

SUBJECT: SALTWATER DISPOSAL WELL

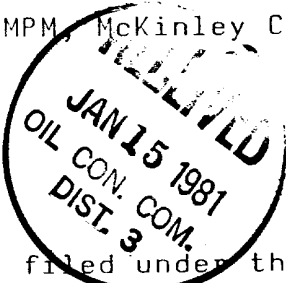
THE APPLICATION OF CITIES SERVICE
COMPANY FOR A SALT WATER DISPOSAL WELL

ORDER NO. SWD-233

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701 (C), Cities Service Company made application to the New Mexico Oil Conservation Division on December 15, 1980, for permission to complete for salt water disposal its Federal "E" No. 3 ~~SWD~~ located in Unit A of Section 28, Township 19 North, Range 5 West, NMPM, McKinley County, New Mexico.

The Division Director finds:

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- (1) That application has been duly filed under the provisions of Rule 701 (C) of the Division's Rules and Regulations;
 - (2) That satisfactory information has been provided that all offset operators and surface owners have been duly notified; and
 - (3) That the applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 (C) will be met.
 - (4) That no objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED:

That the applicant herein, Cities Service Company, is hereby authorized to complete its Federal "E" No. 3 SWD located in Unit A of Section 28, Township 19 North, Range 5 West, NMPM, McKinley County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the Gallup Sandstone formation at approximately 2900 feet to approximately 3100 feet through 3 1/2 inch plastic lined tubing set in a packer located at approximately 2850 feet.

IT IS FURTHER ORDERED:

That the operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

That the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

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That injection pressure shall not exceed 580 pounds per square inch as measured at the surface.

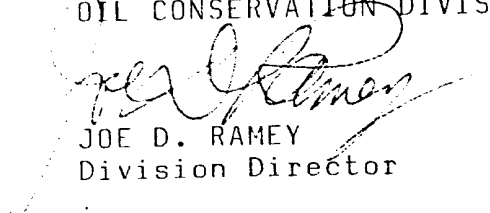
That the operator shall notify the supervisor of the Division's Aztec District Office before injection is commenced through said well;

That the operator shall immediately notify the Supervisor of the Division's Aztec District Office of the failure of the tubing, casing, or packer in said well or the leakage of water from or around said well and shall take such steps as may be timely or necessary to correct such failure or leakage.

PROVIDED FURTHER: That jurisdiction of this cause is hereby retained by the Division for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after notice and hearing, the Division may terminate the authority hereby granted in the interest of conservation. That applicant shall submit monthly reports of the disposal operations in accordance with Rule 704 and 1120 of the Division's Rules and Regulations.

APPROVED at Santa Fe, New Mexico, on this 9th day of January, 1981.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


JOE D. RAMEY
Division Director

S E A L

OIL CONSERVATION COMMISSION
Cyte DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE Dec. 19, 1980

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD 2 _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated Dec. 15, 1980
for the Citis Service Co. Trubal E #3 H-28-19-5
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve. Attached copies of water studies show that
waters are comparable and unfit.

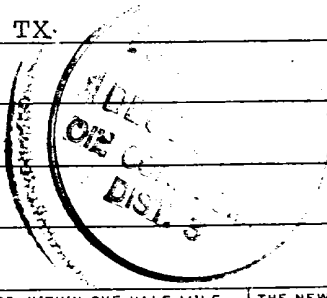
Yours very truly,

Frank J. Lang

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Cities Service Company		ADDRESS Box 1919, Midland, TX 79702	
LEASE NAME FEDERAL "E"	WELL NO. 3 SWD	FIELD Undesignated	COUNTY McKinley
LOCATION UNIT LETTER A ; WELL IS LOCATED 330 FEET FROM THE North LINE AND 330 FEET FROM THE East LINE, SECTION 28 TOWNSHIP 19N RANGE 5W NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	9-5/8"	200'	110	Surface	Circulated
INTERMEDIATE					
LONG STRING	7"	3100'	700	Surface	Circulated
TUBING	3 1/2"	2900'	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Lok-Set @ 2850'		
NAME OF PROPOSED INJECTION FORMATION Gallup Sandstone			TOP OF FORMATION 2900'		BOTTOM OF FORMATION 3100'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES? Perforations	PROPOSED INTERVAL(S) OF INJECTION 2900-3100'		
IS THIS A NEW WELL DRILLED FOR DISPOSAL? Yes	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?			HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH NONE					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 150' Est.		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA NONE		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 5100'	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 500	MINIMUM 500	MAXIMUM 7500	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 750
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF No	NATURAL WATER IN DISPOSAL ZONE No	ARE WATER ANALYSES ATTACHED? Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Federal Land - U.S.G.S. in Farmington, New Mexico					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Cities Service Company - Box 1919, Midland, TX.					
					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER No		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL N/A		THE NEW MEXICO STATE ENGINEER No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA Yes		ELECTRICAL LOG Not Drilled		DIAGRAMMATIC SKETCH OF WELL Yes

I hereby certify that the information above is true and complete to the best of my knowledge and belief.



(Signature)

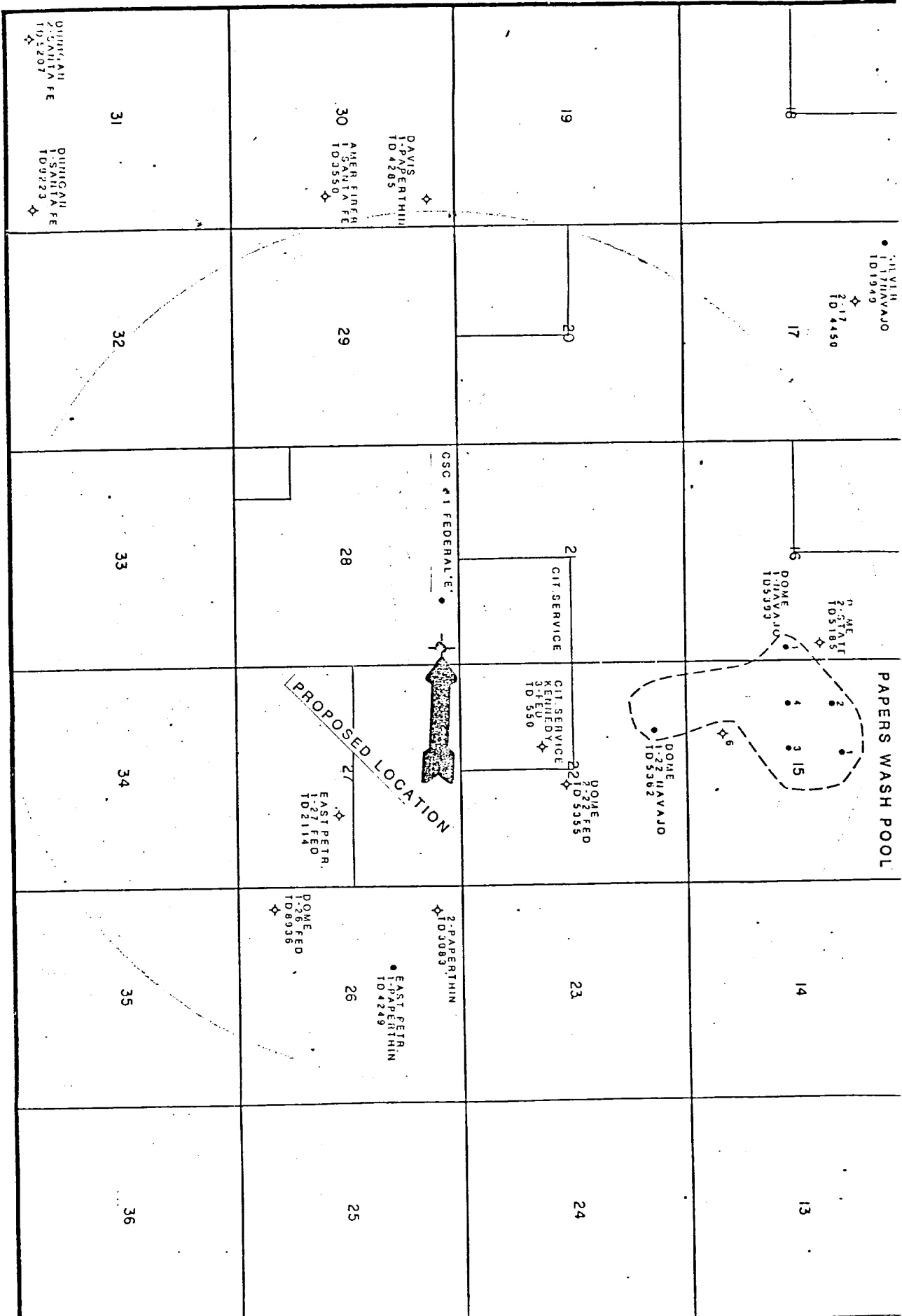
Region Operations Manager
(Title)

12/10/80
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

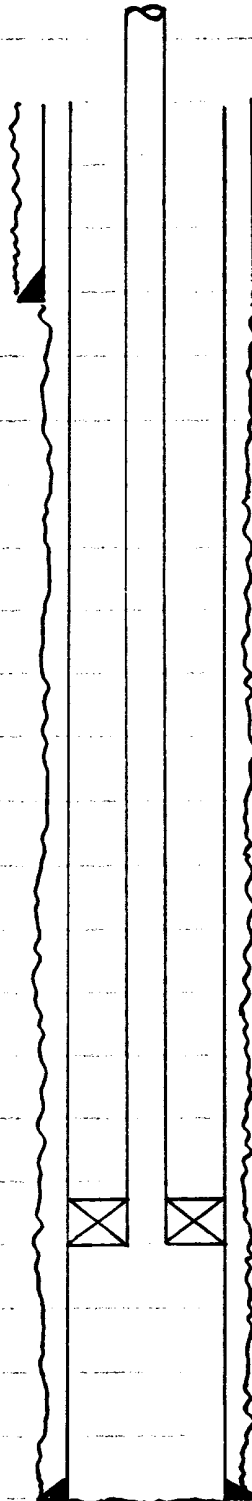
T. 19 N.



R. 5 W.

Cities Service Company's
FEDERAL "E" No. 3 SWD
330' FNL & 330' FEL
Section 28-19N-5W
McKinley County, New Mexico
Lease No. NT-6999

CITIES SERVICE COMPANY
FEDERAL E #3 SWD
330' FNL AND 330' FEL
SEC 28-T19N-R5W
McKINLEY COUNTY, NEW MEXICO



9⁵/₈" 32.3# H-40 @ 200'
CEMENT CIRC.

3¹/₂" 9.3# J55 EUE TUBING @ 2050'
w/BAKER LOCK SET PKR. @ 2050'

GALLUP S.S. PERF'S 2900'-3100'

7" 20# K55 @ 3100'

TD 3100'

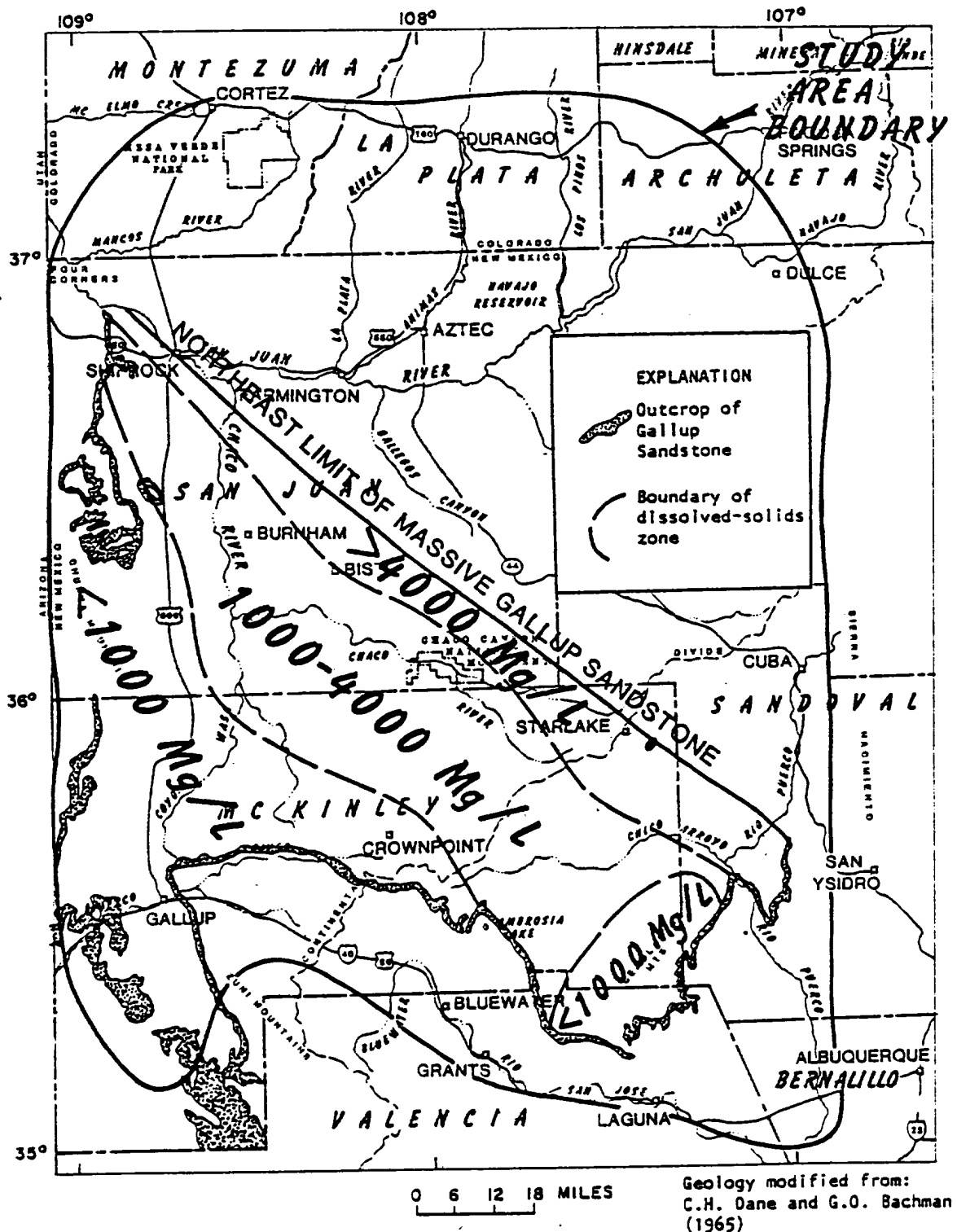


Figure 7.--Dissolved-solids concentration in the Gallup Sandstone of the Mesaverde Group.

This is from a paper by Lyford and others that is presently in colleague review and will eventually be printed in New Mexico Bur of Mines "Hydrologic Report 67"

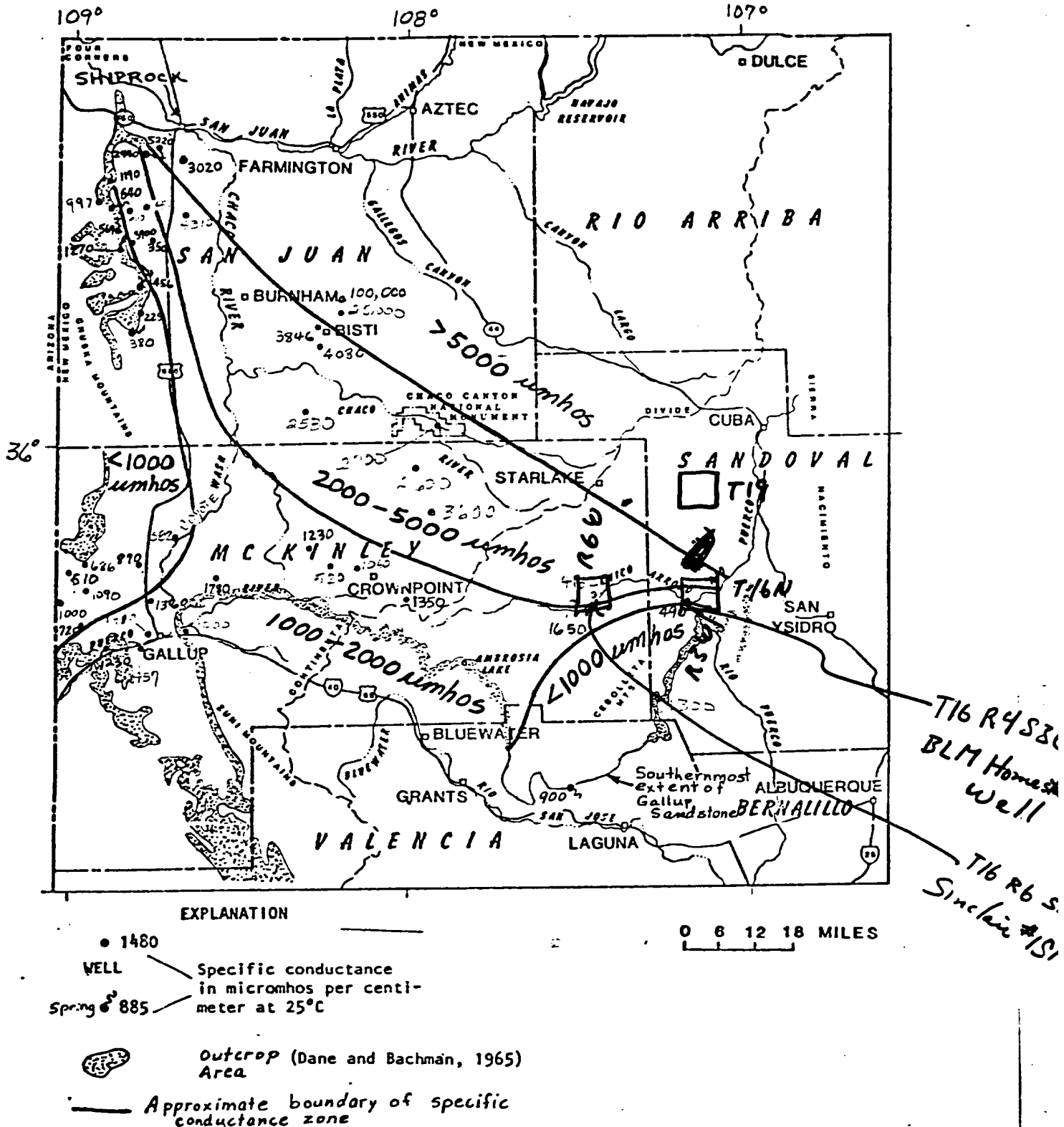


Figure 19.--Specific conductance of water from wells and springs in the Gallup Sandstone