS

Name of Operator Phillips Petroleum Company				Address 5525 Hwy 64, NBU 3004, Farmington, NM 87401					
Report of	Fire	Break	Spill	Leak X	Blowout	Other*			
Type of Facility	Drig Well	Prod Well	Tank Btty	Pipe Line X	Gaso Plnt	Oil Rfy	Other*		
Name of Facility (SJ - 8 - 6) 32-7 Water pipeline (Wells 32-7 #222, 224, 233, 238)									
Location of Facility (Quarter/Quarter Section or Footage Description) SE NW						Sec. 21	Twp 32N	Rng. 7W	County SJ
Distance and Direction From Nearest Town or Prominent Landmark 10 miles south of Ignacio, CO									
Date and Hour of Occurrence Unknown				Date and Hour of Discovery 2/23/95 @ 3:30 pm					
Was Immediate Notice Given?	Yes X	No	Not Required	If Yes, To Whom Ernie Busch - OCD					
By Whom Ed Hasely				Date and Hour 2/24/95 10:30 am					
Type of Fluid Lost Coal seam produced water (analysis attached)				Quantity 24000 BW (estimated)		Volume 0 BW Recovered			
Did Any Fluids Reach a Watercourse?			Yes X	No	Quantity Unknown				
If Yes, Describe Fully** The produced water traveled approx. 200 yds across Sagebrush flats then entered the Benito Canyon Wash. The wash was flowing at the time of discovery from natural runoff. Water samples taken at the time of discovery showed no indication of produced water downstream in the wash prior to entering the Navajo Reservoir.									
Describe Cause of Problem and Remedial Action Tanken** Internal corrosion of the 4" steel pipeline caused the leak. The section of line was cut out and replaced. Further actions are discussed on the attached sheet.									
Describe Area Affected and Cleanup Action Taken** The water spread out across a sagebrush flat (approx. 100 yds X 200 yds), then entered Benito Canyon Wash. None of the spilled water was recovered. Soil samples were taken, and will continue to be taken, to ensure no long term soil damage was incurred.									
Description of Area	Farming	Grazing	Urban	Other* Range Land					
Surface Conditions	Sandy	Sandy Loam	Clay	Rocky	Wet X	Dry	Snow		
Describe General Conditions Prevailing (Temperature, Precipitation, Etc.)** 55 degrees and sunny									
I Hereby Certify That the Information Above is True and Complete to the Best of My Knowledge and Belief.									
Signed			Ed Hasely	Title	Environmental Engineer		Date March 7, 1995		

*Specify

** Attach Additional Sheets if Necessary

STund223.WK3

ATTACHMENTS

- 1) Water Analysis of Spilled Water
- 2) Chain of Events Summary
- 3) Action Plan - Summary
- 4) Gas Volume/Line Pressure Graph
- 5) Water Volume Report
- 6) Summary of Water Analyses
- 7) Water Sample Locations Map
- 8) Summary of Soil Analyses
- 9) Soil Sample Locations Map

Client: Phillips Petroleum
Project: 32-7 W.G.S.
Sample ID: #1 C Leak
Laboratory ID: W02680
Sample Matrix: Water
Condition: Cool/Intact

At Leak

Date Reported: 02/25/95
Date Sampled: 02/23/95
Time Sampled: 1708
Date Received: 02/24/95

Parameter	Analytical			
	Result	Units	Units	
Lab pH.....	8.0	s.u.		
Lab Conductivity @ 25° C.....	10,200	umhos/cm		
Total Dissolved Solids (Calc).....	7,120	mg/L		
Total Alkalinity as CaCO ₃	6,210	mg/L		
Total Hardness as CaCO ₃	78	mg/L		
Bicarbonate as HCO ₃	7,580	mg/L	124.20	meq/L
Carbonate as CO ₃	0	mg/L	0.00	meq/L
Hydroxide as OH.....	0	mg/L	0.00	meq/L
Nitrate Nitrogen.....	0.14	mg/L	0.01	meq/L
Fluoride.....	<0.01	mg/L	<0.01	meq/L
Chloride.....	350	mg/L	9.86	meq/L
Sulfate.....	<1	mg/L	<0.01	meq/L
Calcium.....	12	mg/L	0.59	meq/L
Magnesium.....	12	mg/L	0.97	meq/L
Potassium.....	21	mg/L	0.53	meq/L
Sodium.....	3,000	mg/L	130.70	meq/L
Cations.....			132.78	meq/L
Anions.....			134.07	meq/L
Cation/Anion Difference.....			0.48	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 17th ed., 1989.

Comments:

Reported by mh

Reviewed by alt

32-7 Coal Seam Water Pipeline Leak
Chain of Events

2/23/95 - Thursday

- ~2:30 pm Onesimo Martinez (San Juan County) contacted Ray Tucker (PPCo Contractor) about possible leak. Ray inspected leak. Contacted Harry Dee (PPCo) at 2:45 pm.
- 3:30 pm Reported to PPCo office. Investigation by Willie Worley (PPCo), Tracy Konkel (PPCo) and Ray Tucker determined the leak was on PPCo's 32-7 Unit coal seam water line (# SJ 8-6).
- No estimate on volumes or how far leaked water traveled.
- Working to shut off source of leak.
- 5:00 pm Harry Dee collected water samples of leak, road crossing (3 4 mile down wash), below Well #238 (1 mile down wash) and background. Samples were collected prior to the leak being stopped.
- 7:30 pm All water pumps were shutdown on affected wells. A block valve was shut in at line intersection. Line was drained with a vacuum truck. Leak stopped.

2/24/94 - Friday

- 9:00 am Richard Allred, Bob Wirtanen & Ed Hasely (PPCo) inspected spill site. Could not visually determine how far the produced water traveled down Benito Canyon Wash. No visual indications that produced water entered Navajo Reservoir. Collected soil & and water samples.
- 10:30 am Reported to OCD - Ernie Busch. Volume-unknown. We were asked to let him know when more information is available.
- 10:50 am Reported to BLM - Shirley Davenport. Volume-unknown. She asked us to let her know when more information is available.
- 11:00 am Line Excavated. Leak identified. Section of pipe removed and inspected.
- 3:30 pm Review water production and disposal data. Estimate high of 24,000 bbls. Agreed the leak was capable of entering the reservoir, but it would be extremely diluted at that point.

3:40 pm Updated OCD (Johnny Robinson took information).

3:45 pm Contacted New Mexico Env. Department (NMED) - Santa Fe - they are to call back.

3:50 pm Updated BLM - Shirley Davenport. She said Ruben Sanchez went out to inspect spill area.

3:55 pm Reported to Natural Response Center (NRC). Dan Sammons - report 281108. Reported "produced water" capable of entering reservoir. He said report will show Zero (unknown). No questions on water quality.

4:15 pm NMED (Chica) left message. 505-827-4308. I called and talked with Michael LeScouarnec. He referred me to Surface Water - Nina Wells, 827-0572.

4:30 pm OCD called. Discussed spill with Frank Chavez, Roger Anderson, Ernie Busch & Johnny Robinson. Jim Taylor (PPCo Area Manager) participated in phone call.

OCD requested that PPCo set up a spill site visit for Saturday morning. Invite BLM, Bureau of Reclamation (BOR) and the Game and Fish.

4:45 pm Contacted BOR, Dick Gjere. Give report. Inform of meeting at LaBoca at 9:00 am Saturday. He did not know if they would attend.

Contacted Don Ellsworth (BLM). LaBoca at 9:00.

Contacted Game & Fish (Jimmy Misquez). Give report. Inform of meeting at LaBoca at 9 am. He did not know if anyone would attend.

5:00 pm Section of pipe replaced. Put back in service. Left pipe uncovered to verify pipe repair integrity.

6:40 pm Called NM Surface Water (Nina Wells). Left detailed message.

6:45 pm Called Johnny Robinson (OCD) at home. LaBoca at 9:00 am.

2/25/95 - Saturday

9:00 am Inspected spill site. Discussed water analyses from samples collected on 2/23/95.

Phillips

Jim Taylor
Richard Allred
Ed Hasely

Others

Don Ellsworth - BLM
Denny Foust - OCD
Johnny Robinson - OCD
Frank Chavez - OCD
Billy Larson - G & F
Jimmy Misquez - G & F

Collected 3 background water samples.
Visited with Jack Mackey (Landowner).

2/27/95 - Monday

8:10 am Called Nina Wells with State Surface Water - 827-0572
She wants all reports sent to:

Jim Piatt
Bureau Chief
Surface Water Quality Bureau
P.O. Box 26110
Santa Fe, NM 87502

8:30 am BOR (Judy Martin) called wanting directions. Meeting set up at 10:30.

10:30 am Ed Hasely met with BOR at spill site. Discussed water analyses from samples collected 2/23/95.

Judy Martin - BOR
Noreen O'Donnell - BOR

11:00 am Pipe re-buried.

1:30 pm Collected soil samples: (Ed Hasely)

Surface, 1 ft, 2 ft, and 5 ft.

3 test holes in affected area
1 test hole in background area.

Collected water samples: (Ed Hasely)

Spring, background wash, and draw near lake, lake (2).

3/3/95 - Friday

8:15 am

Al Lange (EPA-Denver) called. We discussed the quality of coal seam produced water and he felt nothing more needed done from the EPA's perspective. He would update the report concerning water quality.
Note: EPA Region VIII received the report from the NRC because the nearest town reported was Ignacio, Colorado.

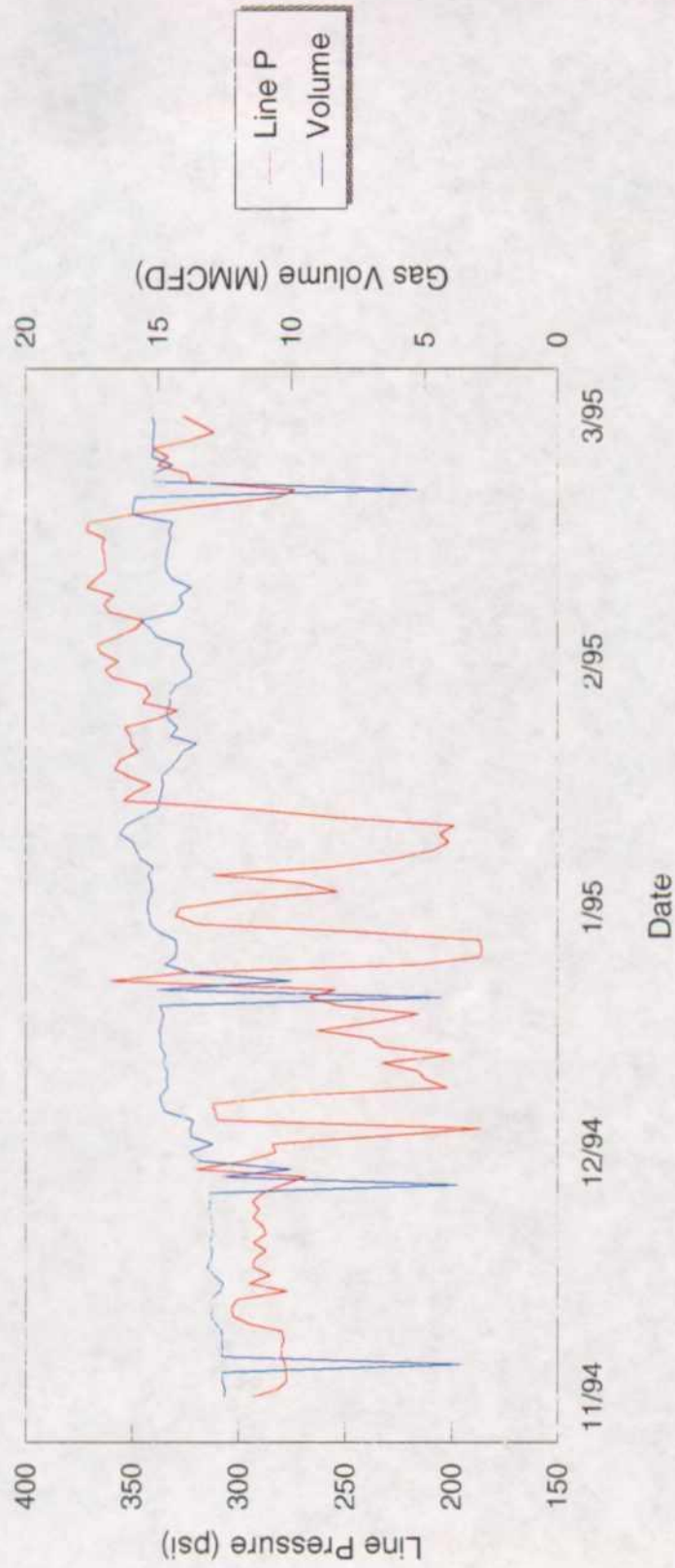
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ACTION PLAN

- 1). A scraper pig will be run through the line. Solids collected from scraping the line will be analyzed.
- 2). Phillips will re-pressure test segments of the water gathering lines in the 32-7 Unit.
- 3). Phillips will expose sections of the pipeline and run sonar scans to verify pipe thicknesses.
- 4). Additional check valves will be installed in the system to reduce the potential spill size if future leaks occur.
- 5). Phillips will install and monitor a pressure recorder approximately midway on the main trunk line.
- 6). The pipeline ROWs will be visually inspected annually.
- 7). Phillips is evaluating the installation of telemetry to monitor the SWD's daily injection volumes.

32-7 CPD

11/1/94-3/1/95



MONTHLY WATER VOLUMES
32-7 SWD

Month	Pumped from Wells (bbls)	Disposed at SWD (bbls)	Difference (bbls)	Difference (%)
6/94	36,559	31,556	5,000	14
7/94	31,543	24,620	6,923	22
8/94	32,349	27,651	4,698	15
9/94	43,861	33,791	10,070	23
10/94	37,845	29,851	7,994	21
11/94	31,082	26,997	4,085	13
12/94	32,404	27,022	5,382	17
1/95	32,202	16,910	15,296	47
2/95	25,819	14,143	11,676	45

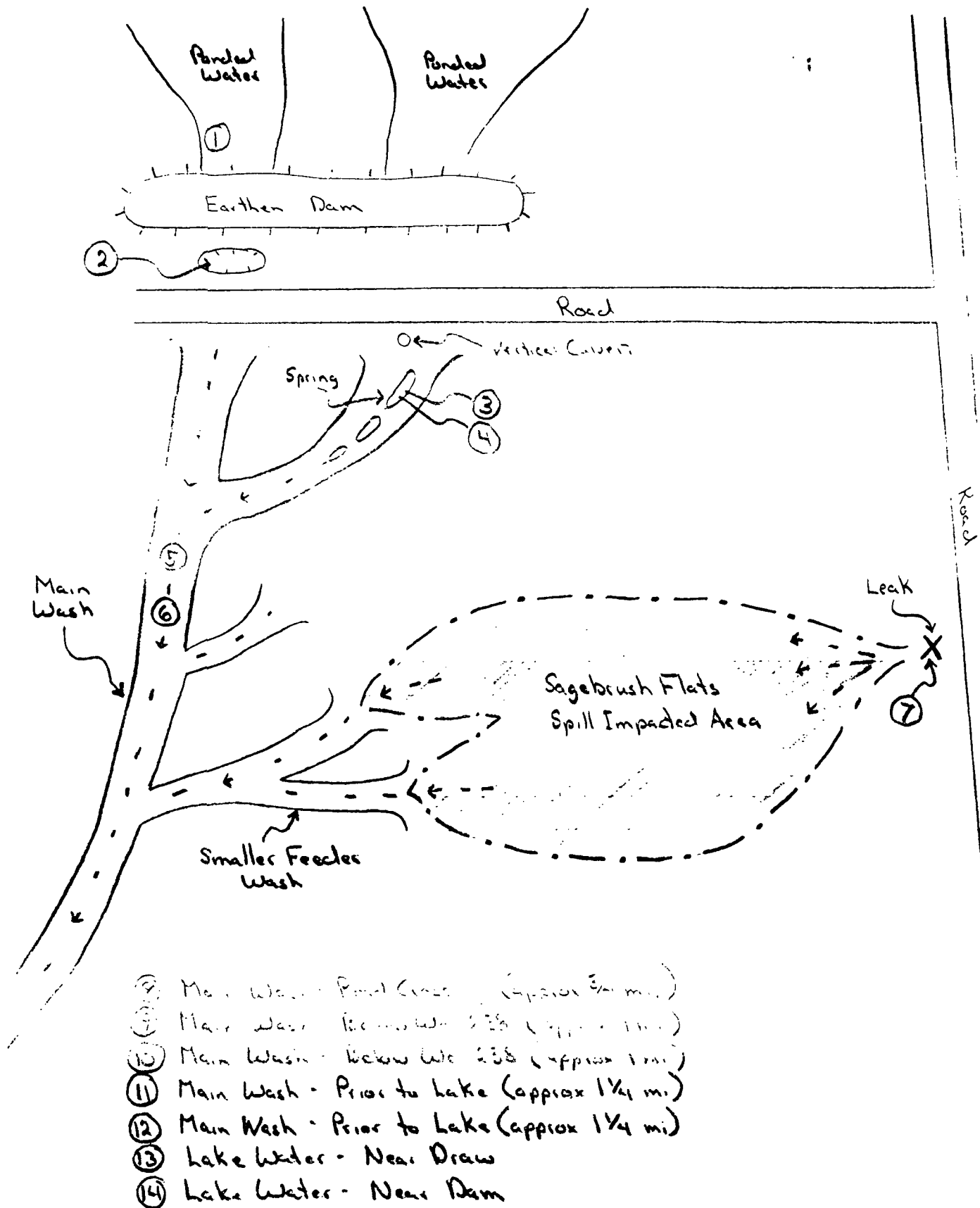
WATER ANALYSES
32-7 Water Pipeline Leak

Sample #		TDS (mg/L)	Bicarb (mg/L)	Sulfate (mg/L)	Sodium (mg/L)	Alkalinity (mg/L)	Cations (meq/L)
	Backgrounds						
1.	(2/25) Upper Pond	97	78	11	9.9	64	2
2.	(2/25) Lower Pond	201	176	10	41	144	4
3.	(2/23) Spring	2640	342	1300	644	280	39
4.	(2/27) Spring	3440	508	1710	841	416	52
5.	(2/25) Main Wash	5400	544	2750	1390	446	81
6.	(2/27) Main Wash	3800	486	1860	997	398	58
	Spilled Water						
NA	(2/93) Well #224	7080	5970	4.9	2920	5980	129
NA	(10/93) Well #238	6820	7380	1.6	2830	6160	126
7.	(2/23) Leak	7120	7580	4	3000	6210	133
	Downstream Water						
8.	(2/23) Road X-ing	276	254	17	96	208	5
9.	(2/23) Below #238	149	133	18	44	109	3
10.	(2/24) Below #238	198	159	35	51	130	4
11.	(2/24) Before Lake	759	305	340	96	250	13
12.	(2/27) Before Lake	878	339	387	99	278	14
	Lake Water						
13.	(2/27) Lake at Draw	125	106	22	14	87	2
14.	(2/27) Lake at Dam	129	92	35	12	75	2

Note: Samples #3, #7, #8 and #9 were collected prior to the water leak being stopped.

LEH
3/6/95

Water Sample Locations · 32-7 Water Leak



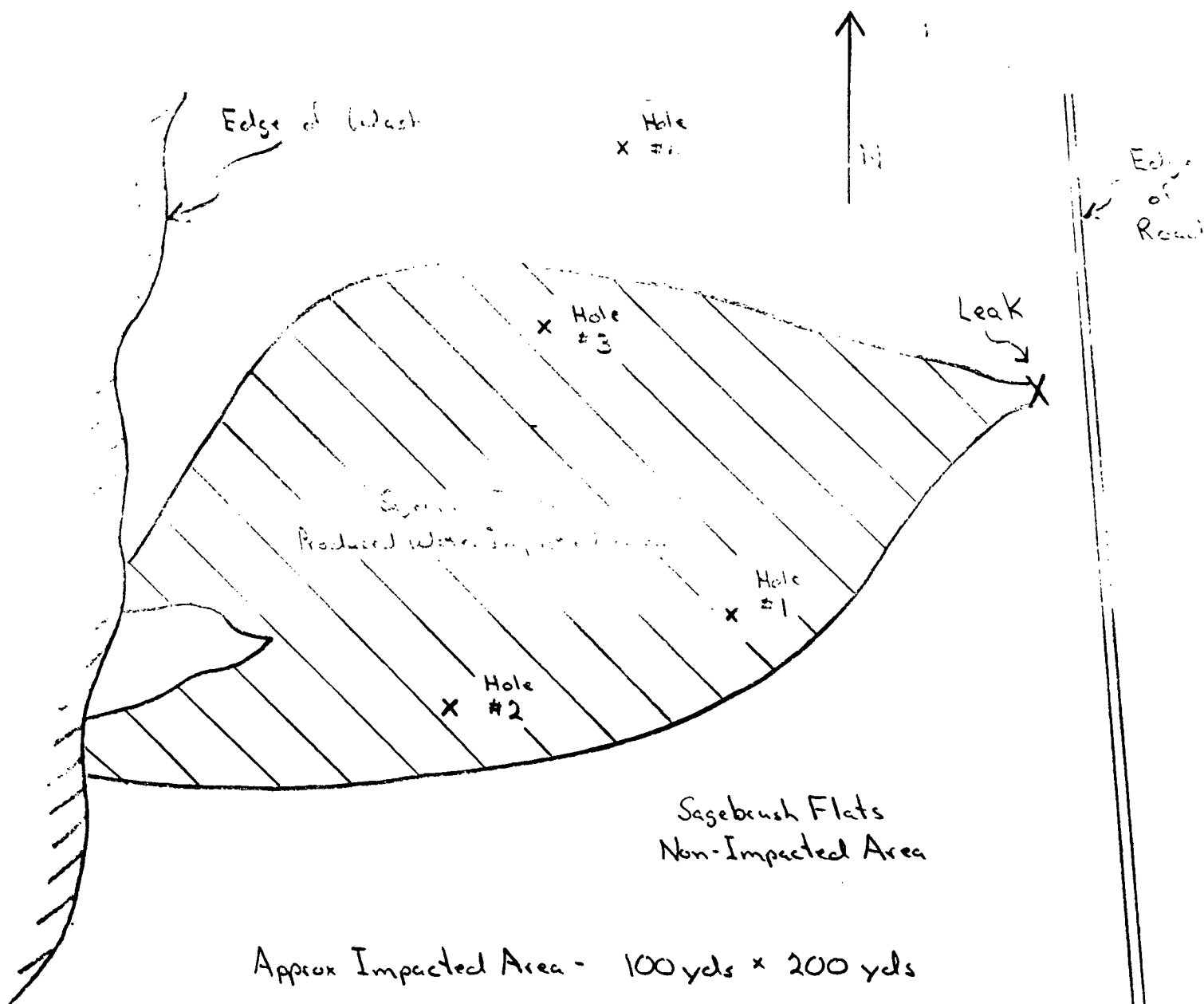
SOIL ANALYSES
32-7 Water Pipeline Leak

TEST HOLE	SAMPLE DEPTH	ELECTRICAL CONDUCTIVITY (mmhos/cm)	EXCHANGEABLE SODIUM % (ESP)	pH
#1	Surface	6.14	85.8	9.7
#2	Surface	3.83	0.8	9.8
#3	Surface	5.12	101.0	9.8
#4	Surface	0.26	1.0	6.7
#1	One Foot	1.18	12.7	8.1
#2	One Foot	0.69	15.0	8.4
#3	One Foot	0.65	2.1	8.0
#4	One Foot	0.31	1.9	7.3
#1	Two Feet	0.69	4.3	7.8
#2	Two Feet	0.57	7.0	8.2
#3	Two Feet	0.74	3.3	7.9
#4	Two Feet	0.35	1.5	7.7
#1	Five Feet	2.50	10.0	7.7
#2	Five Feet	1.04	14.6	8.5
#3	Five Feet	1.89	11.6	8.1
#4	Five Feet	0.56	3.3	8.0

Note: Test Holes #1, #2, and #3 were in spill impacted areas in the sagebrush flats. Test Hole #4 was in a non-impacted area. All samples were collected on 2/27/95.

LEH
3/6/95

Soil Sample Locations - 32-7 Water Leak



Approx Impacted Area - 100 yds x 200 yds

SE NW Section 2 - T32N - R7W