

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

SCHEMATIC DIAGRAM OF UNIT WELL NO. 14-17

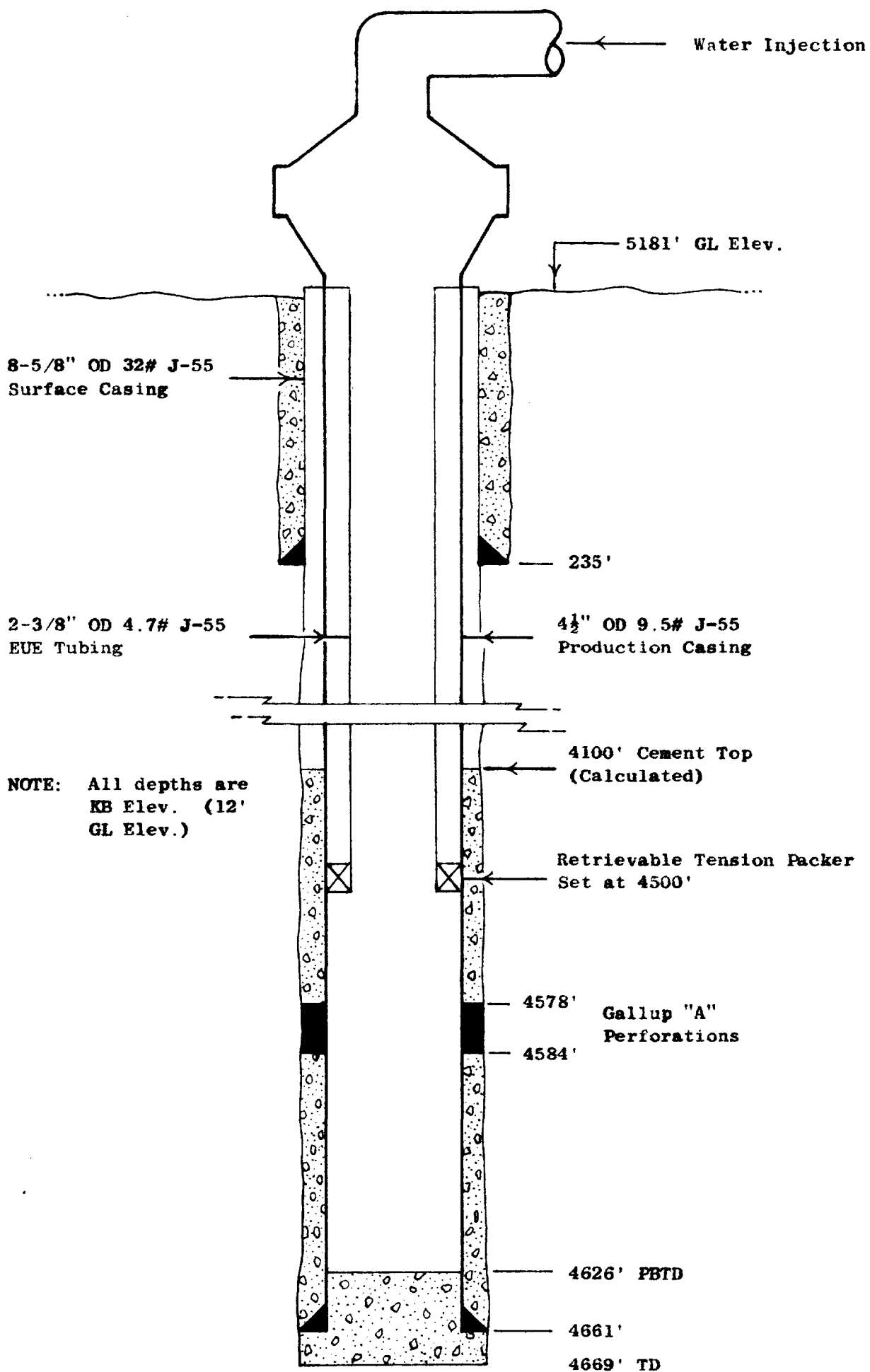


EXHIBIT "B"
 TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
 RELATIVE TO PRESSURE MAINTENANCE PROJECT
 NORTHWEST CHA CHA UNIT
 SAN JUAN COUNTY, NEW MEXICO

SCHEMATIC DIAGRAM OF UNIT WELL NO. 21-28

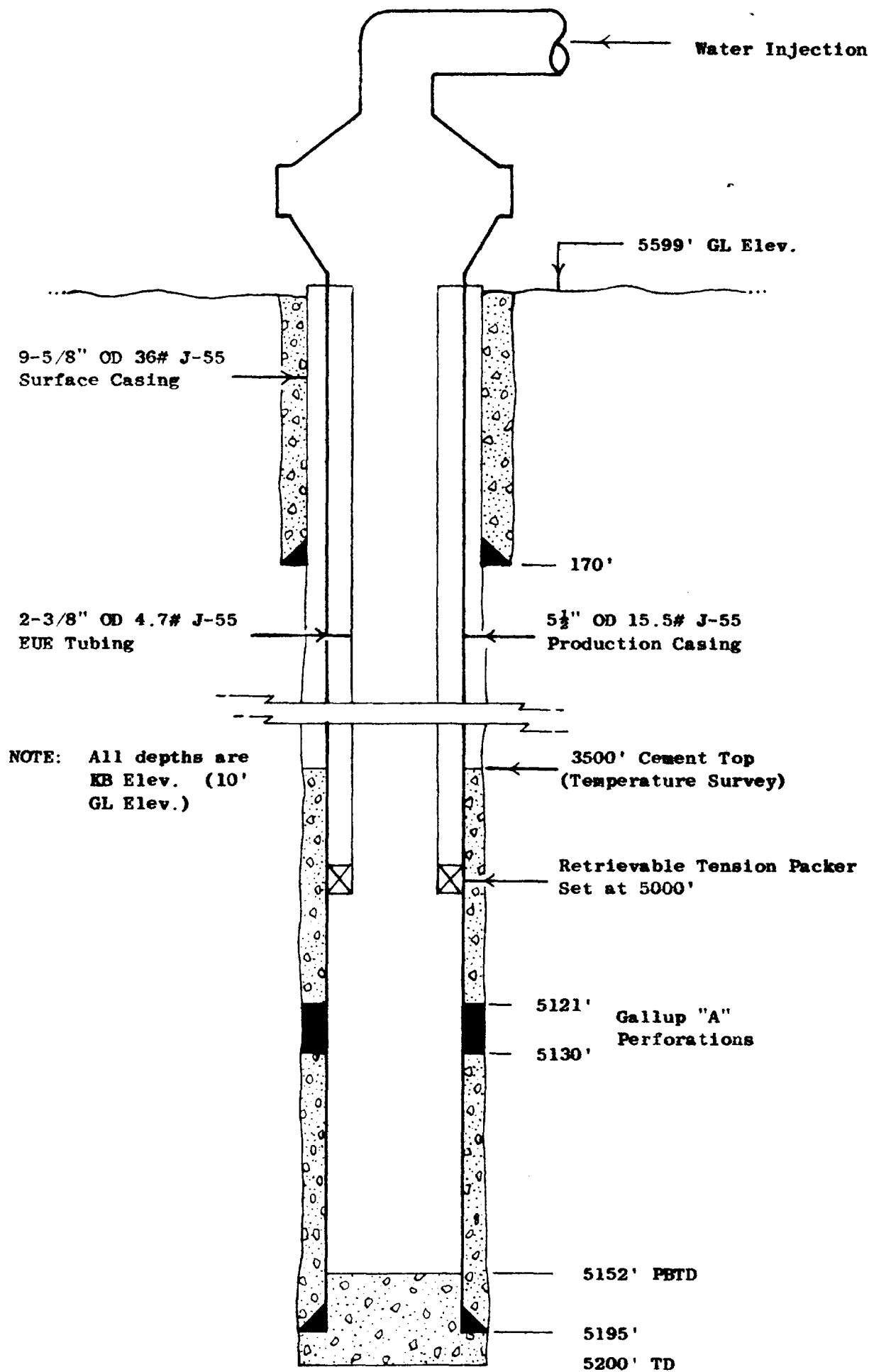


EXHIBIT "C"
TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
RELATIVE TO PRESSURE MAINTENANCE PROJECT
NORTHWEST CHA CHA UNIT
SAN JUAN COUNTY, NEW MEXICO

SCHEMATIC DIAGRAM OF UNIT WELL NO. 32-22

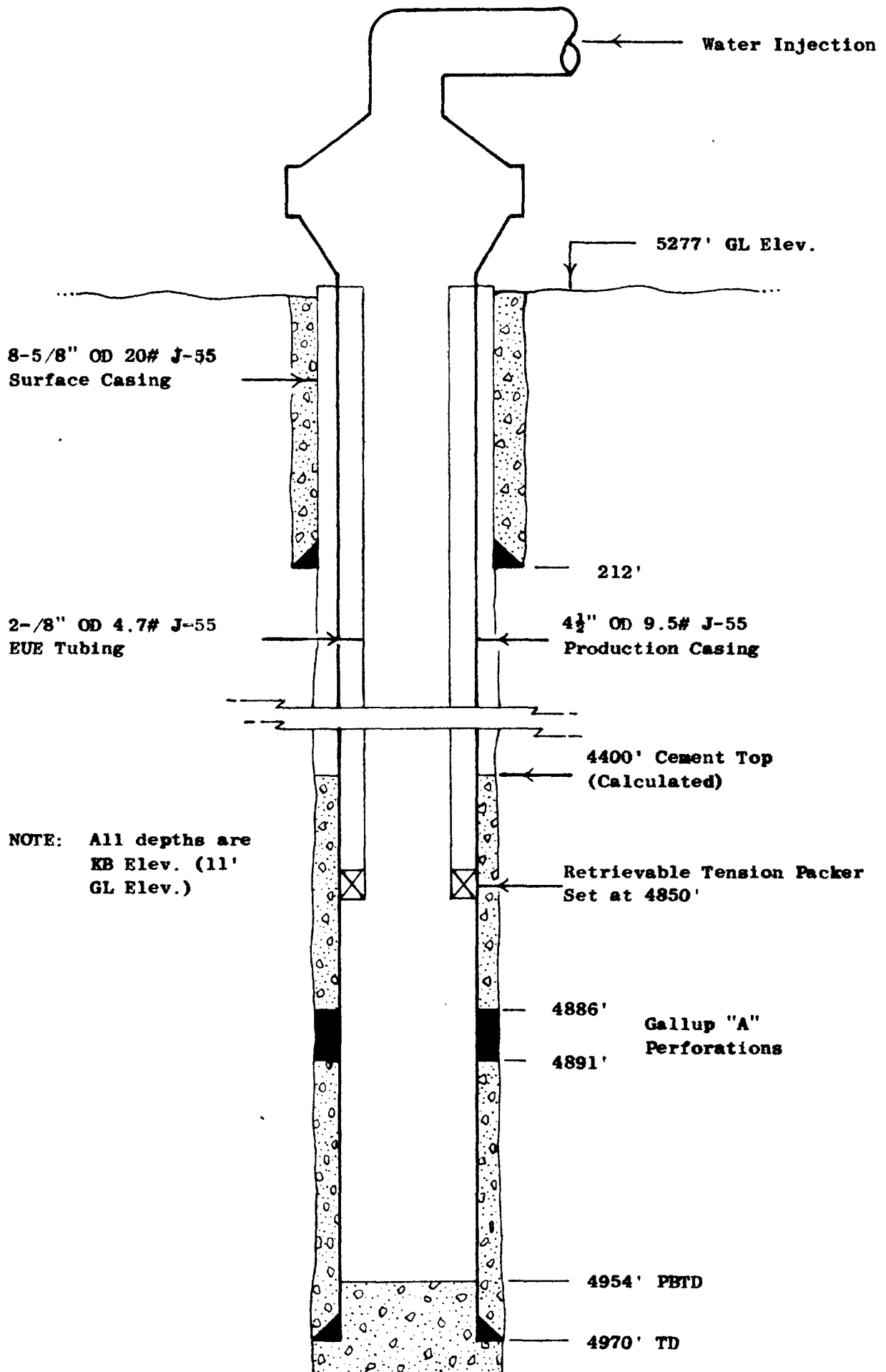


EXHIBIT "D"
TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
RELATIVE TO PRESSURE MAINTENANCE PROJECT
NORTHWEST CHA CHA UNIT
SAN JUAN COUNTY, NEW MEXICO

SCHEMATIC DIAGRAM OF UNIT WELL NO. 32-35

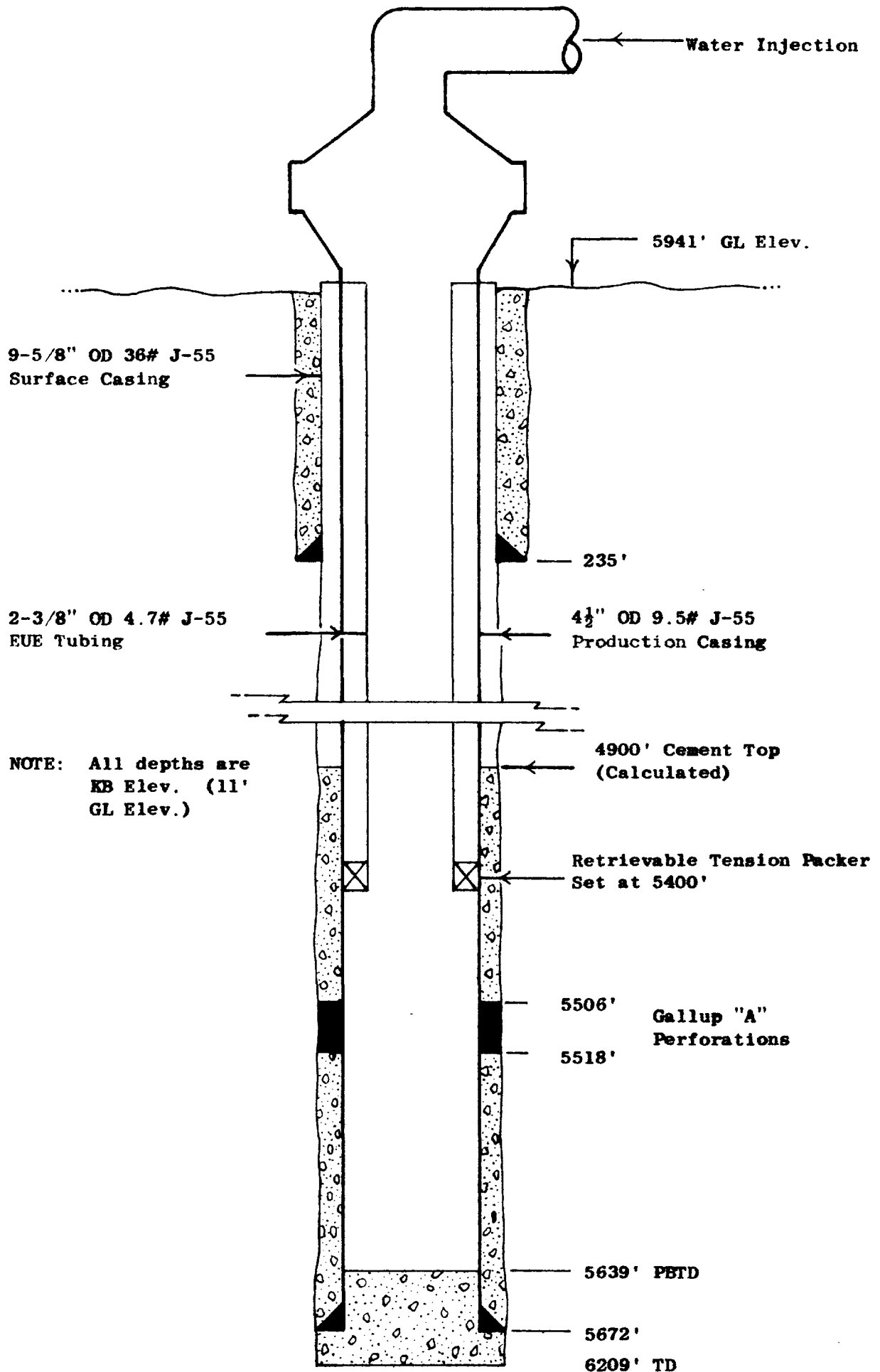


EXHIBIT "E"
 TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
 RELATIVE TO PRESSURE MAINTENANCE PROJECT
 NORTHWEST CHA CHA UNIT
 SAN JUAN COUNTY, NEW MEXICO

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

APPLICATION OF HUMBLE OIL &
REFINING COMPANY FOR AN ORDER
APPROVING THE CONVERSION OF
FOUR ADDITIONAL PRODUCING WELLS
TO WATER INJECTION SERVICE IN
THE NORTHWEST CHA CHA-GALLUP
PRESSURE MAINTENANCE PROJECT,
SAN JUAN COUNTY, NEW MEXICO

NOTICE

To: Texaco, Inc.
P. O. Box 2100
Denver, Colorado

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico

El Paso Natural Gas Products Company
P. O. Box 1161
El Paso, Texas

Atlantic Refining Company
760 Petroleum Club
Denver, Colorado

Roy Owen
Petroleum Club Plaza
Farmington, New Mexico

Southwest Production Company
3108 Southland Center
Dallas, Texas

Please take notice that Humble Oil & Refining Company will file with the New Mexico Oil Conservation Commission its application for an order approving the conversion of four additional producing wells to water injection service in the Northwest Cha Cha-Gallup Pressure Maintenance Project, San Juan County, New Mexico. A copy of said application is served upon each of you herewith. This notice is given and Proof of Service hereinbelow made in support of said application and pursuant to the provisions of Rule 11(3) of the Special Rules and Regulations for the Humble Oil & Refining Company Cha Cha-Gallup Pressure Maintenance Project, which said rule is fully set forth in Order No. R-2154 in this case.

Humble Oil & Refining Company
P. O. Box 120
Denver, Colorado

PROOF OF SERVICE

WILLIAM S. LIVINGSTON, affiant herein, being first duly sworn on oath deposes and says that on March 4, 1966, he did give notice of the application of Humble Oil & Refining Company described above to the parties listed above by sending a copy of the above notice, together with copies of the application and exhibits attached thereto (which said application and exhibits are exact copies of the application and exhibits filed with the Commission in this matter) in the United States mail at Denver, Colorado, addressed to the operators named above at the addresses set forth above, first class postage prepaid.



William S. Livingston

Subscribed and sworn to before me this 4th day of
March, 1966.

My commission expires:
September 13, 1969



Notary Public in and for the
State of Colorado.
Residing at Denver.

INTENTIONAL OMISSIONS

The following document(s) have been intentionally omitted from this file due to the indicated reasons.

FILE # _____

P11X 20

DESCRIPTION OF OMITTED DOCUMENTS

[illegible]

P.I.
DENVER • CASPER
BILLINGS • BISMARCK
LOS ANGELES

LOG NO	31937 IE
	35 29N 14W

SCHLUMBERGER		SCHLUMBERGER WELL SURVEYING CORPORATION BIRMINGHAM, ALABAMA	
		<i>Production - Electrical Log</i>	
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY		Other Surveys	
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>		Location of Well <u>1980 - 14" B/L</u> <u>1980 - 10" I/L</u> <u>S.T.C. 35-29N-14W</u>	
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>		Elevation: D.F. 5952.1 K.B. 5953.7 or G.L. 5941.1	
LOCATION <u>S.T.C. 35-29N-14W</u>		FLING No.	
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COUNTRY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			
COUNTY <u>SAN JUAN</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			
COMPANY <u>MURKLE OIL CO.</u> FIELDING COMPANY			
WELL <u>MARAJO T-111 OF</u> <u>INDIANAS L-2</u>			
FIELD <u>CH</u> <u>W</u> <u>SHALLUP</u>			
LOCATION <u>S.T.C. 35-29N-14W</u>			

SPONTANEOUS-POTENTIAL millivolts	DEPTHS	CONDUCTIVITY millimhos/m = $\frac{1000}{\text{ohms. m/m}}$
	2 1/2" - 100'	INDUCTION 400 1200 0 600 400
		RESISTIVITY -ohms. m ² /m
	16" - 235'	16" NORMAL 0 1 100 0 1000

TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
RELATIVE TO PRESSURE MAINTENANCE PROJECT
NORTHWEST CHA CHA UNIT
SAN JUAN COUNTY, NEW MEXICO

LOG NO 32470 IE
22 29N 14W

32470 IE



LOC (P.I.)	22 29N 14W
	1830 S/N 1830 W/E SW NE
CO.	Pan American
	Petroleum Corporation
WELL	#9-E Navajo
FIELD	Cha Cha
	San Juan, New Mexico

SCHLUMBERGER WELL SURVEYING CORPORATION INDUSTRIAL FIELD	
<i>Induction-Electrical Log</i>	
COUNTY SAN JUAN, NEW MEXICO FIELD or LOCATION CHA CHA GALLUP WELL NAVAJO TRIBAL E #9	COMPANY PAN AMERICAN PETROLEUM CORPORATION
STATE NEW MEXICO	Other Surveys NONE
COUNTY SAN JUAN	Location of Well 1830' FR N/L 1830' FR E/L SEC. 22-29N-14W
FIELD CHA CHA GALLUP	Elevation: D.F. 5289 K.B. 5289 or G.L. 5276
LOCATION SEC. 22-29N-14W	FILING No.
FOLD HERE	
REMARKS C.D. USEC S.O. = 1.1"	
Cartridge No. C 182 Panel No. B 237 Sonde No. C 269	

SPONTANEOUS-POTENTIAL millivolts	DEPTHS	CONDUCTIVITY millimhos/m = $\frac{1000}{\text{ohms. m /m}}$	
10 —  — MV	2"- 100'	INDUCTION	
		400	200
			600 400
		RESISTIVITY -ohms. m ² /m	

30225 IE	LOG NO
28 29N 14W	

 Schlumberger Well Surveying Corporation Production - Electrical Log HOUSTON, TEXAS		COUNTY <u>SAN JUAN, N. M.</u> FIELD or LOCATION <u>UNDESIGNATED GALLUP</u> WELL <u>OJO AMARILLO NO. 6</u>	
		COMPANY <u>EL PASO NATURAL GAS PRODUCTS COMPANY</u>	
COMPANY <u>EL PASO NATURAL GAS PRODUCTS COMPANY</u>		Other Surveys	
WELL <u>OJO AMARILLO</u> NO. <u>6</u>		Location of Well 3300' FR. N/L 230' FR. W/L SEC. 28-29N-14W	
FIELD <u>UNDESIGNATED GALLUP</u>		Elevation: D.E. 5609.1 K.B. 5610.1 or G.L. 5599.1	
LOCATION <u>SEC. 28-29N-14W</u>		FILING No.	
COUNTY <u>SAN JUAN</u>		FOLD HERE	
STATE <u>NEW MEXICO</u>			
RUN No. <u>ONE</u>		REMARKS	
Drive 8-5-60			
First Reading 15581		C.D. USED : S.O. 1-172"	
Last Reading 170			
Feet Measured 15470		Corrigend No. 169	
Csg. Schlum. 170			
Csg. Driller 180		Panel No. 179	
Depth Measured 15287			
Bottom Driller 15585		Sonde No. 335	
Depth Driller 15585			
Depth Driller 15585		MUD SAMPLE FROM MUD PIT	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
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Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	
Depth Driller 15585			
Depth Driller 15585		Mud Resist. 9.6	

SPONTANEOUS-POTENTIAL millivolts	DEPTH	CONDUCTIVITY millimhos/m = $\frac{1000}{\text{ohms. m}^2/\text{m}}$	
$- \left \begin{array}{c} 10 \\ \longleftrightarrow \\ \text{MV} \end{array} \right +$	2" - 100'	INDUCTION	
		400	1200
			600
	LR 170'	RESISTIVITY -ohms. m ² /m	
		16" NORMAL	
		0	100
		0	1000

EXHIBIT "H"
TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
RELATIVE TO PRESSURE MAINTENANCE PROJECT
NORTHWEST CHA CHA UNIT
SAN JUAN COUNTY, NEW MEXICO

SPONTANEOUS-POTENTIAL millivolts	DEPTH	RESISTIVITY ohms. m ² /m	RESISTIVITY ohms. m ² /m	
	21'-10"	0	0	
	16" NORMAL	1000	64" LONG NORMAL	1000
		1000		1000
	18'-8" LONG NORMAL	100		
		1000		

TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
RELATIVE TO PRESSURE MAINTENANCE PROJECT
NORTHWEST CHA CHA UNIT
SAN JUAN COUNTY, NEW MEXICO

CONVERSION TO WATER INJECTION

	<u>UNIT WELL NO. 14-17</u>	<u>UNIT WELL NO. 21-28</u>	<u>UNIT WELL NO. 32-22</u>	<u>UNIT WELL NO. 32-35</u>
Injection Formation	Gallup "A"	Gallup "A"	Gallup "A"	Gallup "A"
Kind of Fluid	Fresh Water	Fresh Water	Fresh Water	Fresh Water
Anticipated Injection Volume	400 BPD	600 BPD	200 BPD	900 BPD
Source of Injection Fluid	Alluvium Wells San Juan River	Alluvium Wells San Juan River	Alluvium Wells San Juan River	Alluvium Wells San Juan River

EXHIBIT "K"
TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
RELATIVE TO PRESSURE MAINTENANCE PROJECT
NORTHWEST CHA CHA UNIT
SAN JUAN COUNTY, NEW MEXICO

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Page 1 of 2

Operator Humble Oil & Refining Company		Pool Chia Cha Gallup		County San Juan											
Address Box 120 Denver, Colorado 80201		Type of Test - (X)		Completion ☐ Special ☐											
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU. FT./BBL		
		U	S	T						R	WATER BBLs.	GRAV. OIL		OIL BBLs.	GAS M.C.F.
H.O. CHIA CHA UNIT	1416	H	16	291	144	5-18-65	Open	-	5	24	0	12	1	3	3000
	1417	H	17	291	144	5-27-65	Open	-	1	24	16	12	1	2	2000
	1418	H	18	291	144	5-21-65	Open	-	39	24	3	12	20	135	4500
	2120	G	20	291	144	5-26-65	Open	-	1	24	0	12	1	2	2000
	1420	A	20	291	144	5-13-65	Open	-	15	24	1	12	22	3	250
	1420	I	20	291	144	5-16-65	Open	-	16	24	2	12	22	3	135
	2122	G	21	291	144	5-1-65	Open	-	29	24	177	12	12	30	244
	1421	H	21	291	144	5-6-65	Open	-	35	24	9	12	12	30	300
	1422	H	22	291	144	5-8-65	Open	-	6	24	14	12	12	3	
	2122	H	22	291	144	5-23-65	Open	180	11	21	30	12	12	3	
2122	G	22	291	144	5-23-65	Open	180	11	21	30	12	12	3		
2122	O	22	291	144	5-23-65	Open	180	11	21	30	12	12	3		
2123	O	23	291	144	5-31-65	Open	200	11	21	25	12	12	1		
2123	O	23	291	144	5-28-65	Open	190	11	21	2	12	12	27		
2125	H	25	291	144	5-15-65	Open	90	110	24	176	12	12	123		
2125	O	25	291	144	5-12-65	Open	200	11	24	0	12	12	37		
2125	O	25	291	144	5-1-65	Open	200	11	24	0	12	12	7		
2125	H	25	291	144	5-18-65	Open	100	311	24	30	12	12	309	189	
2126	G	26	291	144	5-16-65	Open	160	7	24	83	12	12	24		
2127	K	27	291	144	5-13-65	Open	-	32	24	2	12	12	16		
1427	A	27	291	144	5-19-65	Open	120	16	24	106	12	12	17		
1427	I	27	291	144	5-21-65	Open	190	50	24	10	12	12	17		
2128	G	28	291	144	5-17-65	Open	100	100	24	0	12	12	101		
1428	A	28	291	144	5-17-65	Open	100	100	24	0	12	12	101		

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

No well will be assigned an allowable greater than the amount of oil produced on the official test.
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.
Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.
Report casing pressure in lieu of tubing pressure for any well producing through casing.
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

EXHIBIT "L"
TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
RELATIVE TO PRESSURE MAINTENANCE PROJECT
NORTHWEST CHA CHA UNIT
SAN JUAN COUNTY, NEW MEXICO

(Signature)
(Title)
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS
Page 2 of 2

C-116
Revised 1-1-65

Operator Humble Oil & Refining Company		Pool Cha Cha Gallup		County San Juan										
Address Box 120 Durango, Colorado 80201		TYPE OF TEST - (X)		SCHEDULED ☒ SPECIAL ☐										
WELL NO.	U	S	T	R	DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	Completion ☐ Special ☐				
										WATER BBL'S.	PROD. DURING TEST OIL BBL'S.	GAS M.C.F.		
1234	A	34	201	114	5-19-65	0.002	60	5	21	2	11	1	1500	0
1235	B	35	201	114	5-19-65	0.002	60	3	21	1	11	0	1500	0
1236	G	35	201	114	5-20-65	0.002	60	14	21	162	11	23	1500	0
1237	O	35	201	114	5-20-65	0.002	60	5	21	1	11	2	1500	0
1238	N	35	201	114	5-20-65	0.002	60	7	21	3	11	0	1500	0
1239	O	35	201	114	5-20-65	0.002	60	16	21	10	11	13	1500	0

No well will be assigned an allowable greater than the amount of oil produced on the official test.
 During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.80.

Report casing pressure in lieu of tubing pressure for any well producing through casing.
 Attach original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Original signed by: Roger S. Frazier

(Signature)
Operations Superintendent

6-23-65 (Date)

TO APPLICATION OF HUMBLE OIL & REFINING COMPANY
 RELATIVE TO PRESSURE MAINTENANCE PROJECT
 NORTHWEST CHA CHA UNIT
 SAN JUAN COUNTY, NEW MEXICO