SWD - 146

August 2, 1973

Mr. A. L. Porter, Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Sante Fe, New Mexico 87501

Re: Application for
Salt Water Disposal
No. 3 Federal Media
Sandoval Co. New Mexico

Dear Mr. Porter:

Petro-Lewis Corporation and Fluid Power Pump Company, operator of the Media field located in Township 19 North, Range 3 West, N.M.P.M. Sandoval County New Mexico, desire to convert their No. 3 Federal Media (a non-commercial Gallup well) to a salt water disposal well. This well will be the second salt water disposal well, the No. 5 Federal Media previously approved as a disposal well on Administrative Order SWD-115 January 12th, 1971. Rule 701 (C).

As required by Rule No. 701, a map is attached showing the location of the present producing wells in the Media Entrada field in Sections 14, 15 and 22 of T19N, R3W. These wells are the Jurassic Entrada Federal Media No. 1 and 2, Fluid Power Pump No.'s 1,3 and 5. The map also shows the location of the present salt water disposal well Federal Media No. 5 and the application salt water disposal well Federal Media No. 3. The water pit, tank and injection pumps are located between the Federal Media No.'s 1 and 2 wells and a line will be constructed from the pumps to the Federal Media No. 3 well.

The attached map shows the ownership of the oil and gas leases around the No. 3 well. The majority of the acreage is held by the applicant Petro-Lewis and Fluid Power Pump Company, and there are no other operators active in the area. Mr. Andres Maestas, 2007 Las Luceros Road NW, Albuquerque, New Mexico, is the surface lessee of the acreage upon which the No. 3 well is located, and he has been furnished with a copy of Application Form No. C-108.

We are also enclosing a water analysis report and the analysis shows the produced Entrada water to be almost identical to the analysis submitted for the No. 5 disposal well.

The enclosed induction electric log on the No. 3 well has the formation tops marked and the diagrammatic sketch indicates the casing strings, size and setting depth, cement program and perforated intervals.

Originally, the No. 3 well was drilled to the Entrada sandstone where it was found to be non-productive at a total depth of 5342'. The well was then plugged back per approval USGS by placing a 60 sack cement plug across the Entrada 5342'-5100', a 87 sack plug across the Dakota 4445'-4145'; set 4-1/2" casing at 3102' and cemented with 175 sacks of class C and 175 sacks of Diamix "A" cement. Total cement 350 sacks. Cement top 1600'. The well was selectively perforated from 2826' to 3019' and sand-oil fractured with 40,000 # sand and 31,810 gallons of oil. To the best of our knowledge the well produced approximately 907 bbls from June to August 1969 and was shut in as a non-commercial well. The well was pump tested during June and July of 1973 and made 40 bbls of water per day with a scum of oil. It is our desire to use this well as a salt water disposal well since it has been broken down over a large interval by the fracture treatment and the injection of water into this formation would not contaminate any known formation water. The Mancos shale as shown on the induction electric log forms a good thick seal both above and below the Gallup sandstones and this along with the good cement job should protect any other porous formations from contamination in the salt water disposal well.

Presently Petro-Lewis Corporation and Fluid Power Pump Company are on a limited production capacity from the producing Entrada oil wells due to the inability to dispose of the produced water. Plans to install high volume lift equipment which will increase the oil production considerably also intensifies this problem.

Your approval of the project is respectfully solicited. If additional information is needed please call collect (303) 573-7561 or write the undersigned.

Very truly yours,

Dale R. Worth

Dale R. Worth
Minerals Management, Inc.
928 Patterson Building
Denver, Colorado 80202

Consulting Engineer for
Petro-Lewis Corporation

DRW/mad
Enclosures
cc: Mr. Emery Arnold

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

August 30, 1973

Mr. Dale R. Worth
Minerals Management, Inc.
928 Patterson Building
Denver, Colorado 80202

Re: Order No. SWD-146

Dear Mr. Worth:

Enclosed herewith please find Administrative Order No. SWD-146 for your Federal Media Well No. 3 located in Unit B of Section 22, Township 19 North, Range 3 West, NMPM, Sandoval County, New Mexico.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/[redacted]EK/og

cc: Oil Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR	ADDRESS
Petro-Lewis Corporation	1600 Broadway Denver, Colorado 80202

LEASE NAME	WELL NO.	FIELD	COUNTY
Federal Media	3	Media	Sandoval

LOCATION: UNIT LETTER B ; WELL IS LOCATED 430' FEET FROM THE North LINE AND 1690' FEET FROM THE East LINE, SECTION 22 TOWNSHIP 19N RANGE 3W NMPM

RECEIVED AUG - 6 1973 OIL CONSERVATION COM. Santa Fe

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	DETERMINED BY
SURFACE CASING	8-5/8"	233'	175	Circulated to surface	
INTERMEDIATE	None				
LONG STRING	4-1/2"	3102	175 sks Class C 175" Diamit A	1600'	Temperature Survey
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Gallup	2818'	3362' 3013'-19'

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Perforations	2826-36',2838-49',2856-60',2872-78',2900-16',2926-30',2933-42',2950-54

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Oil well Gallup - non-commercial	No

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	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
None Known	None	Entrada 5300'

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
3000	1000	5000	Closed	Pressure	400

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 —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Yes	None	Yes

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Federal land-surface lessee is Andres Maestas, 2007 Las Luceros Rd. N.W. Albuquerque N.M.

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

There are no operators within one-half mile except the applicant.

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	Yes	No opertors to be notified	Yes

ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	Yes	Yes

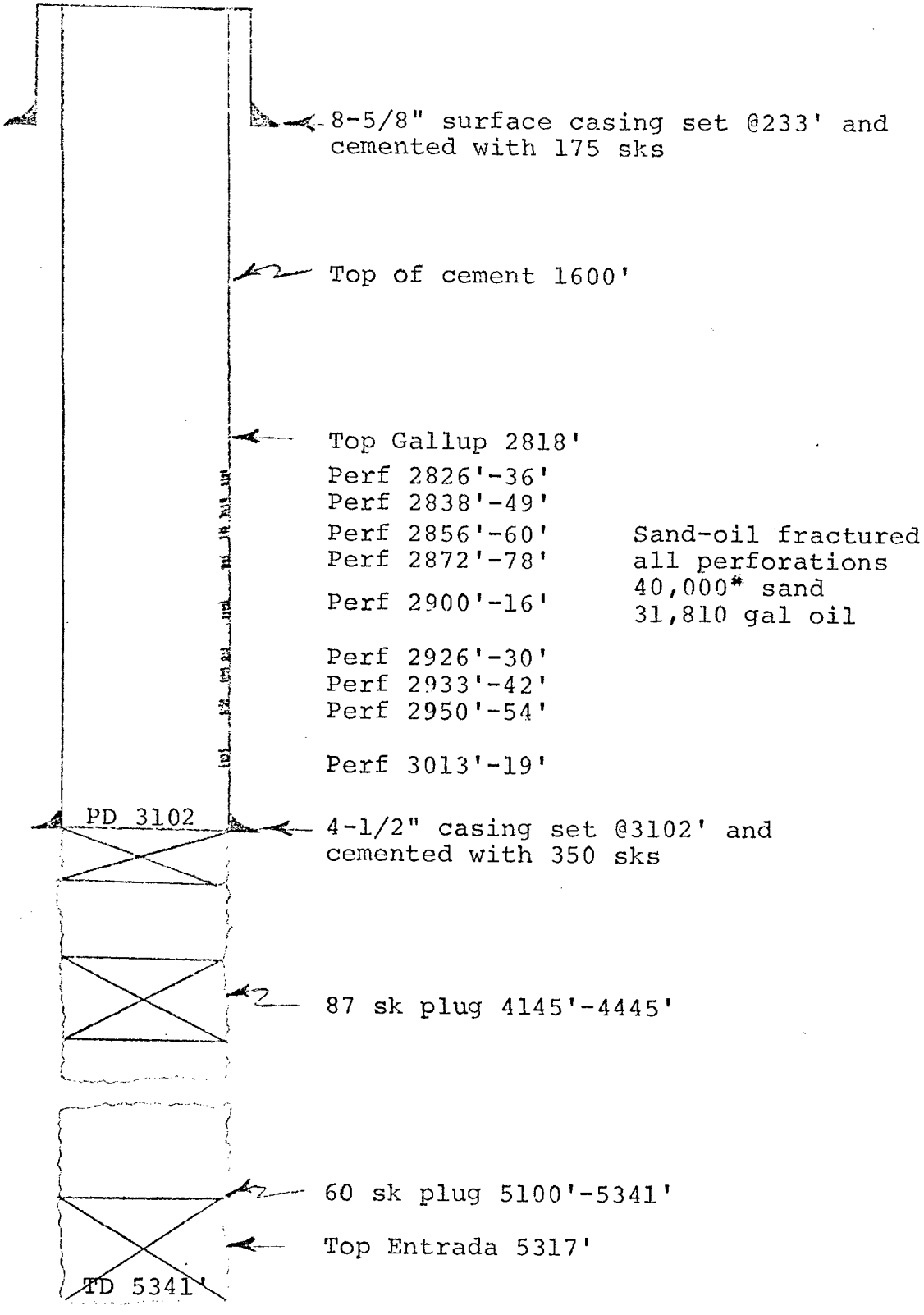
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Dale K. Ward — Consulting Engineer, MMI — August 1, 1973

(Signature) (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.

Federal Media No. 3 Well
430' FNL 1690' FEL Sec. 22 T19N R3W
Sandoval County, New Mexico
(Diagrammatic Sketch)



NALCO

REPORT OF WATER ANALYSIS

From Petro - Lewis
Media Leases

Analysis Date June 25, 1973

Sample Marked Federal Media No. 1

MILLIGRAMS PER LITER

Chloride (as NaCl)	10,500
Total Hardness (as $CaCO_3$)	760
Calcium Hardness (as $CaCO_3$)	750
Total Alkalinity (as $CaCO_3$)	480
Acidity to Phenolphthalein (as $CaCO_3$)	40
Sulfate (as Na_2SO_4)	6,500
Total Iron (as Fe)	
Suspended Solids	
Precipitated By Sulfate (as $BaSO_4$)	
Turbidity (SiO_2)	
H_2S	110
O_2	0
pH	7.0
Specific Gravity	

*Estimated

CCC
Analyst

NALCO CHEMICAL COMPANY
VISCO CHEMICALS
P. O. BOX 87 • SUGAR LAND, TEXAS 77478

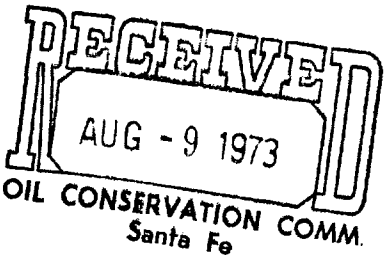
LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

OIL CONSERVATION COMMISSION
3 DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE 8-6-73

Re: Proposed NSP
Proposed NWU
Proposed NSL
Proposed NFO
Proposed MC
Proposed Swd



Gentlemen:

I have examined the application dated 8-1-73

for the Petro Lewis Corp. Federal Medina #3 13-22-17N-3W
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

approve

Yours very truly,

Emery C. Arnold

CHEMICAL & GEOLOGICAL LABORATORIES

SWD 146

P. O. Box 2794
Casper, Wyoming

WATER ANALYSIS REPORT

OPERATOR Petro-Lewis Corporation
WELL NO. Boling Federal 6-22
FIELD SW Media
COUNTY Sandoval
STATE New Mexico

DATE September 30, 1974 LAB NO. 13891
LOCATION SE NW 22-19N-3W
FORMATION Entrada
INTERVAL 5300-5313
SAMPLE FROM

REMARKS & CONCLUSIONS: Green sulfur water.

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	5634	245.08	Sulfate	3700	76.96
Potassium	64	1.64	Chloride	5500	155.10
Lithium	-	-	Carbonate	204	6.79
Calcium	60	2.99	Bicarbonate	903	14.81
Magnesium	48	3.95	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	Present	-
Total Cations		253.66	Total Anions		253.66

Total dissolved solids, mg/l 15655
NaCl equivalent, mg/l 13702
Observed pH 8.9

Specific resistance @ 68°F.:
Observed 0.56 ohm-meters
Calculated 0.51 ohm-meters

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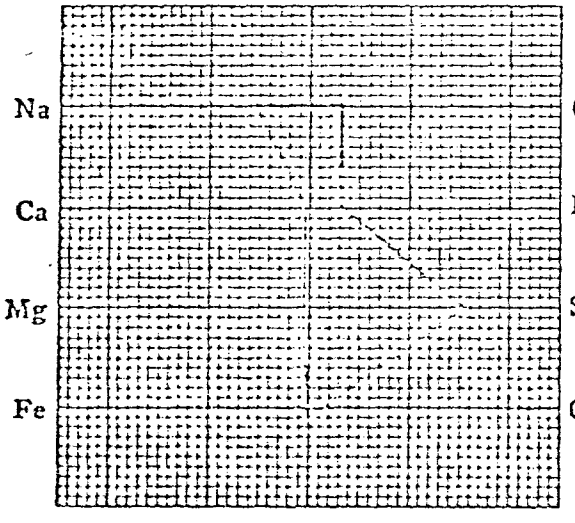
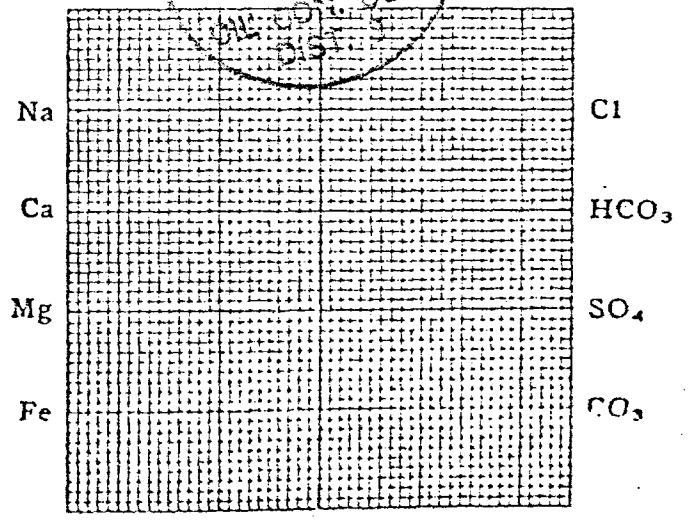
JUL 10 1975
OIL CON. COM.
DIST. 3

WATER ANALYSIS PATTERN

Sample above described

Scale
MEQ per Unit





(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components