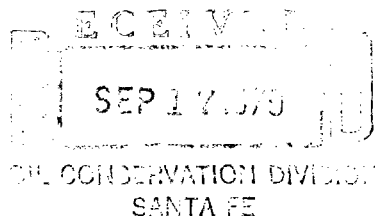


J. GREGORY MERRION  
PETROLEUM ENGINEER  
P. O. BOX 507  
FARMINGTON, NEW MEXICO 87401

September 11, 1979

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
1000 Rio Brazos  
Aztec, NM 87410



Gentlemen:


Enclosed please find our application for approval of salt water disposal into the subsurface reflecting a change of plans.

We propose to change the injection zone from the Gallup to the Cliffhouse Mesa Verde at 2490-2520 feet. Cement will be squeezed across this zone as instructed by the District Engineer.

If further information is required, please advise.

Yours truly,

MERRION & BAYLESS

  
STEVEN S. DUNN

SSD/pb

Enclosure



\*\*\*CHANGE OF PLANS\*\*\*

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

Form C-108

Revised 11-65

SEP 17 1979

OPERATOR <b>J. Gregory Merrion and Robert L. Bayless</b>		ADDRESS <b>P.O. Box 507, Farmington, NM 87401</b>	
LEASE NAME <b>Navajo H</b>	WELL NO. <b>13</b>	FIELD <b>Totah Gallup</b>	COUNTY <b>San Juan</b>
LOCATION UNIT LETTER <b>K</b> ; WELL IS LOCATED <b>1830</b> FEET FROM THE <b>South</b> LINE AND <b>1830</b> FEET FROM THE <b>West</b> LINE, SECTION <b>13</b> TOWNSHIP <b>29N</b> RANGE <b>14W</b> NMPM.			

CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8-5/8	204'	180	Surface	Circulated
INTERMEDIATE	none				
LONG STRING	4-1/2	5138	200	4140	Calculated
TUBING	2-3/8		NAME, MODEL AND DEPTH OF TUBING PACKER <b>Baker model A Tension Packer</b>		
NAME OF PROPOSED INJECTION FORMATION <b>Cliffhouse</b>			TOP OF FORMATION <b>2490</b>		BOTTOM OF FORMATION <b>2520</b>
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>Plastic lined tubing</b>		PERFORATIONS OR OPEN HOLES? <b>Perforations</b>	PROPOSED INTERVAL(S) OF INJECTION <b>2490-2520</b>		
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Gallup Oil Production</b>				HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>Gallup 4990-4997</b>
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>Surface Alluvium - 100'</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>Pictured Cliffs - 1100'</b>		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>Pt. Lookout - 3650'</b>	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) <b>50</b>	MINIMUM <b>500</b>	MAXIMUM <b>500</b>	OPEN OR CLOSED TYPE SYSTEM <b>Closed</b>	IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>As required</b>	APPROX. PRESSURE (PSI) <b>less than 500</b>
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 - <b>Yes</b>			WATER TO BE DISPOSED OF <b>Yes</b>	NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	ARE WATER ANALYSES ATTACHED? <b>No</b>
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Navajo Tribe, Window Rock, Arizona, ATTN: Minerals Supervisor</b>					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>J. Gregory Merrion and Robert L. Bayless are only operators within 1/2 mile of this injection well (see Location Map). Other information: Water to be injected is produced from the Pictured Cliffs and Mesa Verde Formations.</b>					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? <b>Yes</b>					
SURFACE OWNER <b>Yes</b>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>		THE NEW MEXICO STATE ENGINEER <b>Yes</b>	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) <b>Yes</b>		ELECTRICAL LOG <b>Yes</b>		DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>	

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

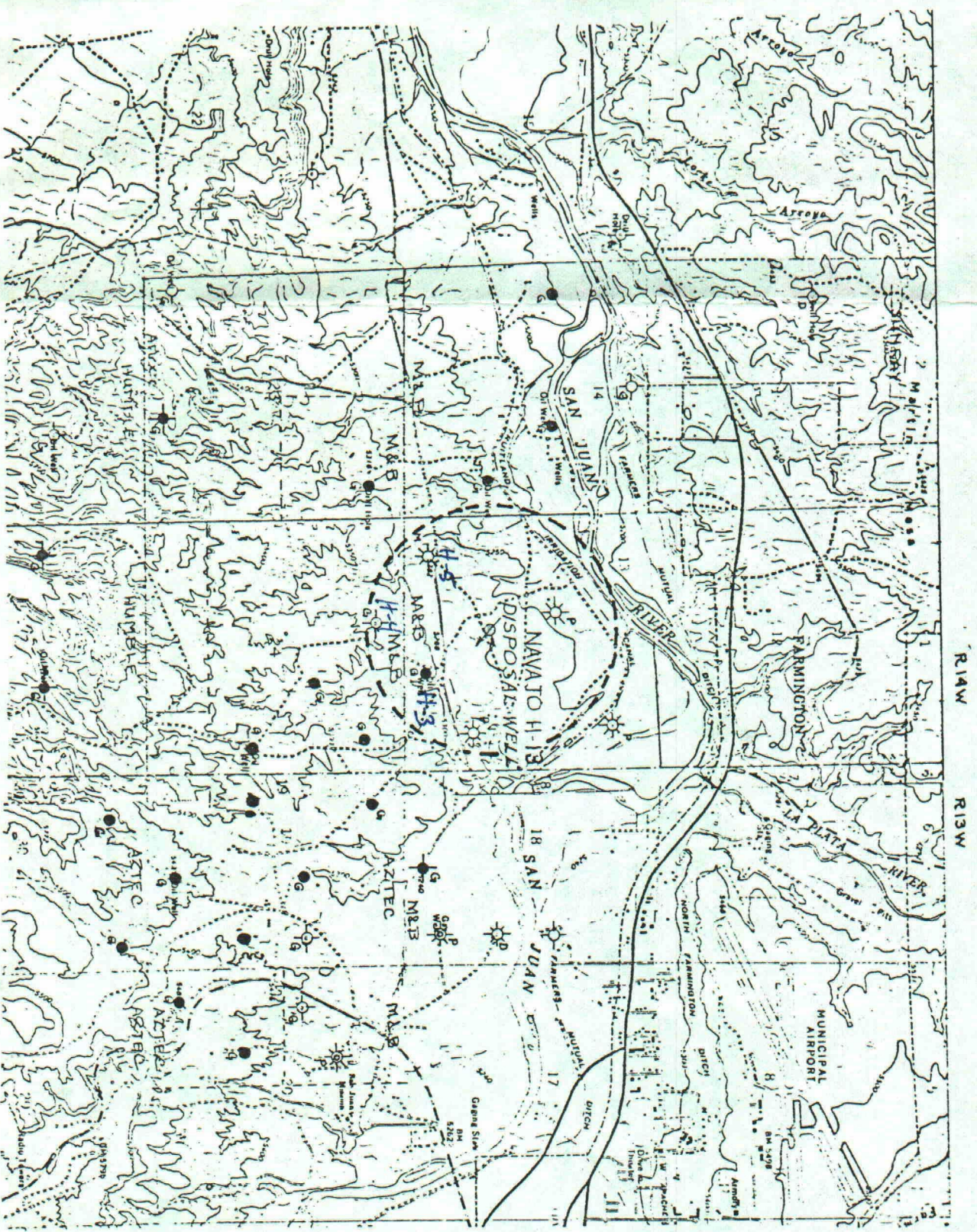
(Signature)

ENGINEER  
(Title)

(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.





R14W R13W

LEGEND

- ⊕ DRY HOLE OR ABANDONED
- GALLUP PRODUCER
- ☼ PICTURE CLIFF PRODUCER
- ☼ DAKOTA PRODUCER

T 29 N

MERRION & BAYLESS

1" = 1/2 MILE	9/27/78	BY: SSD
---------------	---------	---------

LOCATION MAP

PROPOSED SALT WATER  
DISPOSAL WELL  
SAN JUAN COUNTY



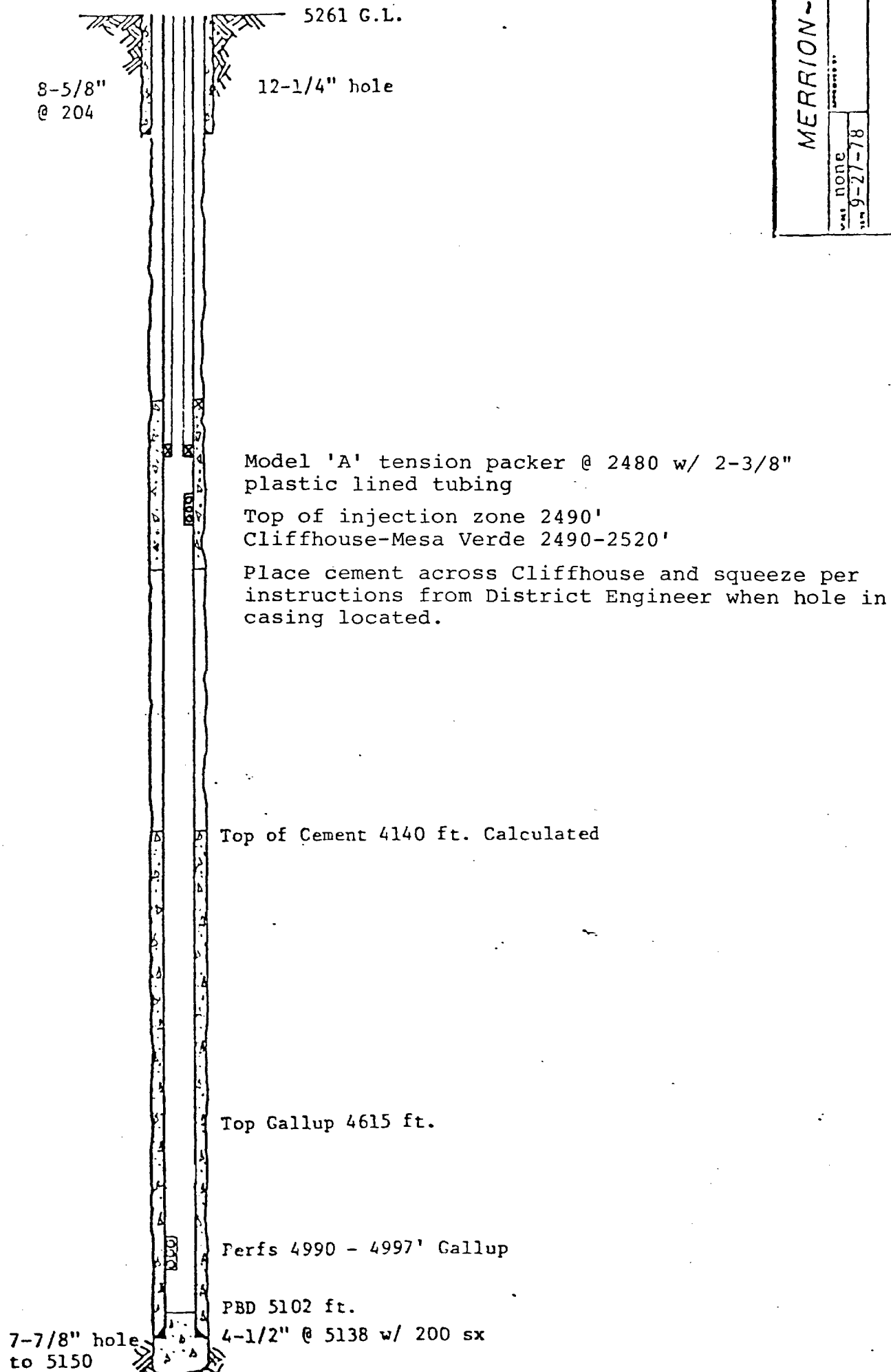
NAVAJO H-13  
1830 FSL & 1830 FWL  
Sec. 13, T19N, R14W  
San Juan County

MERRION-BAYLESS

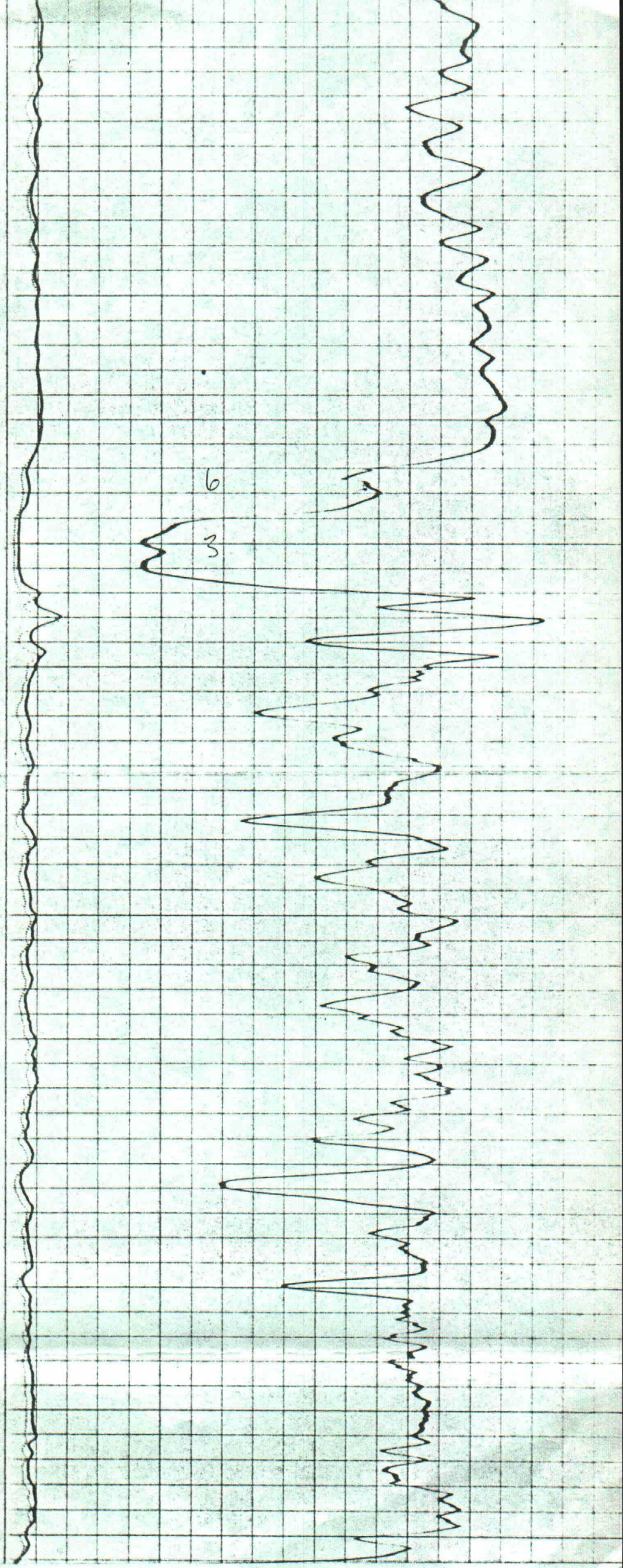
DATE NONE  
WELL NO. 9-2/-78

Wellbore Diagram

Salt Water Disposal

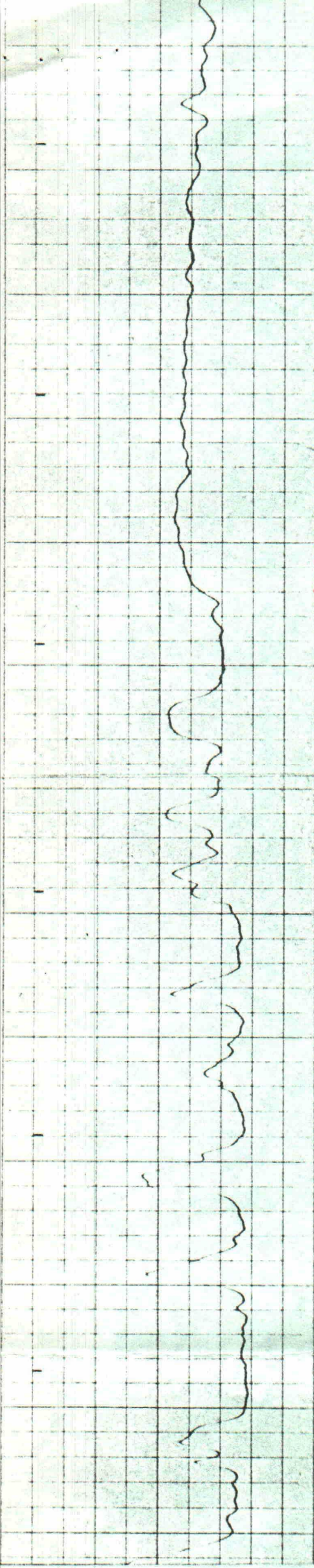






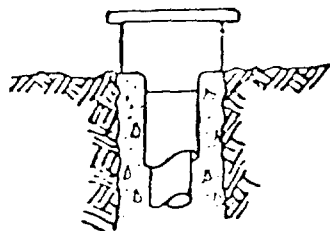
2300      2400      2500      2600      2700      2800      2900

00000

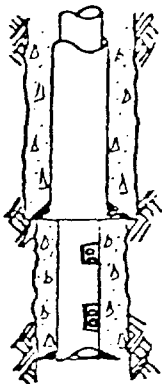




NAVAJO H-4  
510 FNL & 2130 FWL  
Section 24, T29N, R14W  
San Juan County



Elevation 5347' G.R.

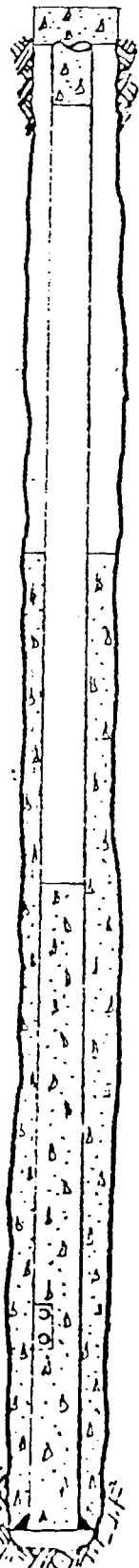


8-5/8" @ 209' w/ 175 sx  
Perfs 842-82

Perfs 982-92

Re-ran 4-1/2" casing @ 1119' KB w/250 sx

Cut 4-1/2" @ 1632 Spotted 30 sx  
plug 1682-1582



OK

=Top of Cement 3817' calculated

Top of cement calculated 4810'

Top of Gallup 4681'

Old Perfs squeezed off 5048-5056'

4-1/2" @ 5156 ft.

MERRION~BAYLESS

APPROVED BY:

SCALE: None

DATE: 9-27-78

DRAWN BY: SSD

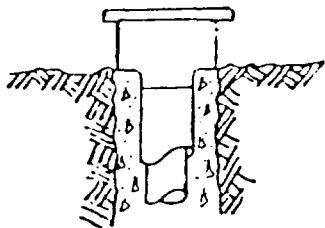
REVISED

Wellbore Schematic

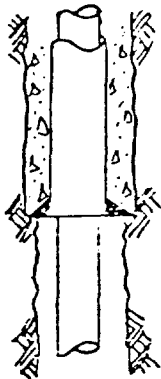
DRAWING NUMBER

Navajo II Lease

NAVAJO H-3  
510 FSL & 1980 FEL  
O-Sec. 13, T29N, R14W  
San Juan Co., New Mexico



Elevation 5327 KB



8-5/8" - 20 lb/ft @ 206 ft. w/ 160 sx



*Must be plugged @  
injection interval*

Top of cement 4175 ft. calculated

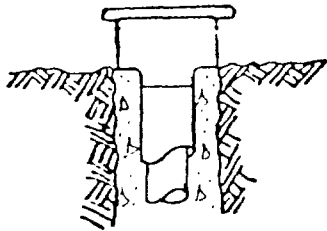
Perf 5052-5060 ft.

4-1/2" @ 5147' w/ 200 sx  
TD @ 5150'

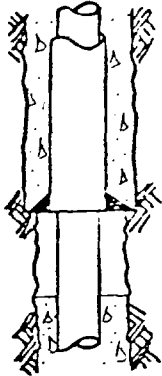
MERRION~BAYLESS

SCALE: none	APPROVED BY:	DRAWN BY: SSD
DATE: 9-27-78		REVISED
Wellbore Schematic		
Navajo II Lease		
DRAWING NUMBER		

NAVAJO H-5  
705 FSL & 660 FWL  
M-Sec. 13, T29N, R14W  
San Juan County



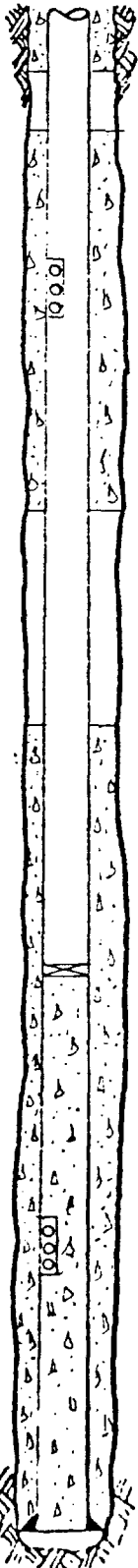
Elevation 5278 G.L.



8-5/8" @ 191 ft w/ 190 sx

Top cement @ 2400

*must be plugged higher*



Squeeze corrosion w/ 270 sx @ 2810'

Top cement @ 2872

Mesa Verde perfs 3355-65'

Stage collar @ 3742 Cement w/ 250 sx

Top cement @ 4166

Retainer 4868 on plug back

Old Gallup perfs 4979-86' squeezed w/ 50 sx

4-1/2" @ 5081' w/ 450 sx

MERRION~BAYLESS

SCALE: None	APPROVED BY:	DRAWN BY SSD
DATE: 9-27-78		REVISED

Wellbore Schematic

Navajo H - 5	DRAWING NUMBER
--------------	----------------