



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

8-21-90

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

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

Swd-401

RE: Proposed:

MC	_____
DHC	_____
NSL	_____
NSP	_____
SWD	<u>X</u>
WFX	_____
PMX	_____

Gentlemen:

I have examined the application for the:

<i>Layton Enterprises Inc.</i>	<i>Merrell #1-H</i>	<i>10-9-36</i>
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

 02

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: LAYTON ENTERPRISES, INC.
Address: 3103 79TH ST LUBBOCK TEXAS 79423
Contact party: D.R. LAYTON Phone: 806/795-4636
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: DONALD R. LAYTON Title: PRESIDENT
Signature: Donald R. Layton Date: 8-10-90
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Affidavit of Publication

STATE OF NEW MEXICO)

) ss.

COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is **Adv. Director** of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Legal Notice

and numbered in the

..... Court of Lea County, New Mexico, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, once each week on the same day of the week, for **One (1)**

consecutive weeks, beginning with the issue of

August 10, 19**90**

and ending with the issue of

August 10, 19**90**

And that the cost of publishing said notice is the sum of \$ **5.43**

which sum has been (Paid) ~~XXXXXX~~ (Assessed) as Court Costs

Joyce Clemens

Subscribed and sworn to before me this **13th**

day of **August**, 19**90**

Mrs Jean Serice

Notary Public, Lea County, New Mexico

My Commission Expires **Sept. 28**, 19**90**

LEGAL NOTICE

Layton Enterprises, Inc., 3103 79th St., Lubbock, Texas, 79423, Donald R. Layton, 806/745-4638 had made application to the State of New Mexico, Oil Conservation Division for permit to dispose of produced salt water into the Merrill No. 1 well located 1980 feet FNL and 330 feet FEL, Sec. 10, Twp. 9S, R36E, Lea County, N.M. Injection will be into the Bough "C" (Penn) Formation at a depth of 9793-9825, anticipated maximum rates of 600 B/D at zero pressure. Interested parties may file objection or request for hearing within 15 days to Oil Conservation Division, P. O. Box 2088, Santa Fe, N.M. 87501.

Published in the Lovington Daily Leader August 10, 1990.

INJECTION WELL DATA SHEET

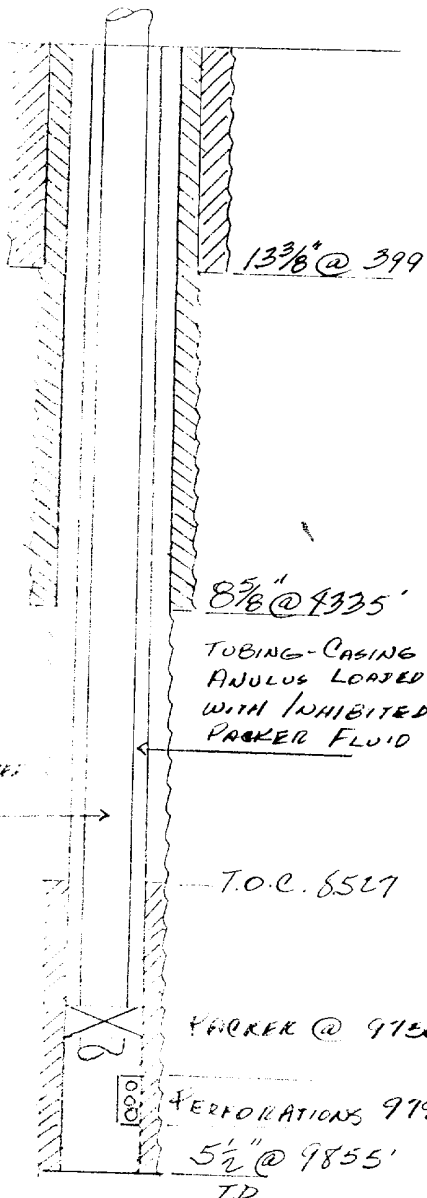
LAYTON ENTERPRISES, INC.

MERRELL

OPERATOR	LEASE			
1	1980' FNL	330' FEL	10	95
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
			36E	

Schematic

Tabular Data



Surface Casing

Size 13 3/8 " Cemented with 300 sx.
 TOC SURFACE feet determined by CIRCULATION
 Hole size 17 1/2 "

Intermediate Casing

Size 8 5/8 " Cemented with 1900 sx.
 TOC SURFACE feet determined by CIRCULATION
 Hole size 11 "

Long string

Size 5 1/2 " Cemented with 200 sx.
 TOC 8527 feet determined by CALCULATION
 Hole size 7 7/8 "

Total depth 9855

Injection interval

9793 feet to 9825 feet
 (perforated or open-hole, indicate which)

Tubing size 3 1/2 " lined with TUBE KOTE TR-70 PLASTIC COATING set in a
 (material)
BAKELL MODEL A-3 - PLASTIC COATED packer at 9750 feet
 (brand and model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation BOUGH "C" (PENN)
- Name of Field or Pool (if applicable) ALLISON PENN
- Is this a new well drilled for injection? ☐ Yes ☒ No
 If no, for what purpose was the well originally drilled? OIL PRODUCTION
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)
NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
8950 - ABO
4800 - SAN ANDRES

SUPPLEMENTAL DATA

- VII. 1. Proposed average daily injection rate is 300 B/D with anticipated maximum rate of 600 B/D.
2. The injection system will be closed.
3. Anticipated injection pressure will be zero at the wellhead.
4. Source of injected fluid will be from the Bough "C" Formation from the Allison Penn Field (same zone as the injection zone).
- VIII. The Bough "C" Zone is a fine crystalline vuggy limestone of Pennsylvanian age identified by late Cisco Fossils. The gross zone is normally 30 feet thick and in the proposed injection well is found at a depth of 9793 (-5721).
- Fresh water zones are almost non-existent in this area. A few wells of very low capacity have been found at a depth of 150-200 ft.
- IX. No stimulation of the well is planned.
- X. Well logs are on file with OCD. Last production test was in May 1982: 5 BOPD - 28 BWPD.
- XI. At present there are no fresh water wells producing within a one mile radius and analysis is not available.

AFFIRMATIVE STATEMENT

As required by Item XII of Form C-108, Layton Enterprises, Inc. has examined available geologic and engineering data and find no evidence of open faults or other hydrologic connection between the disposal zone and any underground source of drinking water.

SCHEMATIC OF 1" WELLS IN FIELD OF REVIEW

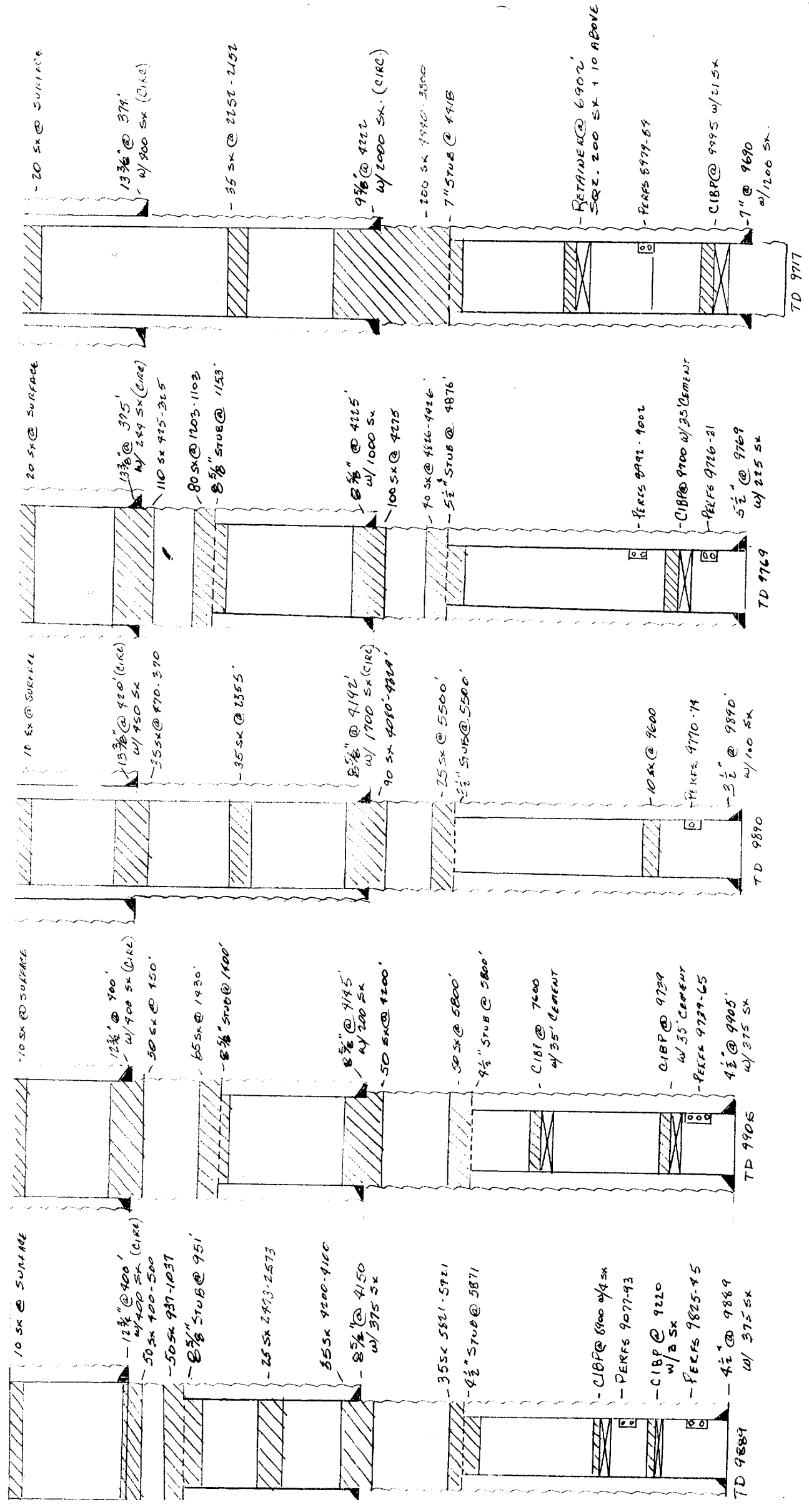
WACO ENERGY OPERATING INC.
MOORE ATLANTIC FEE #3
UNIT P
SEC 10, T 95, R 36E

BLACKHOCK OIL CO.
MOORE ATLANTIC FEE #2
UNIT B
SEC 10, T 95, R 36E

MAURICE L. ECKMAN CO.
O.L. KINER #1
UNIT I
SEC 10, T 95, R 36E

SUN OIL CO.
R.G. MILLS #1
UNIT L
SEC 11, T 95, R 36E

GULF OIL CORP.
MILLS FEE #2
UNIT D
SEC 11, T 95, R 36E



TABULATION OF DATA ON ALL WELLS OF PUBLIC RECORD
(A) THE AREA OF REVIEW - PARAGRAPH II OF C-108.

DISCOVERY OPERATING, INC.
MOBIL ATLANTIC FED. #3

UNIT P SEC 3, T9S, R36E
DRILLED DECEMBER, 1970
CSG: 12 $\frac{3}{4}$ " @ 400' w/400 SK.
8 $\frac{5}{8}$ " @ 4150' w/375 SK.
4 $\frac{1}{2}$ " @ 9889 w/375 SK. (TD)
PERFS: 9825-9845
9077-9093
PULLED: 5871' OF 4 $\frac{1}{2}$ "
951' OF 8 $\frac{5}{8}$ "
BRIDGE PLUGS: 9220 w/3 SK.
8900 w/4 SK
CEMENT PLUGS: 25 SK @ 2573-2473
35 SK @ 5921-5821
35 SK @ 4200-4100
50 SK @ 1037-937
50 SK @ 500-400
10 SK @ SURFACE
P & A MARCH 1976

BLACKROCK OIL CO.
MOBIL ATLANTIC FED. #2

UNIT B SEC 10, T9S, R36E
DRILLED JULY, 1970
CSG: 12 $\frac{3}{4}$ " @ 400' w/400 SK.
8 $\frac{5}{8}$ " @ 4145' w/200 SK
4 $\frac{1}{2}$ " @ 9905' w/375 SK (TD)
PERFS: 9839-9865
PULLED: 5800' OF 4 $\frac{1}{2}$ "
1400' OF 8 $\frac{5}{8}$ "
BRIDGE PLUGS: 9739 w/35' CEMENT
7600 w/35' CEMENT
CEMENT PLUGS: 50 SK @ 5800'
50 SK @ 4200'
65 SK @ 1430'
50 SK @ 450'
10 SK @ SURFACE
P & A APRIL 1974

Maurice L. Brown Co.

O.L. KIRK #1

UNIT I SEC 10, T9S, R36E
DRILLED & ABANDONED BY TRICE, JULY 1959
RE-ENTRY BY J. DON HUGGENS, INC
IN FEBRUARY, 1961 - COMPLETED
AS PRODUCING WELL.

CSS: 13 $\frac{3}{8}$ " @ 420 w/ 450 SK.

5 $\frac{5}{8}$ " @ 4142 w/ 1700 SK.

PERFS: 3 $\frac{1}{2}$ " @ 9890 w/ 100 SK (TD)
9770 - 9774

P & A BY GORDON M. CONE, APRIL 1962

PULLED 5500' OF 3 $\frac{1}{2}$ "

CEMENT PLUGS: 10 SK @ 9600'

25 SK @ 5500'

25 SK @ 4230

10 SK @ SURFACE

RE-ENTRY BY OLEUM INC., APRIL 1970

FOR SWD - OH 4213' - 4510'

P & A BY M.L. BROWN CO., SEPT. 1979

CEMENT PLUGS: 90 SK @ 4329' - 4080'

35 SK @ 2355'

35 SK @ 470' - 310'

10 SK @ SURFACE

SUN OIL CO.

R.G. MILLS #1

UNIT L SEC 11, T9S, R36E

DRILLED NOVEMBER, 1957

CSS: 13 $\frac{3}{8}$ " @ 375 w/ 277 SK.

8 $\frac{5}{8}$ " @ 4225 w/ 1000 SK.

5 $\frac{1}{2}$ " @ 9769 w/ 225 SK. (TD)

PERFS: 9726 - 9731

8992 - 9002

PULLED: 4876' OF 5 $\frac{1}{2}$ "

1153' OF 8 $\frac{5}{8}$ "

BRIDGE PLUG: 9700' w/ 35' CEMENT

CEMENT PLUGS: 40 SK @ 4926 - 4826

50 SK @ 4215 - 4175

100 SK @ 4275

80 SK @ 1203 - 1103

110 SK @ 425 - 325

20 SK @ SURFACE

P & A APRIL 1976

GULF OIL CORP.

MILLS FED. #2

UNIT D SEC 11, T9S, R36E

DRILLED FEBRUARY 1957

CSG: $13\frac{3}{8}$ " @ 377 w/ 400 SK

$9\frac{5}{8}$ " @ 4222 w/ 2000 SK

7" @ 9690 w/ 1200 SK

OPEN HOLE: 9690 - 9717 (TD)

PERFS: 8979 - 87

PULLED 4718' OF 7"

BRIDGE PLUGS: 9495' w/ 21 SK

RETAINER: 6902' w/ 200 SK SQUE.

CEMENT PLUGS: 200 SK @ 4440-3800

35 SK @ 2252 - 2152

20 SK @ SURFACE

P & A SEPTEMBER 1976

LAYTON ENTERPRISES, INC.

EL ZORRO "C" FED No. 3

UNIT C SEC. 11, T9S, R36E

DRILLED SEPTEMBER 1988

CSG: $13\frac{3}{8}$ " @ 380 w/ 350 SK.

$8\frac{5}{8}$ " @ 4157 w/ 1400 SK

$5\frac{1}{2}$ " @ 9800 w/ 1325 SK (TD)

TBG: $2\frac{7}{8}$ " @ 9740

PERFS: 8958 - 78 SQUEEZED w/ 100 SK

9658 - 72 PRODUCING

[illegible]



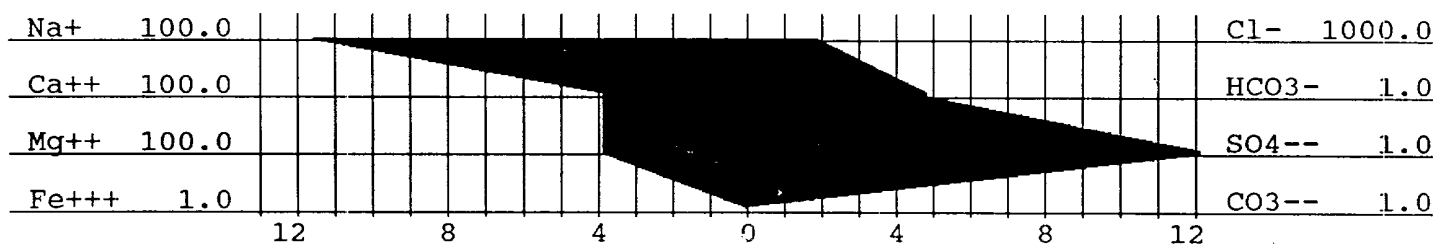
A Baker Hughes company

WATER ANALYSIS
for
LAYTON ENTERPRISES

Date of Analysis:	JUNE 28, 1990	Analysis #:	4008
Company:	LAYTON ENTERPRISES	Company Address:	LUBBOCK
State:	TEXAS	Field:	N/D
Lease:	EL ZORRO C-3	Well #:	C-3
Oil (bbl/day):	N/D	Water (bbl/day):	N/D
Type of Water:	PRODUCED	Temp., C:	20
Sample Source:	WELLHEAD	Date of Sampling:	JUNE 27, 1990
Representative:	W.H. FORT JR.	Analysis By:	BECKY MYERS

WATER ANALYSIS PATTERN

(number beside ion symbol indicates me/l scale unit)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	: 800.00	
Calcium, (Ca++)	: 400.00	8019.25
Magnesium, (Mg++)	: 400.00	4860.56
Iron, (Fe+++)	: 0.05	1.00
Barium, (Ba++)	: N/D	N/D
Sodium, Na+(calc):	1189.26	27353.03
Manganese, (Mn++)	: 0.00	0.00

ANIONS

Chloride, Cl-	: 1971.83	69997.52
Sulfate, SO4--	: 12.49	600.00
Carbonate, CO3--	: 0.00	0.00
Bicarbonate, HCO3-	: 5.00	305.06
Hydroxyl, OH-	: 0.00	0.00
Sulfide, S--	: 0.00	0.00
TOTAL SOLIDS (quant.):		151136.40

DISSOLVED GASES

Hydrogen sulfide:	0.00	mg/l
Carbon dioxide	: 435.60	mg/l
Oxygen	: N/D	mg/l

PHYSICAL PROPERTIES

pH	: 5.80
Spec Grav.	: 1.100
TDS (calc.)	: 111141.42

SCALE STABILITIES

Temp., C	CaCO3	CaSO4	BaSO4
20.0	-0.49	2173	1
30.0	-0.30	2299	1
40.0	-0.08	2521	1
Max entity, (calc.)	879		0

RESIDUAL HYDROCARBONS: N/D

N/D = not determined

Remarks: *6.5* @ 20'C...Slightly corrosive.

@ 20'C...Calcium sulfate scaling is unlikely.

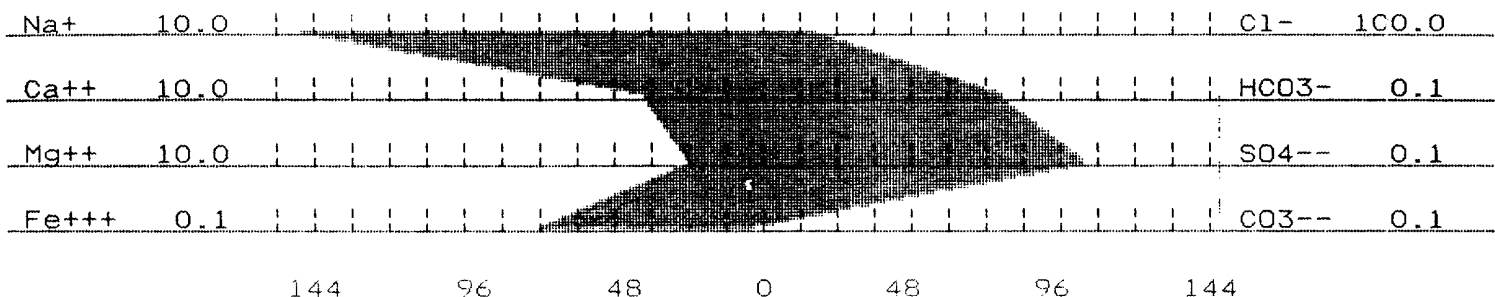


WATER ANALYSIS for LAYTON ENTERPRISE

Date of Analysis: OCTOBER 15, 1987
Company: LAYTON ENTERPRISE
State: N.M.
Lease: EL ZORO FED.
Oil (bbl/day): N/D
Type of Water: PRODUCED
Sample Source: WELLHEAD
Representative: W.H. FORT JR.

Analysis #: 3159
Company Address: N/D
Field: N/D
Well #: # 1
Water (bbl/day): N/D
Temp., C: 20
Date of Sampling: OCTOBER 12, 1987
Analysis By: STEVE STROUD

WATER ANALYSIS PATTERN (number beside ion symbol indicates me/l scale unit)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	580.00	
Calcium, (Ca++)	360.00	7217.32
Magnesium, (Mg++)	220.00	2673.31
Iron, (Fe+++)	6.99	130.00
Barium, (Ba++)	N/D	N/D
Sodium, Na+(calc)	1459.62	33571.36
Manganese, (Mn++)	0.00	0.00

ANIONS

Chloride, Cl-	2028.00	71991.48
Sulfate, SO4--	10.61	510.00
Carbonate, CO3--	0.00	0.00
Bicarbonate, HCO3-	8.00	488.10
Hydroxyl, OH-	0.00	0.00
Sulfide, S--	0.00	0.00
TOTAL SOLIDS (quant.)		145581.50

DISSOLVED GASES

Hydrogen sulfide:	0.00	mg/l
Carbon dioxide	237.60	mg/l
Oxygen	0.80	mg/l

PHYSICAL PROPERTIES

pH	6.40
Spec Grav.	1.080
TDS (calc.)	116589.56

SCALE STABILITIES

Temp., C	CaCO3	CaSO4	BaSO4
20.0	0.26	2291	1
30.0	0.44	2419	1
40.0	0.67	2647	1
Max entity, (calc.)	749		0
RESIDUAL HYDROCARBONS:		N/D	

N/D = not determined

REMARKS @ 20'C SLIGHTLY CORROSIVE & ALSO SLIGHT CARBONATE SCALING
@ 20'C CALCIUM SULFATE SCALING IS UNLIKELY.

N O T I C E

Pursuant to Section XIV of Form C-108, copies of the application have been mailed to the following:

Surface Owner: Ross N. Ainsworth
P O Box 7
Milnesand, New Mexico 88125

Offset Operators within one-half mile:
Ross N. Ainsworth
P O Box 7
Milnesand, New Mexico 88125

Discovery Operating Co.
800 N. Marienfeld, Ste. 100
Midland, Texas 79701