

EXHIBIT 3  
Proposed Wtr.  
Inj. Well

SIMULTANEOUS  
COMPENSATED NEUTRON-  
FORMATION DENSITY

Case 6161

COUNTY	LEA	COMPANY		TENNECO OIL COMPANY	
FIELD	LEONARD	WELL		LEONARD FEDERAL #6	
LOCATION	LEONARD FEDERAL #6	FIELD		LEONARD	
WELL	LEONARD FEDERAL #6	COUNTY		LEA STATE NEW MEXICO	
COMPANY	TENNECO OIL CO.	LOCATION		560' FSL & 1980' FEL	
		Other Services:		DLL	
API SERIAL NO.	SEC.	TWP.	RANGE		
	11	20-S	37-E		
Permanent Datum: G.L. ; Elev.: 3003				Elev.: K.B. 3012	
Log Measured From K.B. , 9 Ft. Above Perm. Datum				D.F. 3003	
Drilling Measured From K.B.				G.L. 3003	
Date	7-25-77				
Run No.	ONE				
Depth-Driller	3600				
Depth-Logger	3606				
Btm. Log Interval	3605				
Top Log Interval	1600				
Casing-Driller	8 5/8 @ 500	@	@	@	@
Casing-Logger	510				
Bit Size	7 7/8				
Type Fluid in Hole	ZEUGEL				
Dens.	Visc.	10.1	36		
pH	Fluid Loss	7	10 ml	ml	ml
Source of Sample	CIRC				
Rm @ Meas. Temp.	.036 @ 112°F	@ °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.041 @ 83°F	.044 @ 80 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	.027 @ 112°F	@ °F	@ °F	@ °F	@ °F
Source: Rmf	Rmc	M	C		
Rm @ BHT	.041 @ 99°F	@ °F	@ °F	@ °F	@ °F
TIME	Circulation Stopped	1500			
	Logger on Bottom	2330			
Max. Rec. Temp.	99 °F	°F	°F	°F	°F
Equip.	Location	7646 HOBBS			
Recorded By	BOROSS				
Witnessed By Mr.	SCHRECK, BRAZIE				

The well name, location and borehole reference data were furnished by the customer.

FOLD HERE

EXHIBIT 3  
Proposed Wtr.  
Inj. Well

SIMULTANEOUS  
**COMPENSATED NEUTRON-  
FORMATION DENSITY**

COUNTY	LEA				
FIELD	SOUTH LEONARD				
LOCATION	LEONARD BROS. NO. 2				
WELL					
COMPANY	TENNECO OIL CO.				
COMPANY		TENNECO OIL COMPANY			
WELL		LEONARD BROTHERS NO. 2			
FIELD		SOUTH LEONARD			
COUNTY		LEA		STATE NEW MEXICO	
LOCATION	1650' FSL & 990' FEL			Other Services:	
API SERIAL NO.	SEC.	TWP.	RANGE	DLL	
	13	26-S	37-E		
Permanent Datum:		G.L.		Elev.: 2998	
Log Measured From:		K.B.		Elev.: K.B. 3007	
Drilling Measured From:		K.B.		D.F. 2998	
G.L.					
Date	2-25-77				
Run No.	ONE				
Depth-Driller	3590				
Depth-Logger	3600				
Btm. Log Interval	3599				
Top Log Interval	SURF				
Casing-Driller	8 5/8 @ 510 @ @				
Casing-Logger	510				
Bit Size	7 7/8				
Type Fluid in Hole	SALT GEL				
Dens.	Visc.	10 62			
pH	Fluid Loss	7 7.5 ml ml ml ml			
Source of Sample	CIRC				
Rm @ Meas. Temp.	.056 @ 80 F @ °F @ °F @ °F				
Rmf @ Meas. Temp.	.047 @ 82 F .048 @ 81 F @ °F @ °F				
Rmc @ Meas. Temp.	@ °F @ °F @ °F @ °F				
Source: Rmf	Rmc	M			
Rm @ BHT	.046 @ 96 F @ °F @ °F @ °F				
Circulation Stopped	1100				
Logger on Bottom	1330				
Max. Rec. Temp.	96 °F °F °F °F				
Equip.	Location	7646 HOBBS			
Recorded By	WILSON				
Witnessed By Mr.	GRIFFITH				

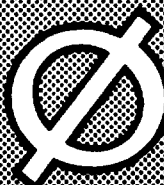
The well name, location and borehole reference data were furnished by the customer.

FOLD HERE

EXHIBIT 3  
Proposed Wtr.  
Inj. Well

ation Logging Systems

sensated **Densilog**  
sensated **Neutron**



FILE NO.	COMPANY <u>TENNECO OIL COMPANY</u>			
	WELL <u>LEONARD BROTHERS NO. 7</u>			
	FIELD <u>SOUTH LEONARD</u>			
	COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u>			
	LOCATION: <u>660' FSL &amp; 660' FWL</u>		Other Services <u>DLL/MLL/GR</u>	
	SEC <u>13</u>	TWP <u>26-S</u>	RGE <u>37-E</u>	
Permanent Datum <u>GROUND LEVEL</u>		Elev. <u>*</u>		Elevations:
Log Measured from <u>K. B.</u> <u>10.4</u> Ft. Above Permanent Datum				KB <u>*</u>
Drilling Measured from <u>K. B.</u>				DF <u>*</u>
				GL <u>*</u>
Date	<u>10-26-77</u>			
Run No.	<u>ONE</u>			
Service Order	<u>88027</u>			
Depth—Driller	<u>3800</u>			
Depth—Logger	<u>3832</u>			
Bottom Logged Interval	<u>3830</u>			
Top Logged Interval	<u>2250</u>			
Casing—Driller	<u>8 5/8@ 503</u>	<u>@</u>	<u>@</u>	<u>@</u>
Casing—Logger	<u>NOT LOGGED</u>			
Bit Size	<u>7 7/8</u>			
Type Fluid in Hole	<u>BRINE-GEL-LOID</u>			
Density and Viscosity	<u>10.2</u> <u>36</u>			
pH and Fluid Loss	<u>7</u> <u>9.6</u> cc	cc	cc	cc
Source of Sample	<u>PIT</u>			
Rm @ Meas. Temp.	<u>.048 @ 78 °F</u>	<u>@ °F</u>	<u>@ °F</u>	<u>@ °F</u>
Rmf @ Meas. Temp.	<u>* @ °F</u>	<u>@ °F</u>	<u>@ °F</u>	<u>@ °F</u>
Rmc @ Meas. Temp.	<u>* @ °F</u>	<u>@ °F</u>	<u>@ °F</u>	<u>@ °F</u>
Source of Rmf and Rmc			<u>°F</u>	
Rm @ BHT	<u>.039 @ 95°F</u>	<u>@ °F</u>	<u>@ °F</u>	<u>@ °F</u>
Time Since Circ.	<u>8 HOURS</u>			
Max. Rec. Temp. Deg. F.	<u>95 °F</u>	<u>°F</u>	<u>°F</u>	<u>°F</u>
Equip. No. and Location	<u>6136</u> <u>HOBBS</u>			
Recorded By	<u>JACKSON</u>			
Witnessed By	<u>JOSEPH</u>			

EXHIBIT 5

Lumberger

SIMULTANEOUS

COMPENSATED NEUTRON-  
FORMATION DENSITY

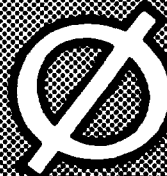
LEA COUNTY FIELD LOCATION WELL COMPANY	SOUTH LEONARD LEONARD BROS. NO. 2 TENNECO OIL CO.	COMPANY <u>TENNECO OIL COMPANY</u>			
		WELL <u>LEONARD BROTHERS NO. 2</u>			
		FIELD <u>SOUTH LEONARD</u>			
		COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u>			
LOCATION		1650' FSL & 990' FEL		Other Services:	
API SERIAL NO.		SEC	TWP.	RANGE	DLL
		13	26-S	37-E	
Permanent Datum: <u>G.L.</u>		<u>2998</u>		Elev.: K.B. <u>3007</u>	
Log Measured From <u>K.B.</u>		<u>9</u> Ft. Above Perm. Datum		D.F. <u>2998</u>	
Drilling Measured From <u>K.B.</u>				G.L. <u>2998</u>	
Date	2-25-77				
R. No.	ONE				
Depth - Driller	3590				
Depth - Logger	3600				
Btm. Log Interval	3599				
Top Log Interval	SURF				
Casing Driller	8 5/8 @ 510	@	@	@	@
Casing Logger	510				
B. size	7 7/8				
Type Fluid - Hole	SALT GEL				
Dens. - Asc.	10 62				
pH - Fluid Loss	7 7.5 ml	ml	ml	ml	ml
Source of Sample	CIRC				
Rm. @ Meas. Temp.	.056 @ 80°F	@ °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.047 @ 82°F	.048 @ 81°F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F	@ °F
Source: Rmf Rmc	M				
Rm. @ BHT	.046 @ 96°F	@ °F	@ °F	@ °F	@ °F
Circulation Stopped	1100				
Logger on Bottom	1330				
Max. Rec. Temp.	96 °F	°F	°F	°F	°F
Equip. Location	76.6 HOBBS				
Recorded By	WILSON				
Witnessed By Mr.	GRIFFITH				

The well name, location and location of the well are furnished by the owner.

FOI D HERE

## Combination Logging Systems

EXHIBIT 3

Compensated **Densilog**  
Compensated **Neutron**

FILE NO.

COMPANY TENNECO OIL COMPANYWELL LEONARD BROTHERS NO. 7FIELD SOUTH LEONARDCOUNTY LEA STATE NEW MEXICOLOCATION: 660' FSL & 660' FWLOther Services  
DLL/MLL/GRSEC 13 TWP 26-S RGE 37-E
 Permanent Datum GROUND LEVEL Elev. \*  
 Log Measured from K. B. 10.4 Ft. Above Permanent Datum  
 Drilling Measured from K. B.

Elevations:

 KB \*  
 DF \*  
 GL \*

Date	10-26-77			
Run No.	ONE			
Service Order	88027			
Depth—Driller	3800			
Depth—Logger	3832			
Bottom Logged Interval	3830			
Top Logged Interval	2250			
Casing—Driller	8 5/8@ 503	@	@	@
Casing—Logger	NOT LOGGED			
Bit Size	7 7/8			
Type Fluid in Hole	BRINE-GEL-VOID			
Density and Viscosity	10.2   36			
pH and Fluid Loss	7   9.6 cc	cc	cc	cc
Source of Sample	PIT			
Rm @ Meas. Temp.	.048 @ 78 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	* @ °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	* @ °F	@ °F	@ °F	@ °F
Source of Rmf and Rmc			°F	
Rm @ BHT	.039 @ 95°F	@ °F	@ °F	@ °F
Time Since Circ.	8 HOURS			
Max. Rec. Temp. Deg. F.	95 °F	°F	°F	°F
Equip. No. and Location	6136   HOBBS			
Recorded By	JACKSON			
Witnessed By	JOSEPH			

SIMULTANEOUS

# COMPENSATED NEUTRON- FORMATION DENSITY

EXHIBIT 3

Lumberger

COUNTY LEA  
FIELD LEONARD  
LOCATION LEONARD FEDERAL #6  
WELL LEONARD FEDERAL #6  
COMPANY TENNECO OIL CO.

COMPANY TENNECO OIL COMPANY

WELL LEONARD FEDERAL #6

FIELD LEONARD

COUNTY LEA STATE NEW MEXICO

LOCATION 500' FSL &amp; 1950' FEL

Other Services:

DLL

API SERIAL NO SEC TWP RANGE  
11 26-S 37-E

Permanent Datum: G.L.; Elev.: 3003  
Log Measured From K.B.; Ft. Above Perm. Datum  
Drilling Measured From K.B.

Elev.: K.B. 3012  
D.F.  
G.L. 3003

Date	7-25-77			
Run No.	ONE			
Depth-Driller	3600			
Depth-Logger	3600			
Btm. Log Interval	3600			
Top Log Interval	1600			
Casing-Driller	8 5/8 @ 500	@	@	@
Casing-Logger	510			
Bit Size	7 7/8			
Type Fluid in Hole	ZEUGEL			
Dens.	10.1	36		
Visc.	7	10 ml	ml	ml
pH				
Fluid Loss				
Source of Sample	CTRC			
Rm @ Meas. Temp.	.036 @ 112 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.041 @ 83 °F	.044 @ 80 °F	@ °F	@ °F
Rmc @ Meas. Temp.	.027 @ 112 °F	@ °F	@ °F	@ °F
Source: Rmf	M	C		
Rm @ BHT	.041 @ 99 °F	@ °F	@ °F	@ °F
Circulation Stopped	1500			
Logger on Bottom	2330			
Max. Rec. Temp.	99 °F	°F	°F	°F
Equip.	7646 HOBBS			
Location				
Recorded By	BOROSS			
Witnessed By Mr.	SCHRECK, BRAZIE			



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

November 20, 1991

United Gas Search, Inc.  
P.O. Box 151  
Tulsa, Oklahoma 74101-0151

Re: Leonard Brothers Waterflood Project  
Leonard Federal Waterflood Project

Dear Sir:

Reference is made to your recent request to consolidate the Leonard Brothers and Leonard Federal Waterflood Projects, both projects previously approved by Division Order No. R-5675 dated March 21, 1978. It is our understanding that the subject waterflood projects currently comprise the following described acreage in Lea County, New Mexico:

Leonard Brothers Waterflood Project  
Township 26 South, Range 37 East, NMPM

Section 13: E/2, NW/4, N/2 SW/4, SW/4 SW/4  
Section 14: N/2

Leonard Federal Waterflood Project  
Township 26 South, Range 37 East, NMPM

Section 14: S/2

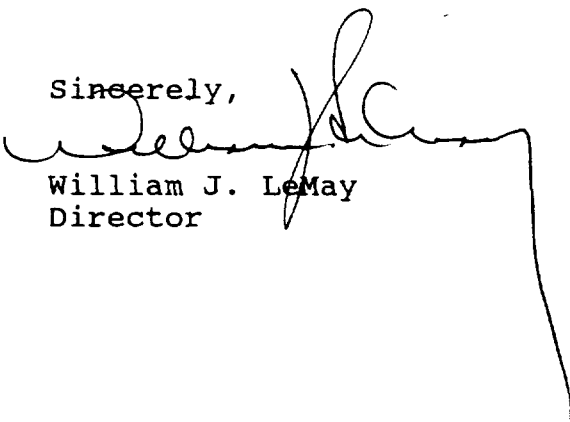
It is further our understanding that the subject acreage is one common Federal Lease (NM-7951), that all interest is common, that the Bureau of Land Management has approved your proposed consolidation, and that both projects involve only the South Leonard Queen Pool. It is further our understanding that you wish to redesignate the wells as "Glenn-Ryan" wells and amend the well numbers.

Authorization is hereby given to consolidate the Leonard Brothers and Leonard Federal Waterflood Projects as described above. The newly consolidated waterflood project is hereby designated the Glenn-Ryan Waterflood Project and shall comprise the following described acreage:

Glenn-Ryan Waterflood Project  
Township 26 South, Range 37 East, NMPM

Section 13: E/2, NW/4, N/2 SW/4, SW/4 SW/4  
Section 14: All

Sincerely,



William J. LeMay  
Director

xc: OCD-Hobbs  
BLM-Carlsbad  
File-Case No. 6161✓  
R. Brown  
OCD-Data Processing