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GENERAL CORRESPONDENCE

YEAR(S):

1980

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87503
(505) 827-5271
Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

MEMORANDUM

October 28, 1980

TO: Mr. Joe D. Ramey, Director, Oil Conservation Division

FROM: David G. Boyer, Geohydrologist, Water Pollution Control Bureau

SUBJECT: OIL FIELD BRINE CONTAMINATION

Enclosed for your information are copies of recent correspondence regarding a brine contamination incident in the Tatum-Bronco area.

Enclosures

DGB/js

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October 28, 1980

Ms. Judy Howard, Legal Intern
NATIONAL WILDLIFE FEDERATION
National Resource Clinic
Fleming Law Building
Boulder, Colorado 80309

Dear Ms. Howard:

Your letter of October 14, 1980 to Dr. George Goldstein regarding instances of brine contamination that were reported in the New Mexico Surface Impoundment Assessment (SIA) has been referred to me for reply. A search of the Environmental Improvement Division (EID) files plus communication with other State agencies has produced the information you requested.

The source of the information on Mr. Robert Field's well was a 1973 report on brine contamination prepared by EID staff and entitled "Report to the Water Quality Control Commission on Brine and Phenolic Contamination of Domestic Wells in Lea County". This report was included as Appendix G of the SIA study, which had been previously sent to your office. Other sections of the SIA report which discuss current brine disposal practices and abandoned brine impoundments include pages 7-11 through 7-12, and Appendix F.

A search of our files and communication with the New Mexico Water Resources Division's Roswell District Office located the map showing the placement of observation wells that were drilled on Mr. Field's property to determine the extent of the brine contamination. Information on water quality at each of the wells is also shown on the map. Attached are a copy of this map, and to assist in site location, a copy of a 7-1/2 minute U.S.G.S. topographic map showing the area.

As discussed on pages 1 and 5 of the 1973 brine contamination report, surface disposal of oil field brines has been generally prohibited in New Mexico since 1969, but continuing pollution from earlier disposal practices remains highly probable. Development of a long-term strategy for identification and clean-up of the Lea County area affected by these past practices as recommended in the brine report was not undertaken either by the EID or jointly by the EID with other State agencies. Given the estimated number of abandoned pits (approximately 2,000), development and implementation of a rehabilitation methodology would be costly and require large-scale funding that is not currently available.

The above information represents the extent of EID knowledge of oil field brine contamination problems experienced by Mr. Field. By State Statute (New Mexico Oil and Gas Act, 70-2-1 through 70-2-38, NMSA, 1978), the Oil Conservation Division of the Energy and Minerals Department is responsible for activities, including disposal of brines, related to oil and gas production. If you have further questions regarding these oil and gas activities, please refer them to the Oil Conservation Division, Mr. Joe D. Ramey, Director.

Sincerely,

David G. Boyer

DAVID G. BOYER
Water Resource Specialist
Ground Water Section
Water Pollution Control Bureau

DGB/js

Enclosures

cc: Dr. George S. Goldstein, Secretary for Health and Environment (w/o Enc)
Mr. Joe D. Ramey, Director, Oil Conservation Division, Energy and Minerals Department (w/Enc)
Mr. J. Wright, New Mexico Water Resources Division, Natural Resources Department, Roswell District Office (w/o Enc)

17

S W 1/4

S E 1/4

WINDMILL
CL-491
SC-1975

19
CL-86
SC-847
TB-53'

18
CL-87
SC-880
TB 53'

15
CL-496
SC-2034
TB-49'

11
CL-1120
SC-4396
TB-52'

17
CL-3330
SC-10643
TB-52'

13
CL-232
SC-1276
TB-49'

12
CL-3230
SC-10316
TB-52'

16
CL-2760
SC-9516
TB-52'

9
CL-4600
SC-14350
TB-49'

6
CL-144
SC-1465
TB-45'

7
CL-9020
SC-25810
TB-49'

28
CL-92
SC-917
TB-40'

29
CL-3280
SC-9610
TB 44'

27
CL-4290
SC-12736
TB-44'

26
CL-12610
SC-3344
TB-43'

21
CL-18250
SC-46031
TB-44'

14
CL-105
SC-989
TB-49'

10
CL-229
SC-1298
TB 51'

20
CL-5060
SC-14562
TB-47'

3 33' 50'
CL-2510 3210
SC-7609 9508
TB-47'

22
CL-535
SC-2313
TB-42'

1
CL-3020
SC-9168
TB-46'

WINDMILL
CL-5210
SC-14,411
2/9/77

48' 2 30'
7140 CL-6740
18800 SC-18700
TB-46'

23
CL-95
SC-977
TB-53'

B 4 A
2130 CL-2150
7548 SC-6770
TB-48'

8
CL-203
SC-1327
TB-48'

5
CL-126
SC-1156
TB-49'

25
CL-960
SC-3495
TB-48'

24
CL-75
SC-828
TB-54'

ASSUMED 1/4 CORNER OF SECTIONS 17 & 20

CL = CHLORIDE P.P.M.
SC = SPECIFIC CONDUCTANCE, 25°C
TB = TOP OF RED BED TAKEN FROM WELL LOG
● NO. 4" ROTARY DRILLED HOLE
WATER SAMPLES BY BAILER - TAKEN BY R.K. FIELD
ANALYSIS BY STATE ENGINEER'S OFFICE
OIL SEPARATER PAD AND FILLED IN PIT AREA
SCALE 1" = 200'

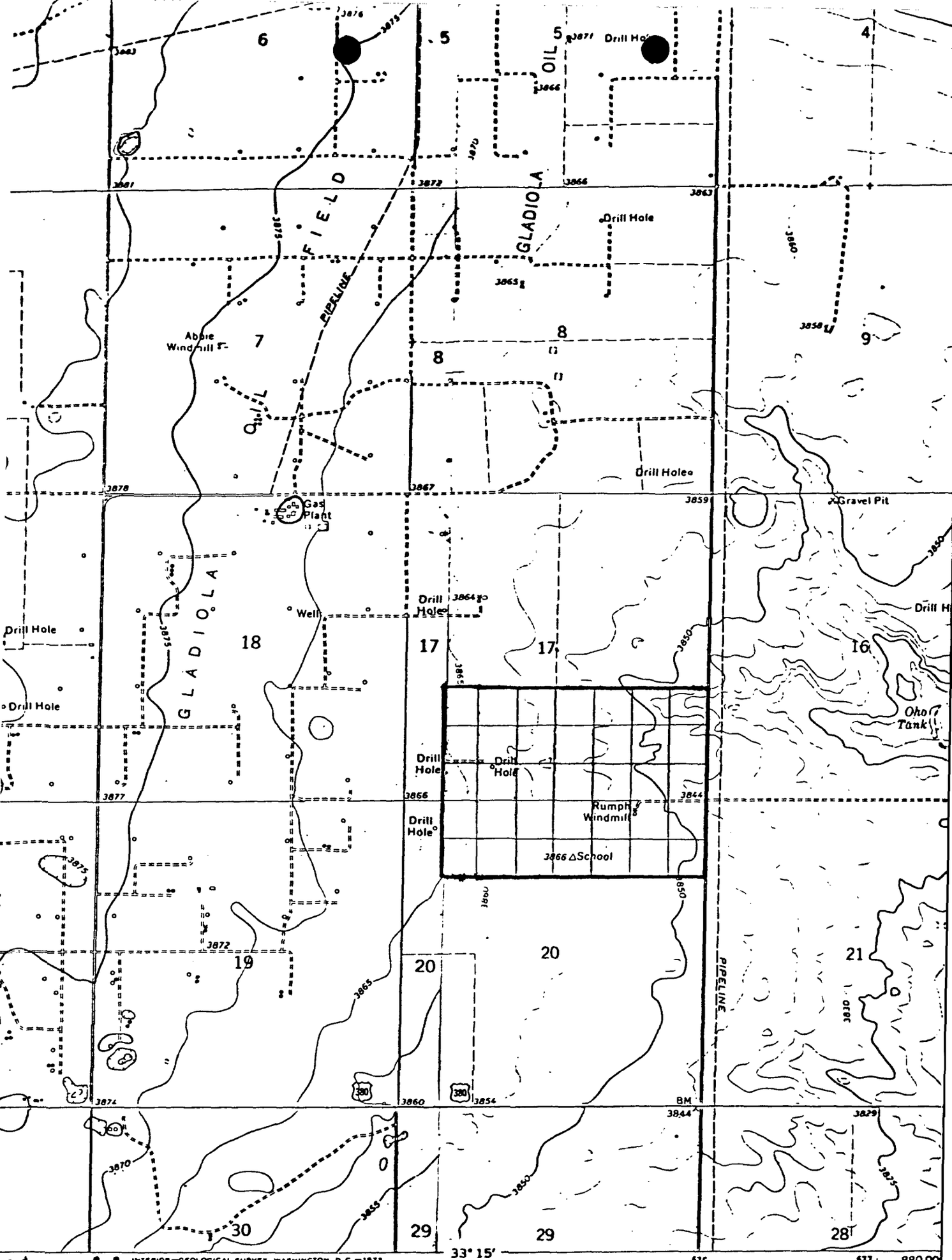
plane table by - Barry, Wright, Grosclose, Urbina, Field
5-15-72

TOWNSHIP 12 SOUTH RANGE 38 EAST LEA COUNTY, N.M.
sections 17 & 20

N W 1/4

N E 1/4

20



INTERIOR—GEOLOGICAL SURVEY WASHINGTON, D. C.—1972

T. 12 S., R. 37 E. R. 38 E. 674000m E. 103° 07' 30" 676 677 880 000

33° 15'

ROAD CLASSIFICATION

Primary highway, all weather, hard surface

Secondary highway, all weather, hard surface

Light-duty road, all weather, improved surface

Unimproved road, fair or dry weather

U. S. Route

State Route

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Planimetry by photogrammetric methods from aerial photographs taken 1968. Topography by planetable surveys 1970

Polyconic projection. 1927 North American datum

10,000-foot grids based on New Mexico coordinate system, east zone, and Texas coordinate system, north central zone

1000-meter Universal Transverse Mercator grid ticks,

NEW MEXICO

QUADRANGLE LOCATION

GLADIOLA, N. MEX.

N3315—W10307.5/7.5

1970

AMS 5350 I SW—SERIES V881

BRONCO, N. MEX.—TEX.

N3315—W10300/7.5

1970

AMS 5350 I SE—SERIES V881

UTM

NATIONAL WILDLIFE FEDERATION

1412 Sixteenth Street, N.W., Washington, D.C. 20036 202—797-6800

ROBERT J. GOLTEN
COUNSEL

NATURAL RESOURCE CLINIC
FLEMING LAW BUILDING
BOULDER, COLORADO 80309

LUKE DANIELSON
COUNSEL

October 14, 1980

George S. Goldstein, Secretary
Department of Health and Environment
State of New Mexico
Post Office Box 968
Santa Fe, New Mexico 87503

Dear Mr. Goldstein:

I am interested in receiving the results of any tests which your department has conducted on the brine levels of Robert Field's wells. I found Mr. Field's name in the New Mexico Surface Impoundment Assessment of February, 1980. The assessment was a report to the U.S. Environmental Protection Agency under EPA grant F-006213-01-0, and was prepared by David G. Boyer, Dennis McQuillan, and Maxine S. Goad. On page 6-9 of the assessment, at the top of the page, Robert Field is identified as the owner of a suspected contaminated well. I have since spoken with Mr. Field, and he informed me that the Water Pollution Control Bureau of the New Mexico Environmental Improvement Division of your Department had conducted tests on the brine content of his well water. I request the results of those tests, as well as any information you may have about the tests, on behalf of the New Mexico Chapter of the National Wildlife Federation and pursuant to N.M.S.A. section 14-2-1 (1978).

Thank you very much.

Very truly yours,

Judy Howard

Judy Howard, Legal Intern

JH:ejr