



HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

CENTRAL REGION

DENVER AREA

WILLIAM G. ODELL
ATTORNEY

May 10, 1965

P. O. BOX 120

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

Dear Mr. Porter:

Enclosed is Humble's application filed in triplicate requesting administrative approval to convert Humble's Navajo Well No. G-19 to water injection service in the Many Rocks-Gallup Pressure Maintenance Project located in San Juan County, New Mexico.

This application is pursuant to Rule 11 of Order No. R-2541 of the Commission.

If we may furnish you with any additional data with respect to this application, please advise.

Thank you for your consideration in this matter.

Very truly yours,

HUMBLE OIL & REFINING COMPANY

William G. Odell

WGO:mg

Enclosures (3)

cc: S. B. Christy, IV
Hinkle, Bondurant & Christy
600 Hinkle Building
Roswell, New Mexico



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

MAY 12 1965

APPLICATION OF HUMBLE OIL & REFINING COMPANY
FOR AN ADMINISTRATIVE ORDER APPROVING THE
EXPANSION OF ITS OPERATIONS IN THE MANY ROCKS-
GALLUP PRESSURE MAINTENANCE PROJECT UNDERLYING
APPLICANT'S NAVAJO "G" LEASE COVERING SECTIONS
1, 2, 11 and 12, TOWNSHIP 31 NORTH, RANGE 17
WEST, SAN JUAN COUNTY, NEW MEXICO, BY CONVERTING
HUMBLE'S NAVAJO WELL NO. G-19 TO WATER INJECTION
SERVICE.

NOTICE AND PROOF OF SERVICE

To: Mobil Oil Company
500 Petroleum Club Building
Denver, Colorado

Atlantic Refining Company
760 Petroleum Club Building
Denver, Colorado

Curtis J. Little
2929 Monte Vista Blvd., N.E.
Albuquerque, New Mexico

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

Superior Oil Company
P. O. Drawer G
Cortez, Colorado

State Engineer's Office
State Capitol
Santa Fe, New Mexico

Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma

Cities Service Oil Company
P. O. Box 97
Hobbs, New Mexico

Please take notice that on the 10th day of May, 1965, Humble Oil & Refining Company did file with the New Mexico Oil Conservation Commission its application for an order approving the expansion of its Many Rocks-Gallup Pressure Maintenance Project, San Juan County, New Mexico, by the conversion of Humble's Navajo Well No. G-19, located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 1, Township 31 North, Range 17 West, to water injection service. 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 of the Special Rules and Regulations for the Many Rocks-Gallup Pressure Maintenance Project, which said rule is fully set forth in Order No. R-2541 in this case.

HUMBLE OIL & REFINING COMPANY

P. O. Box 120
Denver, Colorado 80201

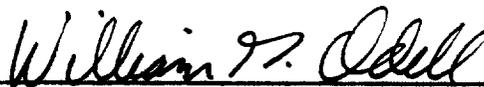
By William F. Odell

EXHIBIT D

To Application of Humble Oil & Refining Company
for
Approval of Expansion of Many Rocks-Gallup Pressure Maintenance Project No. 1
Many Rocks-Gallup Pool, San Juan County, New Mexico

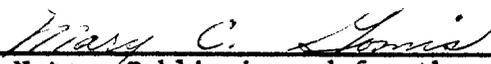
PROOF OF SERVICE

WILLIAM G. ODELL, affiant herein, being first duly sworn on oath deposes and says that on May 10, 1965, 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), by registered United States mail at Denver, Colorado, addressed to the parties named above at the addresses set forth above.



WILLIAM G. ODELL

Subscribed and sworn to before me this 10th day of May, 1965.



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

My commission expires:
September 13, 1965

CONVERSION TO WATER INJECTION

Proposed Injection Well	Navajo Tribe No. G-19
Formation	Gallup Sand
Kind of Fluid	Subsurface Formation Water
Anticipated Injection Volume	100 B/D
Source of Water	Morrison Formation

EXHIBIT

To Application of Humble Oil & Refining Company
for
Approval of Expansion of Many Rocks-Gallup Pressure Maintenance Project No. 1
Many Rocks-Gallup Pool, San Juan County, New Mexico

STATUS OF WATER INJECTION
MANY ROCKS-GALLUP PRESSURE MAINTENANCE PROJECT NO. 1
SAN JUAN COUNTY, NEW MEXICO

<u>Injection Well</u>	<u>Accumulated Injection to 3-1-65</u>	<u>Injection-Avg. B/D February, 1965</u>
G-15	36,623	86
G-16	42,763	63
G-17	25,603	70
G-18	13,105	12
G-20	69,638	114
G-21	69,275	58
G-23	69,917	102

EXHIBIT

To Application of Humble Oil & Refining Company
for
Approval of Expansion of Many Rocks-Gallup Pressure Maintenance Project No. 1
Many Rocks-Gallup Pool, San Juan County, New Mexico

EXHIBIT 9

WELL STATUS PRODUCTION DATA

HUMBLE OIL & REFINING CO.
MANY ROCKS FIELD, SAN JUAN COUNTY, NEW MEXICO

Lease-Well	T.D. Feet	Production Size	Csg Depth	Est. Top Cement Feet	Perforated Interval Feet	Completion Date	Initial BOPD	Potential Ft ³ /Bbl	Current Date	Test BOPD	Data GOR	Cumu. Oil Prod. To 2-1-64, Bbls.	Feb. 1965 Allowable	Waterflood Well Status
G-7	1,300	4-1/2	1,299	753	1,246-60	5-7-63	313	266	2-10-65	6	---	26,859	9	Prod.
G-8	1,268	4-1/2	1,268	726	1,211-23	5-11-63	217	266 (Est)	2-5-65	8	---	25,442	7	Prod.
G-9	1,260	4-1/2	1,260	830 (1)	1,200-17	5-14-63	372	266 (Est)	2-22-65	63	---	60,224	40	Prod.
G-10	1,282	4-1/2	1,282	789	1,234-50	5-19-63	208	350 (Est)	2-4-65	54	315	39,362	52	Prod.
G-11	1,340	4-1/2	1,340	798	1,288-1300	5-23-63	203	360 (Est)	2-11-65	15	267	28,029	17	Prod.
G-12	1,345	4-1/2	1,345	803	1,298-1308	6-10-63	10	2,762	2-8-65	2	---	1,694	1	Prod.
G-13	1,190	4-1/2	1,190	648	1,134-44	6-10-63	S.I.	---	---	---	---	---	---	S.I.
G-14	1,324	4-1/2	1,324	103	1,271-80	6-16-63	95	360 (Est)	2-17-65	2	---	16,124	11	Prod.
G-15	1,350	4-1/2	1,350	129	1,294-1306	6-23-63	170	360 (Est)	---	---	---	21,629	---	Inj.
G-16	1,303	2-7/8	1,303	668	1,231-41	7-8-63	219	360 (Est)	---	---	---	1,731	---	Inj.
G-17	1,305	4-1/2	1,305	636	1,245-53	7-16-63	38	360 (Est)	---	---	---	5,841	---	Inj.
G-18	1,275	2-7/8	1,275	640	1,213-20	8-17-63	INJECTION WELL	---	---	---	---	---	---	Inj.
G-19	1,330	4-1/2	1,330	661	1,284-91	8-5-63	19	TSJM	2-18-65	3	---	4,078	3	Prod.
G-20	1,213	4-1/2	1,213	543	1,132-59	7-29-63	12	TSJM	---	---	---	64	---	Inj.
G-21	1,332	2-7/8	1,332	918	1,272-82	8-29-63	INJECTION WELL	---	---	---	---	---	---	Inj.
G-22	1,658	4-1/2	1,658	858	1,602-10	8-28-63	117	234	2-6-65	1	---	9,051	3	Prod.
G-23	1,235	2-7/8	1,235	578	1,208-16	12-15-63	INJECTION WELL	---	---	---	---	---	---	Inj.
G-24	1,280	4-1/2	1,280	190 (1)	1,226-31	12-26-63	41	300 (Est)	2-20-65	4	---	4,126	3	Prod. (2)

(1) Top of cement by survey.
(2) Approved Injection well; to be converted.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

APPLICATION OF HUMBLE OIL & REFINING COMPANY
FOR AN ADMINISTRATIVE ORDER APPROVING THE
EXPANSION OF ITS OPERATIONS IN THE MANY ROCKS-
GALLUP PRESSURE MAINTENANCE PROJECT UNDERLYING
APPLICANT'S NAVAJO "G" LEASE COVERING SECTIONS
1, 2, 11 and 12, TOWNSHIP 31 NORTH, RANGE 17
WEST, SAN JUAN COUNTY, NEW MEXICO, BY CONVERTING
HUMBLE'S NAVAJO WELL NO. G-19 TO WATER INJECTION
SERVICE.

Case No. PMX-10

TO: THE HONORABLE OIL CONSERVATION COMMISSION, STATE OF NEW MEXICO
AND THE SECRETARY-DIRECTOR THEREOF:

COMES NOW, the Applicant herein, Humble Oil & Refining Company, a Delaware corporation, authorized to do business in the State of New Mexico, as owner and operator of the Many Rocks-Gallup Pressure Maintenance Project, and hereby makes application to the New Mexico Oil Conservation Commission and the Secretary-Director thereof for an administrative order authorizing the expansion of its operations in the project area of the Many Rocks-Gallup Pressure Maintenance Project by the conversion of Applicant's Navajo Well No. G-19 to water injection service. This application is made pursuant to Rule 11 of the Rules and Regulations relating to the Many Rocks-Gallup Pressure Maintenance Project as promulgated in Order No. R-2541 of the Commission. In support hereof, Applicant respectfully alleges and states:

I.

On August 7, 1963, this Commission entered its Order No. R-2541 in this case, which said order authorized Applicant to institute a Pressure Maintenance Project in the Many Rocks-Gallup Pool, San Juan County, New Mexico, by injecting water into the Gallup formation in certain wells described in said order in accord with the Special Rules and Regulations governing the operation of said project, all as set forth in Rules 1 through 11, inclusive, promulgated in said order.

II.

On May 6, 1964, this Commission entered its Administrative Order No. PMX-10. which said order authorized Applicant to convert its Navajo Well

No. G-15 and its Navajo Well No. G-17 into water injection wells to inject water into the Gallup formation for purposes of pressure maintenance in Applicant's Many Rocks-Gallup Project.

III.

Applicant hereby requests authority to convert into water injection and to operate as a water injection well its Navajo Well No. G-19 located in the Northwest Quarter of the Northwest Quarter (NW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 1, Township 31 North, Range 17 West. Said well is owned and operated by Applicant and lies within the presently existing project area.

IV.

In support of this application, Applicant attaches hereto as Exhibit "A" a plat showing:

1. The present project area of the Many Rocks-Gallup Pressure Maintenance Project (outlined in red on said map).
2. The location of the proposed well more particularly described above in Section III which it is proposed to convert to a water injection well.
3. All wells completed in the Gallup formation located within the project area and the proposed expansion thereof, and all wells within two miles of the proposed injection well.
4. All offsetting operators within two miles of the proposed injection well.

V.

Further in support of this application, Applicant attaches hereto as Exhibit "B" a schematic diagram of Humble's Navajo Well No. G-19, which said diagram describes fully the cementing, casing, tubing, perforated intervals and depth of said well, and further showing that the injection of water will be confined to the Gallup formation in said well.

VI.

Further in support of this application, Applicant attaches hereto as Exhibit "C" a formation density log of Humble's Navajo Tribe Well No. G-19.

VII.

Applicant attaches hereto as Exhibit "D" proof of service of a complete copy of this application on all operators of oil and gas leasehold

estates within a two mile radius of the proposed injection well, and on the State Engineer's office, Capitol Building, Santa Fe, New Mexico.

VIII.

Applicant attaches hereto as Exhibit "E" a table indicating, with respect to the proposed injection well, the zones into which water will be injected into said well, the kind of fluid to be injected into said well, the anticipated daily amounts of water that will be injected into said well, and the source of said water.

IX.

Applicant attaches hereto as Exhibit "F" a table summarizing the status of water injection at the Many Rocks-Gallup Pressure Maintenance Project, including accumulated injection per well and average daily rates of injection per well.

X.

Applicant attaches hereto as Exhibit "G" a table summarizing completion and production data on all wells within the Many Rocks-Gallup Pressure Maintenance Project area and the proposed expansion thereof.

XI.

Applicant believes and states that it will be in the interest of conservation and the prevention of waste to expand its operations in the Many Rocks-Gallup Pressure Maintenance Project by converting the well more particularly described in Section III hereof to water injection service and to operate said well as a water injection well as herein requested. Conversion of said well to water injection service is necessary to obtain the greatest ultimate recovery of oil and gas from the Gallup formation within the area.

WHEREFORE, Applicant respectfully requests that the Secretary-Director of the Commission administratively approve and enter an order granting Applicant authority to convert its Navajo Well No. G-19, located in the Northwest Quarter of the Northwest Quarter (NW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 1, Township 31 North, Range 17 West, to water injection service.

Dated this 10th day of May, 1965.

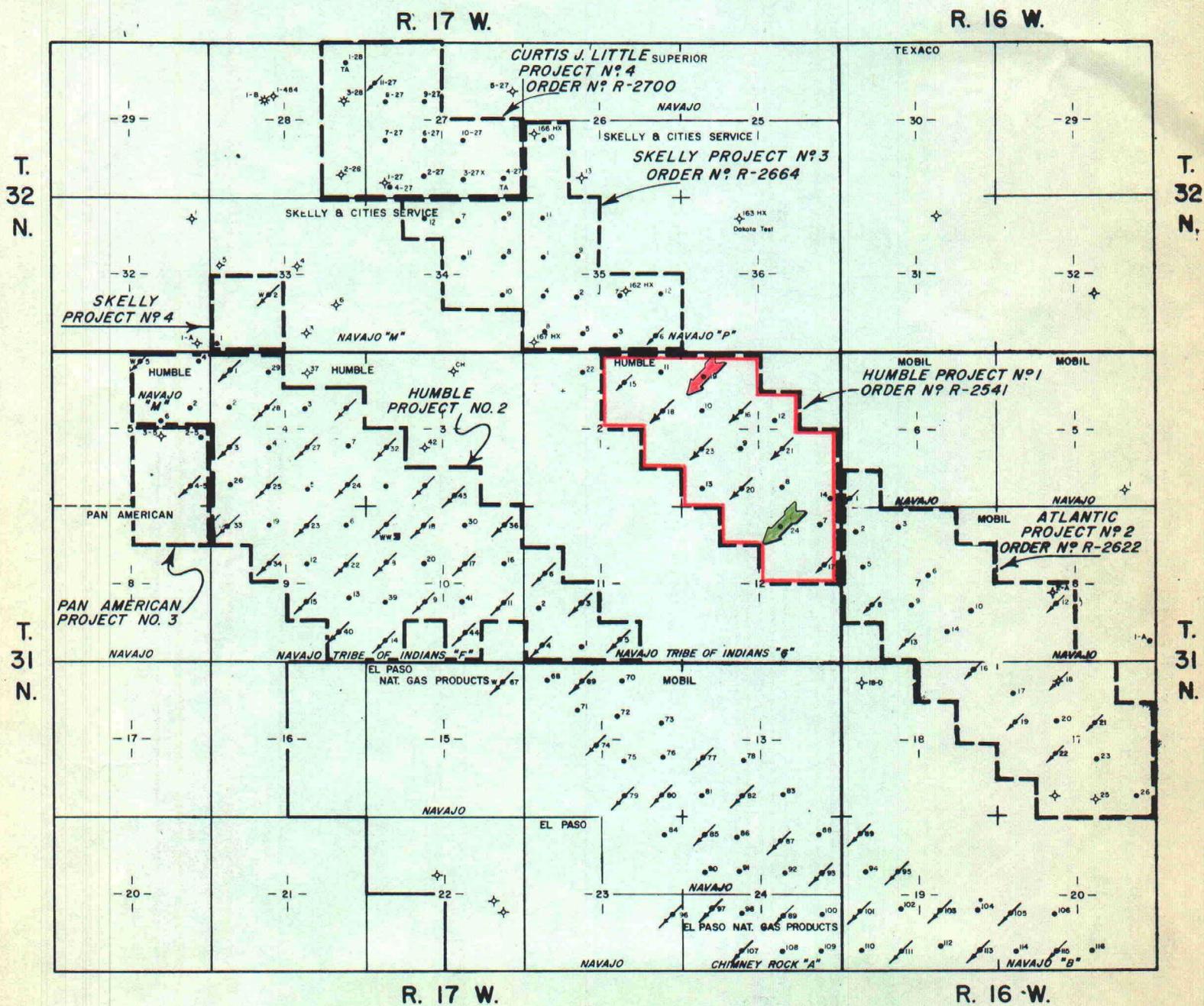
Respectfully submitted,

HUMBLE OIL & REFINING COMPANY

William G. Odell
Humble Oil & Refining Company
P. O. Box 120
Denver, Colorado 80201
Telephone: 534-1251

By William D. Odell
Its Attorney

S. B. Christy, IV
Hinkle, Bondurant & Christy
600 Hinkle Building
Roswell, New Mexico



LEGEND

-  Gallup Formation Producer
-  Current Gallup Injection Well
-  Morrison Formation Water Source Well
-  Proposed Gallup Injection Well - Humble Project No. 1
-  Approved Injection Well
-  Humble Project Area - Proposed Expansion

HUMBLE OIL & REFINING COMPANY
HORSESHOE & MANY ROCKS FIELDS
 SAN JUAN COUNTY, NEW MEXICO

EXHIBIT NUMBER

SCHEMATIC DIAGRAM

HUMBLE NAVAJO TRIBE OF INDIANS G-19

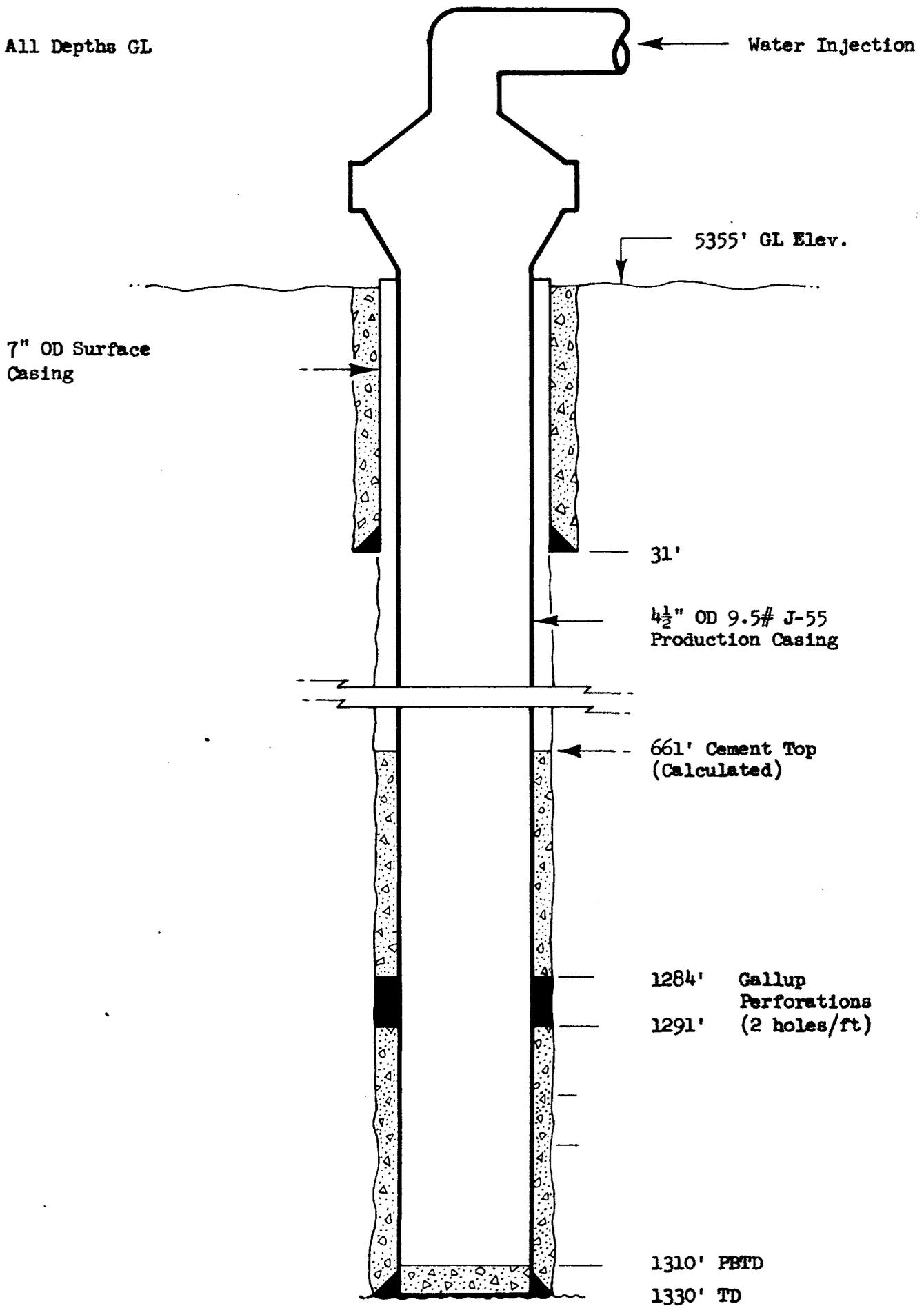


EXHIBIT B

To Application of Humble Oil & Refining Company
for
Approval of Expansion of Many-Rocks-Gallup Pressure Maintenance Project No. 1
Many Rocks Pool
San Juan County, New Mexico

SCHLUMBERGER

FORMATION DENSITY LOG

Gamma-Gamma
SCHLUMBERGER WELL SURVEYING CORPORATION
Houston, Texas

COUNTY SAN JUAN, NEW MEX
FIELD or LOCATION UNDESIGNATED
WELL NAVAJO TRIBE G-19
COMPANY HUMBLE OIL CO.

COMPANY HUMBLE OIL AND REFINING COMPANY

WELL NAVAJO TRIBE OF INDIANS G-19

FIELD UNDESIGNATED

COUNTY SAN JUAN STATE NEW MEXICO

Location: 1980' FWL & 660' FSL SE-SW
Sec. 1 Twp. 31N Rge. 17W

Other Services:
NONE

Permanent Datum: G.L. ; Elev.: 5355'
Log Measured From G.L. Ft. Above Perm. Datum
Drilling Measured From G.L.

Elev.: K.B. ---
D.F. ---
G.L. 5355'

Date	7-10-63
Run No.	ONE
Type Log	FDL - TYPE C
Depth—Driller	1330
Depth—Logger	1330
Bottom logged interval	1329
Top logged interval	100
Type fluid in hole	DILLEMULS
Salinity, PPM Cl.	1600
Density	9.2
Level	FULL
Max rec. temp., deg F.	--
Operating rig time	4 HOURS
Recorded by	SOERENSEN
Witnessed by	MR. SLADE

BORE-HOLE RECORD				CASING RECORD			
Run No.	Bit	From	To	Size	Wgt.	From	To
1	6 1/4	CSG.	T. D.	7"	-	SURFACE	30

Reproduced By
Rocky Mountain Well Log Service

Dallas 2, Texas

REFERENCE K6790E



8 COMPLETION RECORD

SPUD DATE _____

COMP DATE _____

DST RECORD _____

CASING RECORD _____

EXHIBIT C

To Application of Humble Oil & Refining Company
for
Approval of Expansion of Many Rocks-Gallup Pressure Maintenance Project No. 1
Many Rocks-Gallup Pool, San Juan County, New Mexico

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