

# PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING  
DENVER, COLORADO 80202

November 9, 1967

File: AMR-2408-986.510.1

Re: Application of Pan American  
Petroleum Corporation for  
Permission to Convert Additional  
Wells to Water Injection  
Southeast Cha Cha Unit  
Cha Cha Gallup Pool  
San Juan County, New Mexico

Mr. A. L. Porter, Jr.  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

137 1137 18 1110 11

Dear Sir:

Pursuant to the provisions of Rule 11 of NMOCC Order R-2214, dated April 18, 1962, Pan American Petroleum Corporation respectfully makes application for permission to convert Southeast Cha Cha Unit Wells Nos. 9 and 30 from producers to water injection wells. These wells are more specifically located as follows:

Southeast Cha Cha Unit Well No. 9 SE/4 SW/4 Sec. 9, T28N-R13W  
30 SE/4 SE/4 Sec. 15, T28N-R13W

In both cases a bridge plug will be set above the "lower" or "A" zone. This will also be done on all present injection wells. Also, former injection wells Nos. 16 and 22, which were approved by previous order, will be returned to injection service in a similar manner.

Attached is a map of the Southeast Cha Cha Unit Area showing the location of all of the wells within the Unit, the Unit boundary, and the operators of wells adjacent to the Southeast Cha Cha Unit Pressure Maintenance Project area. The map also shows that there are no wells completed in the Gallup formation that are either directly or diagonally offset by well No. 9 proposed for conversion to injection, while Well No. 30 offsets the Gallego Canyon Unit - Gallup Participating Area "C" project. Copies of this application are being sent to Gallup Participating "C" Working Interest Owners, all of whom also own an interest in the SE Cha Cha Unit and have approved these injection well conversions.

Also attached are a log and diagrammatic sketch of each of the proposed injection wells showing thereon a description of the casing, tubing, perforated interval and depth. The conversion of each of the wells will be such that any injection of water into wells will be confined to the "upper" or "A" zone of the Gallup formation.

November 9, 1967

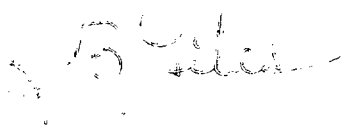
Initial injection of water in the Southeast Cha Cha Unit had been into Wells Nos. 16, 17, and 22, which generally lie along the major axis of the Cha Cha Gallup Sand. Injection into these three wells displayed evidence of premature water breakthrough into wells lying in a northeast-southwest direction from the injection wells. Accordingly, the injection pattern was changed to a line perpendicular to the major axis of the field with the subsequent injection of water into wells Nos. 14, 17, and 26, and wells Nos. 3 and 35 offsetting the boundaries of the Northwest Cha Cha and Gallegos Canyon Units, respectively.

In conclusion, an increase in water injections into the "upper" or "A" zone of the Gallup is to be done, by utilizing more injection wells, in an attempt to improve the performance of this secondary recovery project.

Respectfully yours,

Pan American Petroleum Corp.

cc: Gallegos Canyon Unit -  
Gallup Participating Area "C"  
Owners - Aztec Oil & Gas Co.  
Southern Union Production Co.  
Texaco, Inc.

A handwritten signature in dark ink, appearing to be "J. S. Smith", is written over the typed name "Pan American Petroleum Corp.".

# PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

DENVER, COLORADO 80202

PRODUCING DEPARTMENT  
H. T. HUNTER  
DIVISION PRODUCTION  
MANAGER

December 28, 1967

File: AMR-2980-986.510.1

Re: Administrative Order PMX-25  
Southeast Cha Cha Gallup Pool  
San Juan County, New Mexico

DISTRICT SUPERINTENDENTS  
W. M. JONES  
A. E. PIPER  
T. M. CURTIS  
JOINT INTEREST  
SUPERINTENDENT  
S. B. RICHARDS

Mr. A. L. Porter, Jr.  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

Dear Sir:

We wish to point out an error in the above referenced Administrative Order PMX-25 dated 12-6-67 which provided approval for conversion of two wells to water injection service. The order shows the second of two wells as being Unit Well No. 15 located in Section 15 - T28N-R13W. This should be Well No. 30 as shown on our application.

Respectfully yours,

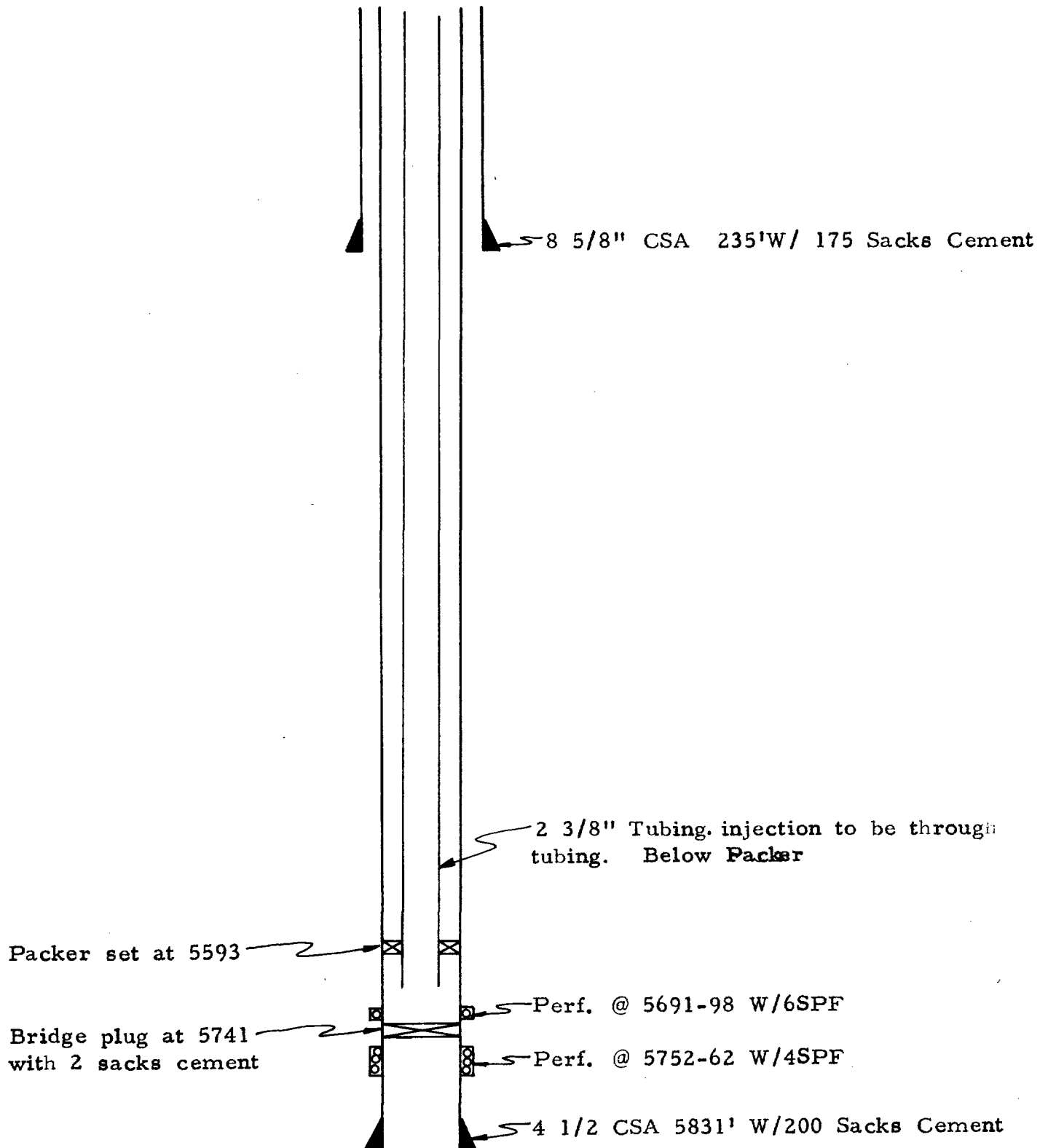
*R. B. Giles /cb*

Pan American Petroleum Corporation

MAIN OFFICE

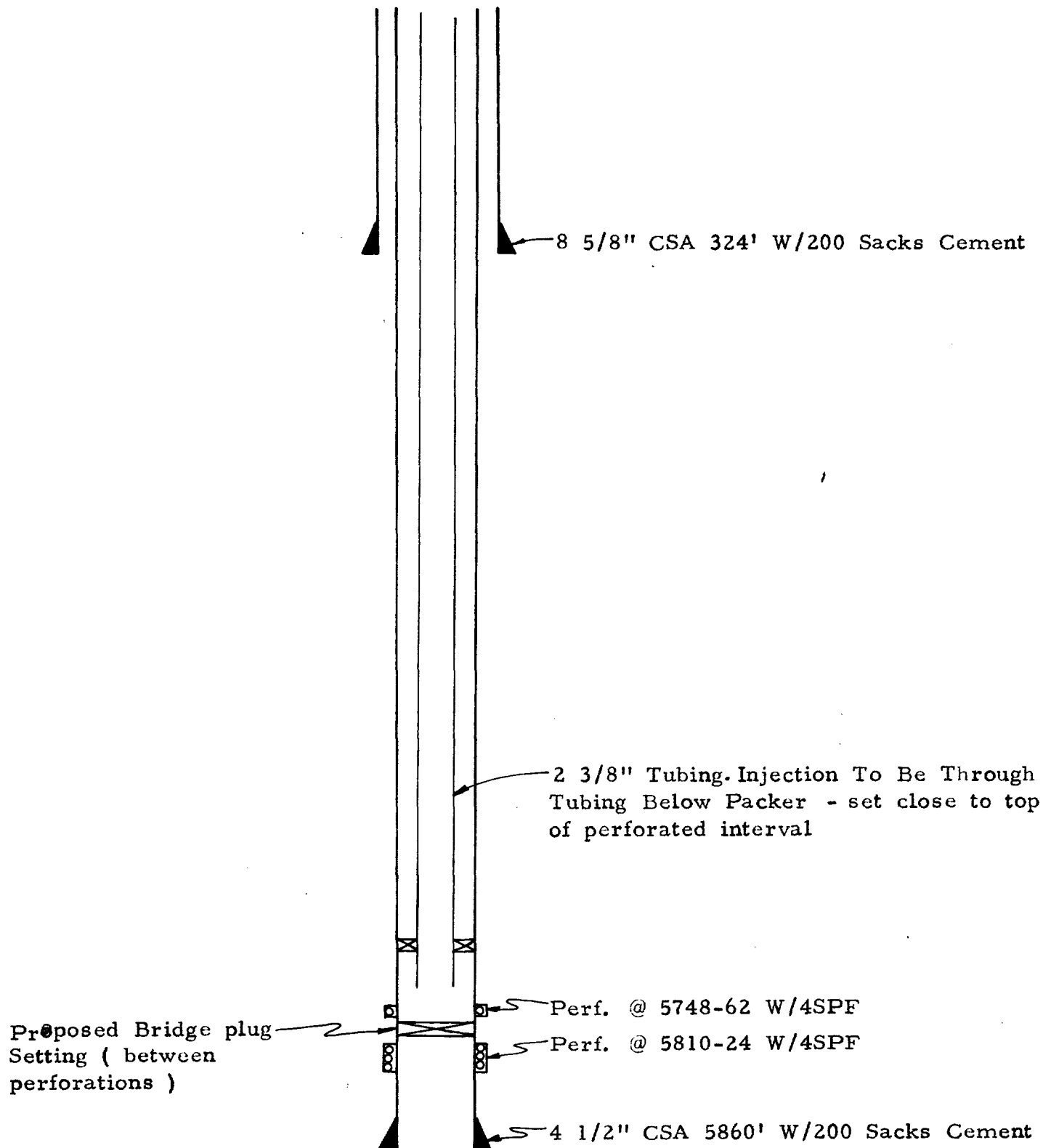
'68 JAN 2 AM 8 11

PAN AMERICAN  
S.E. CHA CHA UNIT WELL NO. 9  
Sec 9- T28N- R13W  
600' FSL & 1880' FWL



WATER INJECTION WELL

PAN AMERICAN  
S. E. CHA CHA UNIT WELL NO. 30  
Sec. 15 - T28N - R13W  
800' FSL & 730' FEL



WATER INJECTION WELL

LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE

# SCHLUMBERGER

# CORPORATION



*Electrical Log*

COUNTY SAN JUAN, NEW MEXICO  
 FIELD or LOCATION UNDESIGNATED  
 WELL ROBINSON 5-G  
 COMPANY AZTEC OIL & GAS COMPANY

COMPANY AZTEC OIL & GAS  
 COMPANY UNIT # 30  
 WELL ROBINSON 5-G  
 FIELD SE CHA CHA UNIT UNDESIGNATED  
 LOCATION SEC. 15-28N-13W  
 COUNTY SAN JUAN  
 STATE NEW MEXICO

Other Surveys  
ML

Location of Well  
 800' FR N/L  
 730' FR E/L  
 SEC. 15-28N-13W

30

Elevation: D.F.: 6093  
 K.B.: 6094  
 or G.L.: 6083

FILING No. \_\_\_\_\_

RUN No.	ONE				
Date	11-2-60				
First Reading	5858				
Last Reading	326				
Feet Measured	5532				
Csg. Schlum.	326				
Csg. Driller	324				
Depth Reached	5859				
Bottom Driller	5860				
Depth Datum	KB				
Mud Nat.	CHEM				
Dens. Visc.	9.7 62				
Mud Resist.	2.5 @ 87 °F	@ °F	@ °F	@ °F	@ °F
" Res. BHT	1.6 @ 135 °F	@ °F	@ °F	@ °F	@ °F
Rmf	2.2 @ 65 °F	@ °F	@ °F	@ °F	@ °F
Rmc	3.6 @ 65 °F	@ °F	@ °F	@ °F	@ °F
" pH	-- @ °F	@ °F	@ °F	@ °F	@ °F
" Wtr. Loss	-- CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.
Bit Size	7 7/8"				
Spcgs.—AM	16"				
A	64"				
AO	18' 8"				
Opr. Rig Time	2 HRS.				
Truck No.	2516 FARM				
Recorded By	HAMILTON				
Witness	MR. DONALDSON				

LANE WELLS

*Handwritten signature*

FILE NO.	COMPANY PAN AMERICAN PETROLEUM CORP	
	WELL <del>G. J. HOLDER No 6</del> Unit #9	
	FIELD SE CHA CHA <del>GALLUP UNIT</del>	
	COUNTY SAN JUAN	STATE NEW MEXICO
	LOCATION: 600' FSL & 1880' FWL	Other Services
	SEC 9 TWP 28N RGE 13W	NONE 5

Permanent Datum	G. L.	Elev. 6018	Elevations:
Log Measured from	K. B.	10' Above Permanent Datum	KB 6028
Drilling Measured from	K. B.	OR 10' ABOVE G. L.	DF 6027
			GL 6018

Date	2-24-61				
Run No.	ONE				
Depth—Driller	5837				
Depth—Logger	5842				
Bottom Logged Interval	5841				
Top Logged Interval	233				
Casing—Driller	8 5/8 @ 235	@	@	@	@
Casing—Logger	233				
Casing Size	7 7/8				
Type Fluid in Hole	CHEMICAL GEL				
Density and Viscosity	9.6 64				
pH and Fluid Loss	7.5 10 cc	cc	cc	cc	cc
Source of Sample	FLOW LINE				
Rmf @ Meas. Temp.	5.1 @ 76 °F	@ °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	3.8 @ 76 °F	@ °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	5.5 @ 76 °F	@ °F	@ °F	@ °F	@ °F
Source of Rmf and Rmc	MEASURED				
Rmf @ BHT	3.0 @ 127 °F	@ °F	@ °F	@ °F	@ °F
Time Since Circ	4.5 HOURS				
Circ. Temp. Deg. F.	127 °F	°F	°F	°F	°F
Tool No. and Location	4470 EIRM				
Tool Bit	WRIGHT				
Tool Bit By	M. J. WRIGHT				

THIS HEADING AND LOG CONFORMS TO API RECOMMENDED STANDARD PRACTICE RP-31

FOLD HERE