

# *Consolidated Oil & Gas, Inc.*

LINCOLN TOWER BUILDING  
1860 LINCOLN STREET  
DENVER, COLORADO 80295  
(303) 861-5252

February 14, 1984

Kellahin & Kellahin  
El Patio - 117 North Gliadslupe  
P. O. Box 2265  
Santa Fe, New Mexico 87504-2265

ATTENTION: Mr. Tom Kellahin

RE: Midway State No. 1 SWD  
Section 8, T17S, R37E  
Lea County, New Mexico

Dear Tom:

Attached are five (5) copies of the form C-108 and exhibits for our application to dispose of saltwater in the Glorieta zone in the subject well. We will abandon the Abo zone, OCD order 6943, and plug back to the Glorieta.

The notice to the offset operators and the notice for publication in a local newspaper have not been done.

Yours very truly,

CONSOLIDATED OIL & GAS, INC.

*D. T. Stogner, Jr.*  
D. T. Stogner, Jr.  
Operations Manager  
Southern Division

DTS/blw

Attachment

## APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ yes ☒ no
- II. Operator: Consolidated Oil & Gas, Inc.  
Address: 1860 Lincoln Street, Suite 1100, Denver, Colorado 80295  
Contact party: D. T. Stogner, Jr. Phone: (303) 861-5252
- 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: D. T. Stogner, Jr. Title: Operations Manager  
Signature: *D.T. Stogner, Jr.* Date: 2-17-84
- \* 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.

CONSOLIDATED OIL & GAS, INC.  
Midway - State 1  
Salt Water Disposal

INDEX

- Exhibit 1 - Map Required by Paragraph V of C-108
- Exhibit 2 - Tabular Summary Required by Paragraph VI of C-108
- Exhibit 3 - Data Sheet Required by Paragraph VII of C-108
- Exhibit 4 - Geological Data Required by Paragraph VII of C-108
- Exhibit 5 - Log of Disposal Well
- Exhibit 6 - Injection Well Data Sheet
- Exhibit 7 - Schematic of P&A Wells Within 1/2 Mile
- Exhibit 8 - Water Quality Required by Paragraph XI of C-108
- Exhibit 9 - Statement Required by Paragraph XII of C-108
- Exhibit 10 - Notice Requirements



TABULAR SUMMARY  
Wells Within One-half Mile of  
Consolidated Oil & Gas, Inc. Midway State # 1

Apollo Oil Company	Lovington 16 State # 1 Producing	440' FNL & 1980' FWL, Sec 16, T17S, R37E	TD 9048', Perfs 8930'-8979'
		Csg: 13-3/8" @ 329' w/250 sx	Top of cmt: Surface
		8-5/8" @ 3570' w/400 sx	Top of cmt: 1998' est.
		4-1/2" @ 9048' w/300 sx	Top of cmt: 7623' TS
	Lovington 9 State # 2 SWD	660' FSL & 1980' FWL, Sec 9, T17S, R37E	TD 9096', Perfs 8901'-898'
		Csg: 10-3/4" @ 295' w/250 sx	Top of cmt: Surface
		7" @ 5550' w/350 sx	Top of cmt: 4600' est
		4-1/2" @ 9090' w/700 sx	Top of cmt: 2270'
	Lovington 9 State # 1 P&A	500' FSL & 500' FWL, Sec 9, T17S, R37E	TD 9014', Perfs 8813'-8904'
		Csg: 13-3/8" @ 303' w/250 sx	Top of cmt: surface
		8-5/8" @ 3548' w/400 sx	Top of cmt: 1976' TS,
		5-1/2" @ 9217' w/183 sx	cut & pulled from 1010'
	Consolidated Oil & Gas, Inc. Southern Union State # 1 Pumping	500' FSL & 660' FWL, Sec 16, T17S, R37E	TD 9014', Perfs 8861'-8898'
		Csg: 13-3/8" @ 314' w/350 sx	Top of cmt: Surface
		8-5/8" @ 3549' w/350 sx	Top of cmt: 2825' TS
		5-1/2" @ 9014' w/300 sx	Top of cmt: 7282' est
	Shipp # 1 TA	660' FEL & 1980' FNL, Sec 17, T17S, R37E	TD 9027', Perfs 8915'-8926'
		Csg: 10-3/4" @ 343' w/275 sx	Top of cmt: Cmt circ
		7-5/8" @ 3550' w/300 sx	Top of cmt: 2150' est
		5-1/2" liner 3424'-9030' w/330 sx	Top of cmt: 3424'
	Shipp # A1 Producing	1650' FNL & 1650' FEL, Sec 17, T17S, R37E	TD 8977', Perfs 8886'-8906'
		Csg: 12-3/4" @ 310' w/375 sx	Top of cmt: surface
		7-5/8" @ 3970' w/250 sx	Top of cmt: 1790'
		5-1/2" liner 3871'-8976' w/100 sx	Top of cmt: 3871'

Consolidated Oil & Gas, Inc. Midway State # 2  
P&A

330' FSL & 1650' FEL, Sec 8, T17S, R37E TD 8905', Perfs 8703'-8842'  
Csg: 12-3/4" @ 301' w/350 sx Top of cmt: surface  
8-5/8" @ 4354' w/350 sx Top of cmt: 3430' est, cut  
5-1/2" liner 4240'-8900' w/425 sx & pulled from 700'  
Spud date 12-18-64 Top of cmt: 4240'

Gulf Oil Corp.

Lea State KN # 1  
Producing

990' FNL & 330' FEL, Sec 17, T17S, R37E TD 9011', Perfs 8800'-8932'  
Csg: 13-3/8" @ 344' w/286 sx Top of cmt: surface  
8-5/8" @ 3596' w/250 sx Top of cmt: 2990' est  
5-1/2" @ 9010' w/350 sx Top of cmt: 7000' est  
Spud date 5-4-63

Lea State KN # 2  
Producing

990' FNL & 1650' FEL, Sec 17, T17S, R37E TD 9012', Perfs 8797'-8982'  
Csg: 13-3/8" @ 359' w/300 sx Top of cmt: surface  
8-5/8" @ 4299' w/450 sx Top of cmt: 3200' est  
5-1/2" @ 9009' w/200 sx Top of cmt: 7850' est  
Spud date 4-27-64

David Fasken

Hale State # 1Y  
Producing

2260' FSL & 1650' FEL, Sec 8, T17S, R37E TD 11,875', Perfs 11,800'-  
11,850'  
Csg: 13-3/8" @ 438' w/350 sx Top of cmt: Surface  
8-5/8" @ 4450' w/1700 sx Top of cmt: surface  
5-1/2" @ 11,875' w/375 sx & 850 sx Top of cmt: 4000' TS  
Spud date 4-29-80

Davoil State # 1  
Producing

1980' FSL & 990' FEL, Sec 8, T17S, R37E TD 11,860', Perfs 10,738'-  
11,820'  
Csg: 13-3/8" @ 412' w/350 sx Top of cmt: surface  
8-5/8" @ 4465' w/2200 sx Top of cmt: surface  
5-1/2" @ 11,860' w/1825 sx Top of cmt: 3610' TS  
Spud date 6-17-81

Consolidated State # 1  
P&A

2310' FNL & 330' FNL, Sec 9, T17S, R37E TD 11,073' Dry hole  
Csg: 13-3/8" @ 398' w/350 sx Top of cmt: surface  
8-5/8" @ 4462' w/1600 sx Top of cmt: surface  
Spud date 1-10-81

David Fasken

Hale State # 1  
P&A

2310' FSL & 1650' FEL, Sec 8, T17S, R37E  
Csg: 13-3/8" @ 437' w/350 sx  
(drill collars left in hole  
1046'-1145')

TD 1215', Perfs none  
Top of cmt: surface

Plug # 1 250 sx/260'-550'  
Plug # 2 10 sx/surface-20'

Spud date 4-18-80

Consolidated State # A-1  
Producing

990' FSL & 1650' FEL, Sec 8, T17S, R37E  
Csg: 13-3/8" @ 399' w/350 sx  
8-5/8" @ 4392' w/1900 sx  
5-1/2" @ 11,934' w/875 sx + 950 sx  
Spud date 11-19-81

TD 11,935', Perfs 11,753'-  
11,882'  
Top of cmt: surface  
Top of cmt: surface  
Top of Cmt: 4100' TS

Hondo Drilling Company

Midway - State # A-1  
P&A

1600' FSL & 700' FEL, Sec 8, T17S, R37E  
Csg: 11-3/4" @ 329' w/250 sx  
8-5/8" @ 4399' w/375 sx  
4-1/2" @ 8680' w/165 sx

TD 8952', perfs 8495'-8618'  
Top of cmt: surface  
Top of cmt: 3320' est, cut &  
pulled from 1250'  
Top of cmt: 7950' est, cut &  
pulled from 7850'

Drilled 1965

Ref. Para VII, C-108

CONSOLIDATED OIL & GAS, INC.  
EXHIBIT 3

Midway State #1  
Salt Water Disposal Well  
Section 8, T17S, R37E NMPM  
Lea County, New Mexico

DATA ON PROPOSED OPERATION

1. Proposed average and maximum daily rate and volume of fluids to be injected:

Average Daily Rate: 1200 BWPD  
Maximum Daily Rate: 2000 BWPD

2. System is open.
3. Proposed average and maximum injection pressures:

Average Injection Pressure: 500 psi  
Maximum Injection Pressure: 1200 psi

4. Source of injection fluid: Leases is area.
5. Zone of disposal is not productive of oil and gas within one mile of proposed disposal well.



REF: Para VIII, C-108

CONSOLIDATED OIL & GAS, INC.

EXHIBIT 4

Midway State #1  
Salt Water Disposal Well  
Section 8, T17S, R37E NMPM  
Lea County, New Mexico

GEOLOGICAL DATA ON INJECTION ZONE

Formation:	Glorieta (Permian)
Lithology:	Sandstone
Thickness:	109 feet
Top:	6585'

No underground sources of drinking water below proposed injection zone. Freshwater zones above injection zone are protected by surface casing.



# WELEX

## ACOUSTIC VELOCITY LOG

COMPANY Consolidated Oil & Gas, Inc.  
WELL Midway-State # 1-8  
FIELD Midway (Abo)  
County Lea State N. M.

COMPANY CONSOLIDATED OIL & GAS, INC.

WELL MIDWAY-STATE # 1-8

FIELD MIDWAY (ABO)

COUNTY LEA STATE NEW MEXICO

Location 330' FSL 330' FEL

Other Services:  
Guard

Sec. 8 Twp 17-S Rge 37-E

Ground Level Elev. 3773

Elev. K.B. 3784  
D.F. 3783  
G.I. 3773

Permanent Datum K. B. 11 Ft. Above Perm. Datum  
Log Measured From Kelly Bushing  
Drilling Measured From

Date 12-6-64

Run No. - One -

Depth-Driller 8939

Depth-Welex 8938

Bim. Log Inter. 8932

Top Log Inter. 20

Casing-Driller 8-5/8" @ 3973

Casing-Welex -

Bit Size 7-7/8"

Type Fluid in Hole Mud

Dens. Visc. 9 138

pH Fluid Loss 6 14.6 ml

Source of Sample Circulated

R<sub>m</sub> @ Meas. Temp. .14 @ 72°F

R<sub>mf</sub> @ Meas. Temp. .10 @ 54°F

R<sub>mc</sub> @ Meas. Temp. .25 @ 67°F

Source R<sub>mf</sub> R<sub>mc</sub> Measured

R<sub>m</sub> @ BHT .088 @ 134°F

Time Since Circ. 134°F @ BH

Max. Rec. Temp. 7121 Hobbs

Equip. Location B. A. Kithas

Recorded By Mr. Farnmar

Fold Here

REMARKS

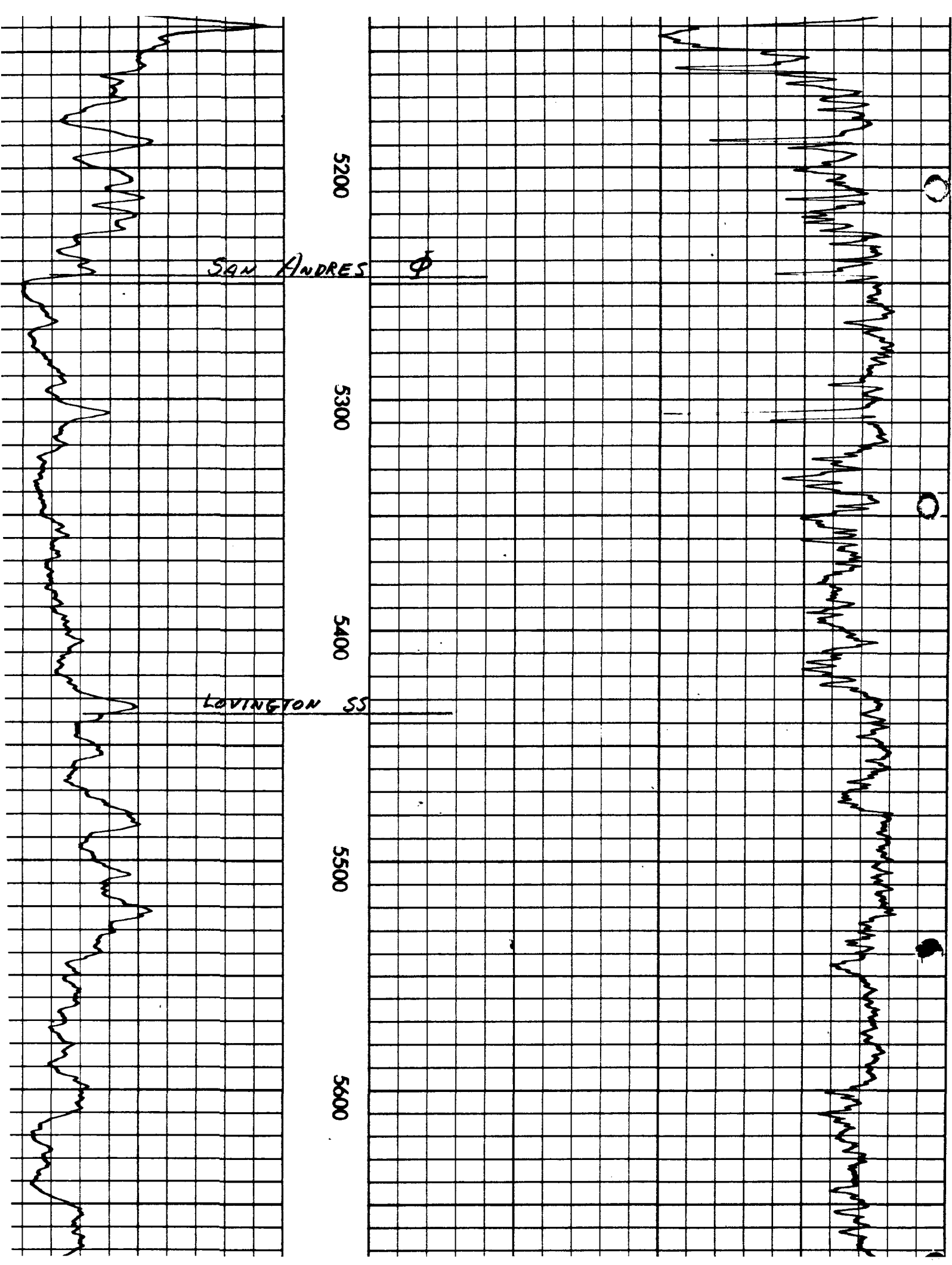
Change in Mud Type or Additional Samples

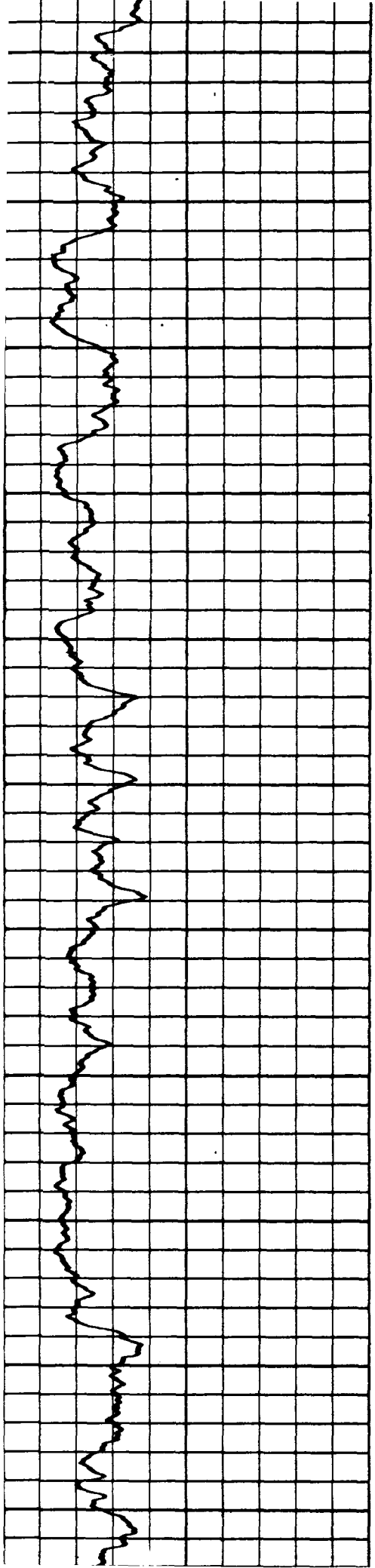
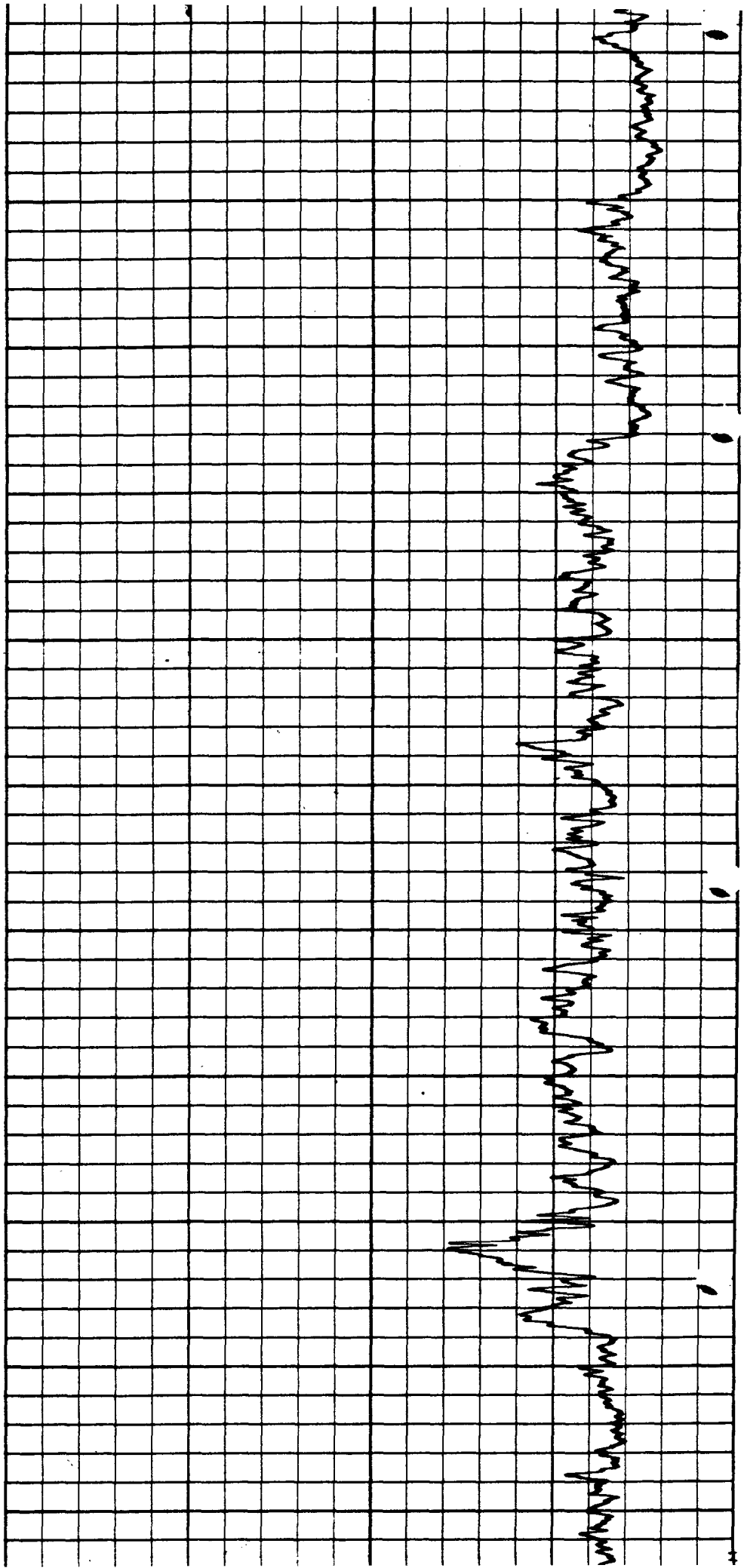
SCALE CHANGES

Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down Hole
Depth-Driller					
Type Fluid in Hole					
Dens.	Visc.				
ph	Fluid Loss				
Source of Sample					
R <sub>m</sub> @ Meas. Temp.	@ °F	@ °F	Run No.	Tool Type and No.	Pad Type
R <sub>mf</sub> @ Meas. Temp.	@ °F	@ °F	- 1 -	AVL # 11172-98	9
R <sub>mc</sub> @ Meas. Temp.	@ °F	@ °F		G/R # 11186	
Source: R <sub>mf</sub>   R <sub>mc</sub>	Measured				
R <sub>m</sub> @ BHT	.088 @ 134 °F	@ °F			
R <sub>mf</sub> BHT	.046 @ 134 °F	@ °F			
R <sub>mc</sub> BHT	.135 @ 134 °F	@ °F			

EQUIPMENT DATA

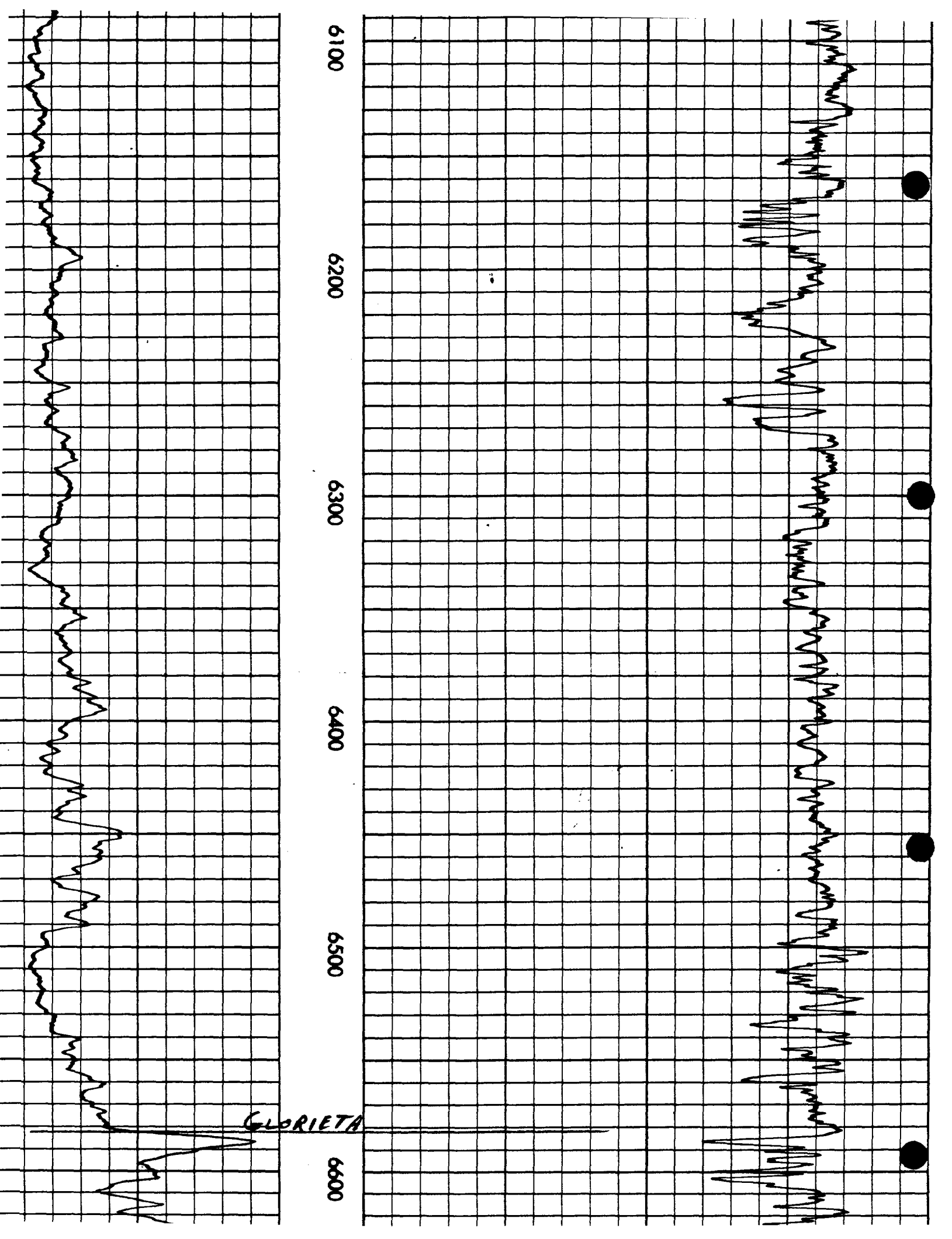
Other  
Centralized  
GM 1E11 28"

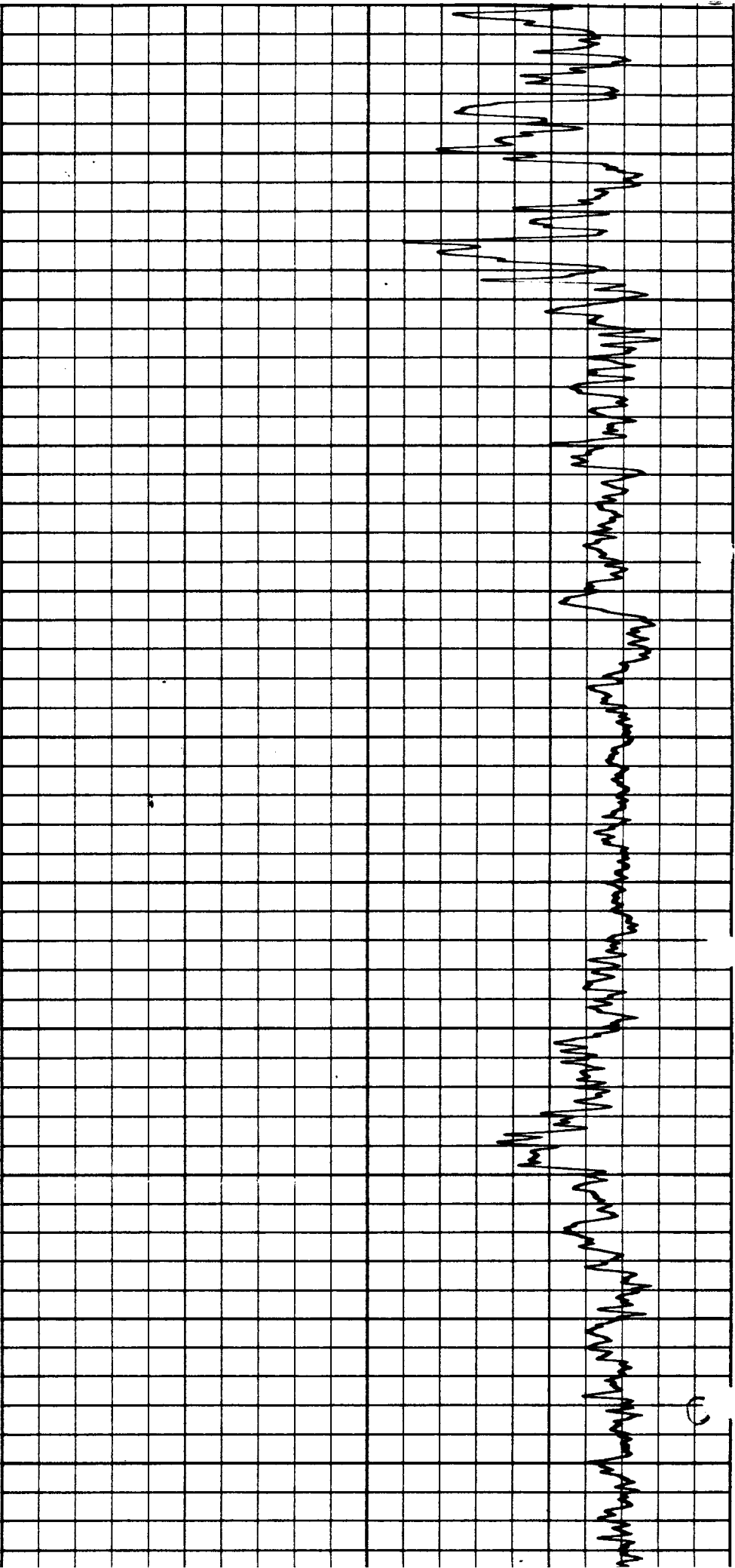




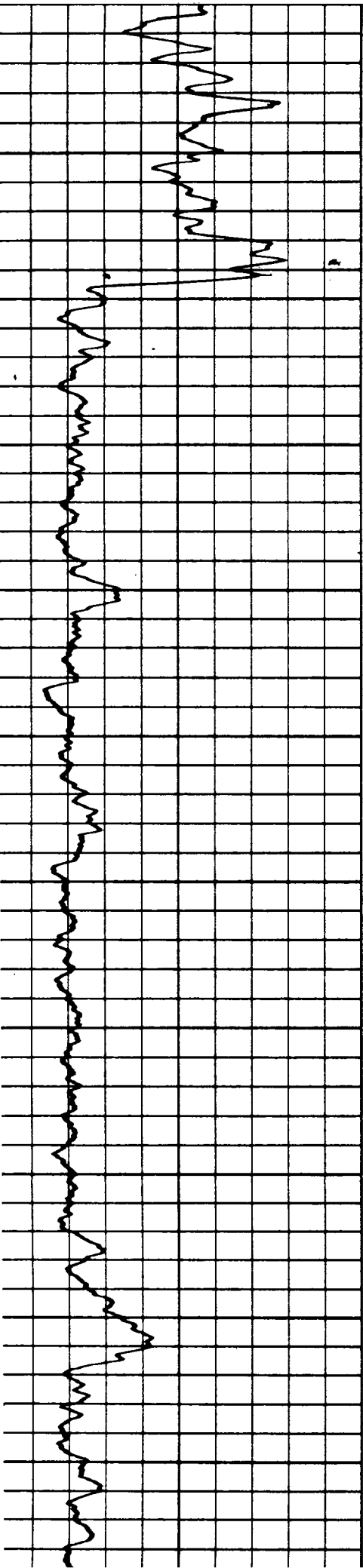
6100 6200 6300 6400 6500 6600

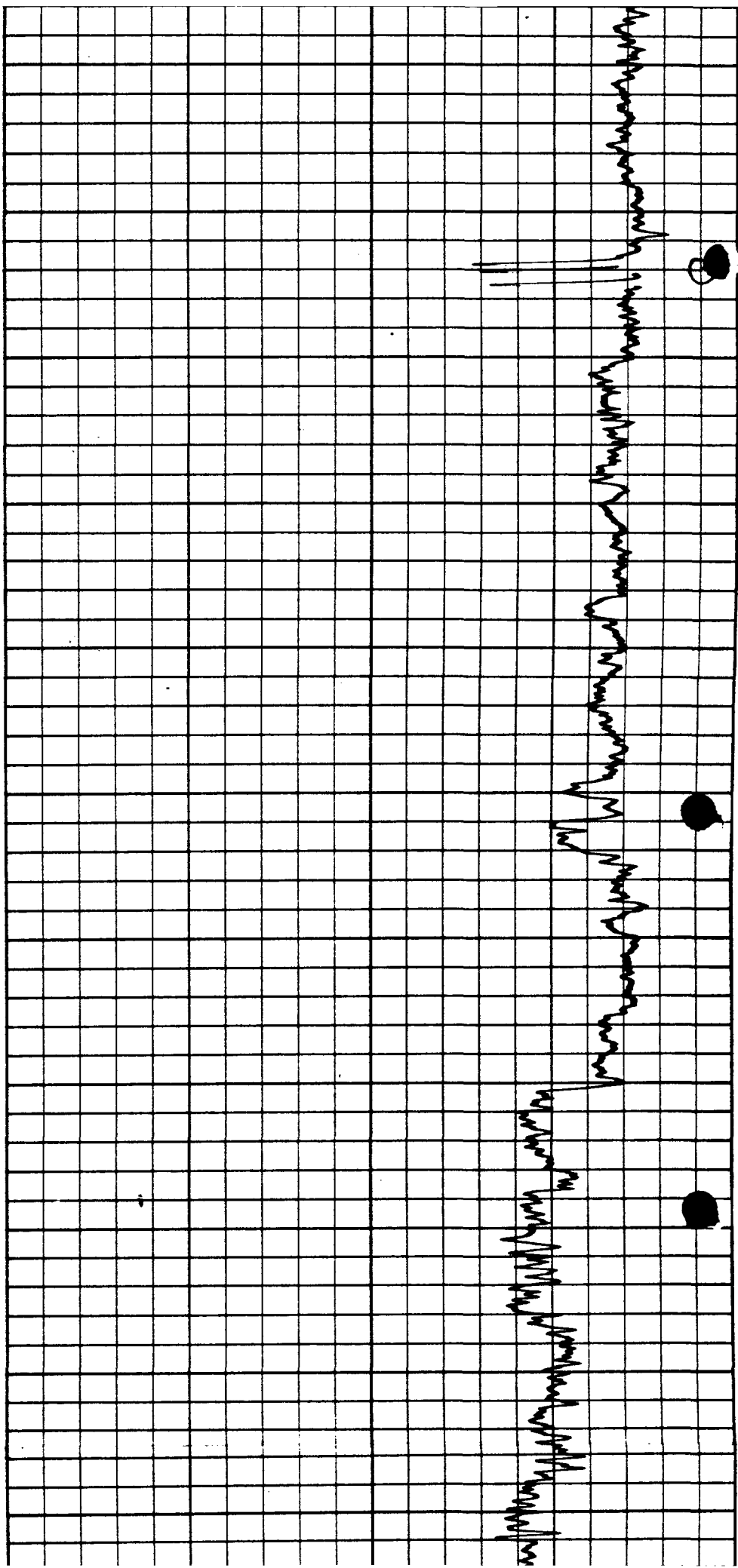
GLORIETA





500 6700 6800 6900 7000 7100





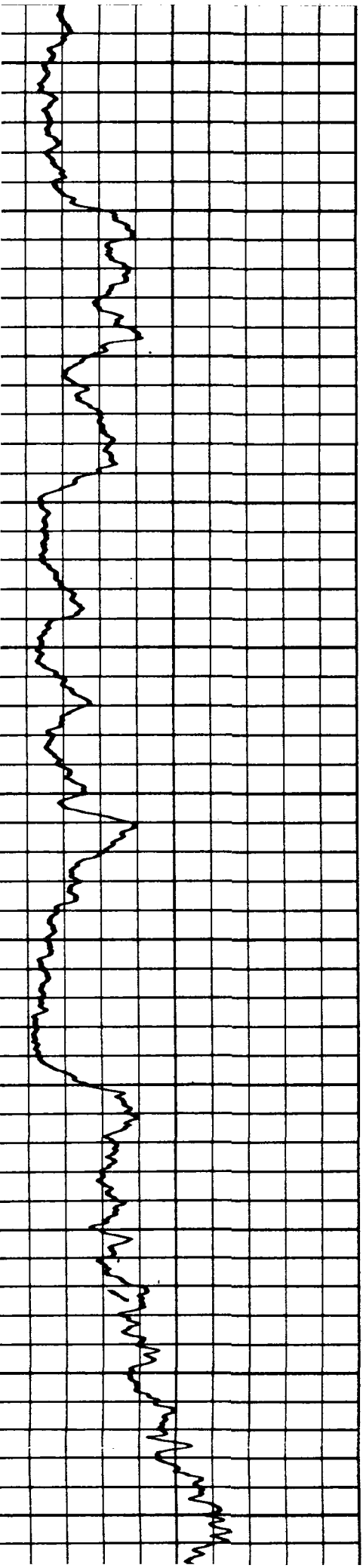
7200

7300

7400

7500

7600

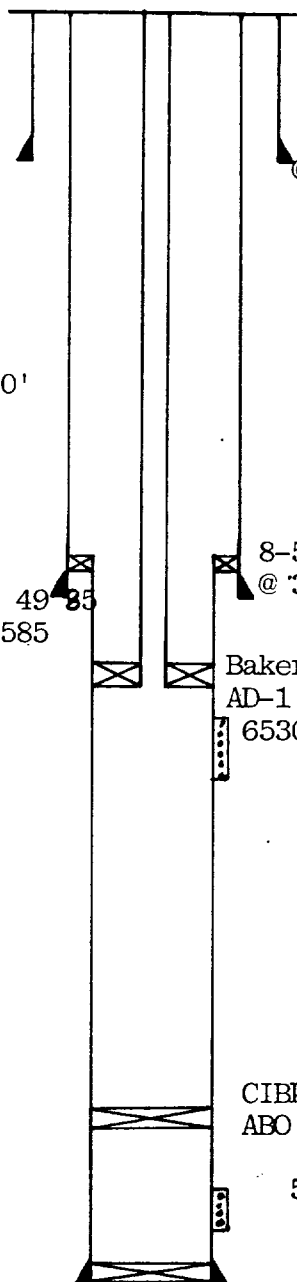


# INJECTION WELL DATA SHEET

Consolidated Oil & Gas, Inc.		Midway State		
OPERATOR		LEASE		
1	330' FSL & 330' FEL	8	17S	37E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Lea County, New Mexico				

## Schematic

## Tabular Data



### Surface Casing

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

### Intermediate Casing

Size 8-5/8 " Cemented with 350 sx.  
 TOC 2600 feet determined by calculated  
 Hole size 12"

### Long string (Liner)

Size 5-1/2 " Cemented with 425 sx.  
 TOC 4300' feet determined by TS  
 Hole size 7-5/8"  
 Total depth 8938

### Injection interval

6585 feet to 6690 feet  
 (perforated or open-hole, indicate which)

Yates 3220'

Queen 4185  
 San Andres 4985  
 Glorieta 6585

8-5/8"  
 @ 3971'  
 Baker Model  
 AD-1 Packer @  
 6530'

ABO 8676

CIBP 8600'  
 ABO perfs 8688'-8856'

5-1/2" liner 3836'-8936' (Top tested to 1250 psi at surface, held ok)

Tubing size 2-7/8" lined with Plastic set in a  
 (material)  
Baker Model AD-1 packer at 6530 feet.  
 (brand and model)

(or describe any other casing-tubing seal).

## Other Data

- Name of the injection formation Glorieta
- Name of Field or Pool (if applicable) Midway ABO
- Is this a new well drilled for injection? ☐ Yes ☒ No  
 If no, for what purpose was the well originally drilled? Oilwell completion in ABO.

- 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 - perforations in ABO zone 8688'-8856' to be plugged with bridge plug at 8600' and cement on BP.

- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

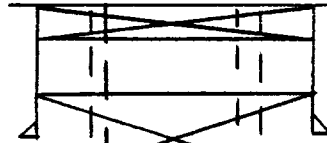
Midway (Strawn) 10,660'

Midway (Devonian) 11,680'

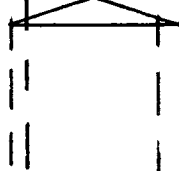


Supron Energy Corporation  
Lovington 9 State No. 1  
500' FSL & 500' FWL  
Sec 9, T17S-R37E  
P&A 12-19-76

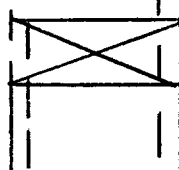
10 sx cmt plug @ surface



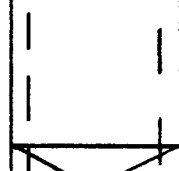
65 sx cmt plug 240'-360'  
13-3/8" @ 303' w/250 sx circ.



45 sx cmt plug 950'-1060'  
8-5/8" csg cut & pulled from 1010'



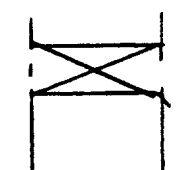
50 sx cmt plug 3425'-3594'  
8-5/8" @ 3548' w/400 sx



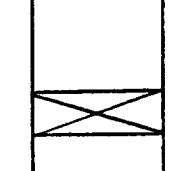
50 sx cmt plug 5820'-6175'  
4-1/2" csg cut & pulled from 6175'



CIBP @ 8794' w/35 sx cmt on top

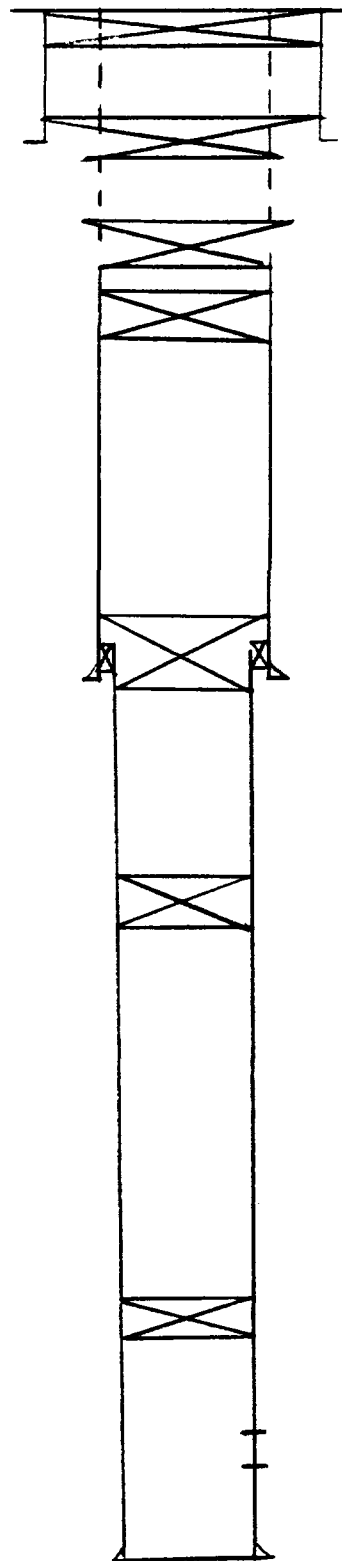


Abo perfs 8813'-8904'



TD 9217'

Consolidated Oil & Gas, Inc.  
Midway State 2  
330' FSL & 1650' FEL  
Sec. 8, T17S, R37E  
P&A 1-22-82



10 sx cmt plug at surface

40 sx cmt plug 230'-330'  
12-3/4" csg @ 301' w/350 sx, circ

35 sx cmt plug 650'-750'  
8-5/8" csg cut & pulled from 700'  
35 sx cmt plug 782'-882'

35 sx cmt plug 4190'-4290'  
Top of 5-1/2" liner 4240'  
8-5/8" csg @ 4354' w/350 sx

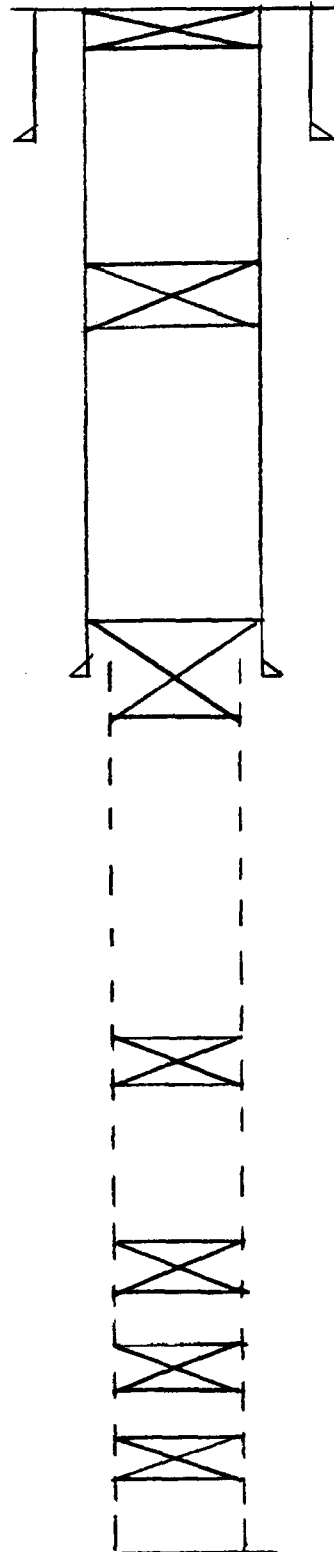
35 sx cmt plug 5600'-5700'

CIPB @ 8510' w/10 sx cmt

Abo perfs 8703'-8842'  
5-1/2" liner @ 8900' w/425 sx

TD 8905'

David Fasken  
Consolidated State # 1  
2310' FNL & 330' FWL  
Sec 9, T17S, R37E  
P&A 3-2-81



Plug # 7 35'-0' w/10 sx

13-3/8" csg @ 398' w/350 sx, circ

Plug # 6 1400'-1300' w/30 sx

8-5/8" @ 4462' w/1600 sx, circ  
plug # 5 4512'-4412' w/40 sx

Plug # 4 6404'-6304' w/50 sx

Plug # 3 8918'-8818' w/40 sx

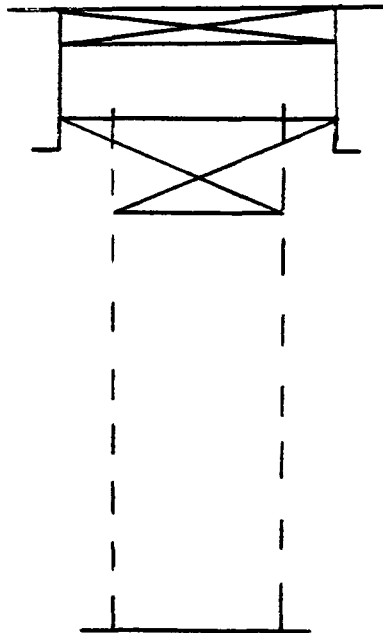
Plug # 2 9140'-9040' w/40 sx

Plug # 1 10,754'-10,654' w/35 sx

Open hole (7-7/8")

TD 11,073'

David Fasken  
Hale State # 1  
2310' FSL & 1650' FEL  
Sec 8, T17S, R37E  
P&A 4-26-80



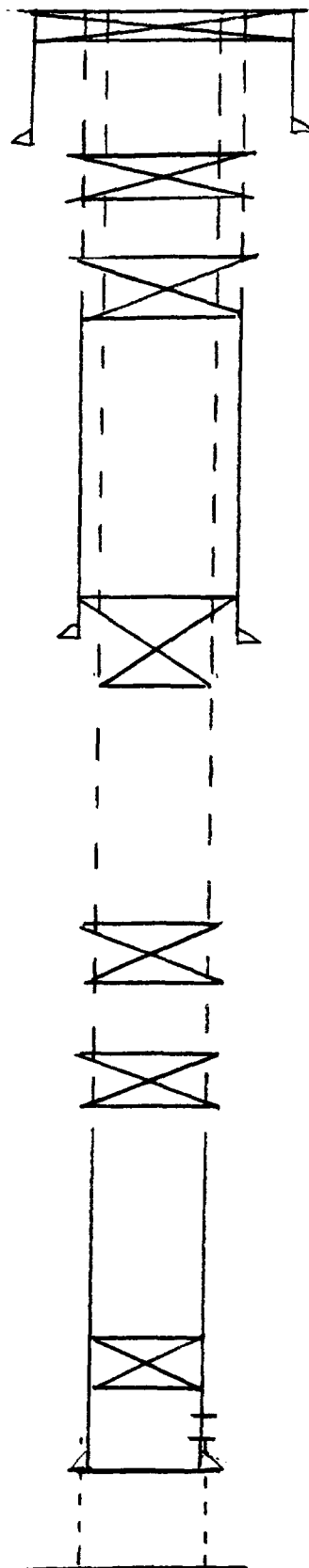
10 sx cmt plug at surface

13-3/8" @ 437' w/350 sx, circ  
250 sx cmt plug 260'-550'

Drill collars left in hole  
1046'-1145'

TD 1215'

Hondo Drilling Company  
 Midway - State "A" 1  
 1600' FSL & 700' FEL  
 Sec 8, T17S, R37E  
 P&A 5-4-66



10 sx cmt plug at surface

11-3/4" @ 329' w/250 sxs  
 25 sx cmt plug 360'-330'

25 sx cmt plug 1260'-1230'  
 8-5/8" csg cut & pulled from 1250'

25 sx cmt plug 4400'-4325'  
 8-5/8" @ 4399' w/375 sx

25 sx cmt plug 6460'-6385'

25 sx cmt plug 7800'-7725'

4-1/2" csg cut & pulled from 7850'

50 sx cmt plug. Top @ 8072'  
 Abo perfs 8495'-8618'

4-1/2" @ 8680' W/165 sx

CONSOLIDATED OIL & GAS, INC.

Exhibit 8

Midway State 1  
Salt Water Disposal Well  
Section 8, T17S,R37E, NMPM  
Lea County, New Mexico

Fresh Water Chemical Analysis

SOURCE LOCATION	WATER WELL Sec. 5,T17S,R37E	IRRIGATION WELL Sec. 5,T17S,R37E
Date Sampled	2-4-82	2-4-82
Total Hardness	0.45	6.5
Calcium	8 mg/l	114 mg/l
Sodium	378.4 mg/l	48.3 mg/l
Chlorides	380 mg/l	110 mg/l
Sulfates	88 mg/l	100 mg/l
Bicarbonates	268.4 mg/l	207.4 mg/l
pH	6.65 mg/l	6.05 mg/l
Total dissolved solids	1123.4 mg/l	589.5 mg/l

CONSOLIDATED OIL & GAS, INC.

Exhibit 9

Midway State 1  
Salt Water Disposal Well  
Section 8, T17S,R37E, NMPM  
Lea County, New Mexico

Affirmative Statement

Consolidated Oil & Gas, Inc. has examined available geological and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

CONSOLIDATED OIL & GAS, INC.

Exhibit 10

Midway State 1  
Salt Water Disposal Well  
Section 8, T17S, R37E, NMPM  
Lea County, New Mexico

NOTICE

Pursuant to Section XIV,

Applicant has mailed copies of the application to the following:

Surface Owner:

Commissioner of Public Lands  
P. O. Box 1148  
Santa Fe, New Mexico 87501  
ATTENTION: Mr. Ray Graham

Leasehold Operators within one-half mile:

Gulf Oil Corporation  
Box 1150  
Midland, Texas 79702

Unicon Producing Company  
% Union Texas Petroleum Corp.  
1300 Wilco Building  
Midland, Texas 79701

Apollo Oil Company  
P. O. Box 1737  
Hobbs, New Mexico 88240

David Fasken  
608 First National Bank Building  
Midland, Texas 79701

Applicant has caused to be published in the Lovington Leader, a newspaper of general circulation in Lea County, the attached notice.





Ref: Para VII - C-108

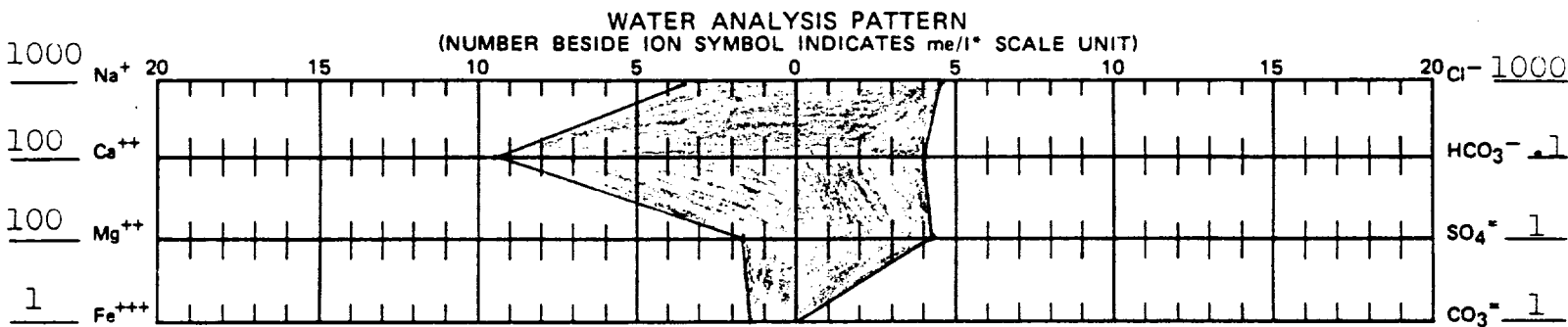
CONSOLIDATED OIL & GAS INC.  
EXHIBIT 12

Midway State 1  
Salt Water Disposal Well  
Section 8, T17S, R37E, NMPM  
Lea County, New Mexico

Injected Fluid Water Analysis  
and Compatibility Test

It is proposed to inject Abo and Devonian produced water. Three water analyses are attached. The first analysis is produced Abo water from the Shipp A Lease, the second is produced Devonian water from the Hale State Lease, and the third is a combined sample of the water from both zones. No precipitation was noted when the two waters were combined.

COMPANY Consolidated Oil & Gas				ANALYSIS NUMBER 0035			
COMPANY ADDRESS				DATE 1-15-84			
FIELD				COUNTY OR PARISH Lea		STATE N.M.	
LEASE OR UNIT Shipp A Abo		WELL(S) NAME OR NO.		WATER SOURCE (FORMATION)			
DEPTH, FT.	BHT, °F	SAMPLE SOURCE Battery	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
DATE SAMPLED 1-15-84		TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL					


**DISSOLVED SOLIDS**

CATIONS	me/l*	mg/l*
Total Hardness	1116	
Calcium, Ca <sup>++</sup>	944	18880
Magnesium, Mg <sup>++</sup>	172	2098.4
Iron (Total) Fe <sup>+++</sup>	1.56	29.04
Barium, Ba <sup>++</sup>	--	--
Sodium, Na <sup>+</sup> (calc.)	3450.38	79358.74

ANIONS	me/l*	mg/l*
Chloride, Cl <sup>-</sup>	4563.38	162000
Sulfate, SO <sub>4</sub> <sup>=</sup>	4.16	200
Carbonate, CO <sub>3</sub> <sup>=</sup>	-0-	-0-
Bicarbonate, HCO <sub>3</sub> <sup>-</sup>	0.40	24.4
Hydroxyl, OH <sup>-</sup>	-0-	-0-
Sulfide, S <sup>=</sup>	--	--

**DISSOLVED GASES**

Hydrogen Sulfide, H <sub>2</sub> S	50 mg/l*
Carbon Dioxide, CO <sub>2</sub>	67.32 mg/l*
Oxygen, O <sub>2</sub>	-- mg/l*

**PHYSICAL PROPERTIES**

pH	5.55
Specific Gravity	1.175
Total Dissolved Solids (calc.)	262561.54 mg/l*
Stability Index @ 30°C	+0.13
CaSO <sub>4</sub> Solubility @ 30°C	9.77 me/l*
Max. CaSO <sub>4</sub> Possible (calc.)	4.16 me/l*
Max. CaSO <sub>4</sub> Possible (calc.)	me/l*

Residual Hydrocarbons \_\_\_\_\_ ppm(Vol/Vol)

**TOTAL SOLIDS (QUANTITATIVE)**
262590.58
**REMARKS AND RECOMMENDATIONS:**

@30 C slight carbonate scaling tendency is indicated.  
 @30 C calcium sulfate scaling is unlikely.

\*NOTE: me/l and mg/l are common  
 used interchangeably for epn and ppr  
 respectively. Where epn and ppr are  
 used, corrections should be made for  
 specific gravity.

BAKER OIL TREATING REPRESENTATIVE Joe Lewis		ADDRESS		TELEPHONE	
ANALYZED BY: <i>Kir</i>		DATE <i>1/15/84</i>		RES:	
		DISTRIBUTION			

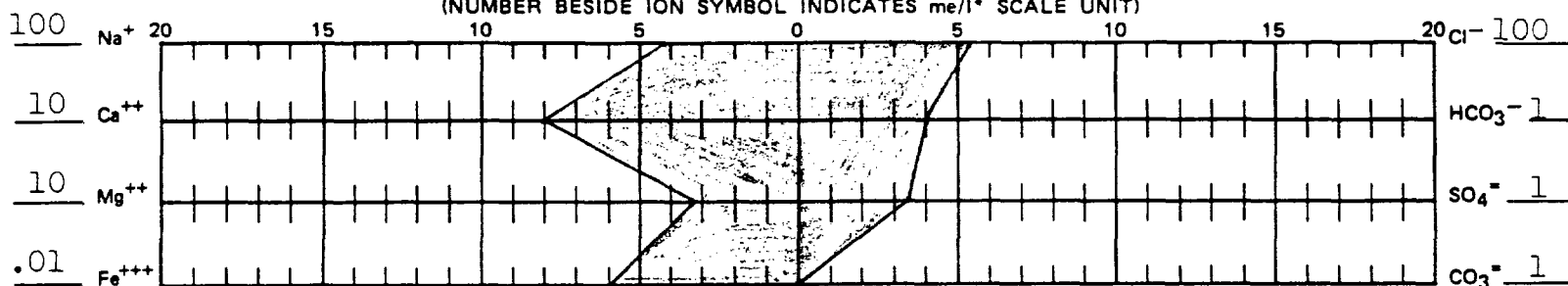


EXHIBIT 12  
Sample 2  
Produced Devonian Water

WATER ANALYSIS REPORT

COMPANY Consolidated Oil & Gas						ANALYSIS NUMBER 0034	
COMPANY ADDRESS						DATE 1-12-84	
FIELD				COUNTY OR PARISH Lea		STATE N.M.	
LEASE OR UNIT David Faskin		WELL(S) NAME OR NO. Hale State		WATER SOURCE (FORMATION)			
DEPTH, FT.	BHT, °F	SAMPLE SOURCE Wellhead	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
DATE SAMPLED 1-11-84		TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL					

WATER ANALYSIS PATTERN  
(NUMBER BESIDE ION SYMBOL INDICATES me/l\* SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l*	mg/l*
Total Hardness	112	1600
Calcium, Ca ++	32	390.4
Magnesium, Mg++	0.06	1.12
Iron (Total) Fe+++	--	--
Barium, Ba++	416.61	9582.03
Sodium, Na+(calc.)		

ANIONS	me/l*	mg/l*
Chloride, Cl-	521.13	18500
Sulfate, SO4=	3.54	170
Carbonate, CO3=	--	--
Bicarbonate, HCO3-	4.00	244
Hydroxyl, OH-	-0-	-0-
Sulfide, S=	--	--

DISSOLVED GASES

Hydrogen Sulfide, H2S	10 mg/l*
Carbon Dioxide, CO2	19.8 mg/l*
Oxygen, O2	-- mg/l*

PHYSICAL PROPERTIES

pH	6.55
Specific Gravity	1.020
Total Dissolved Solids (calc.)	30486.43 mg/l*
Stability Index @ 30 °C	-0.39
CaSO4 Solubility @ 30 °C	40.90 me/l*
Max. CaSO4 Possible (calc.)	3.54 me/l*
Max. CaSO4 Possible (calc.)	me/l*
Residual Hydrocarbons	ppm(Vol/Vol)

TOTAL SOLIDS (QUANTITATIVE)

30487.55

REMARKS AND RECOMMENDATIONS:

@30 C slight corrosive tendency is indicated.  
@30 C calcium sulfate scaling is unlikely.

\*NOTE: me/l and mg/l are commonly used interchangeably for epm and ppr respectively. Where epm and ppr are used, corrections should be made for specific gravity.

BAKER OIL TREATING REPRESENTATIVE J. Lewis		ADDRESS		TELEPHONE	RES:
ANALYZED BY: Bill Young		DATE 1/12/84	DISTRIBUTION		

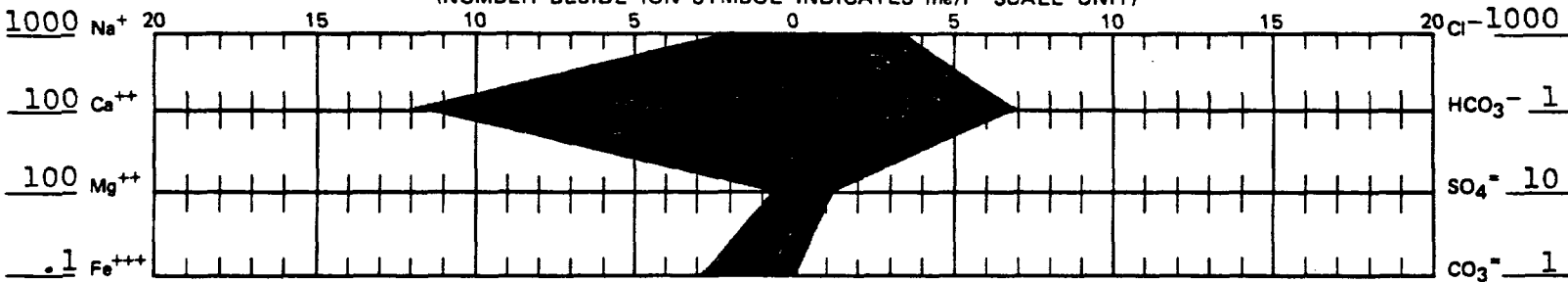


Exhibit 12  
Sample 3  
Combined Abo & Devonian Water  
Compatibility Test

WATER ANALYSIS REPORT

COMPANY CONSOLIDATED OIL & GAS, DAVID FASKENS						ANALYSIS NUMBER #1295	
COMPANY ADDRESS SHIPP "A" BATT. & HALE BATT., COMINGLED IN LAB						DATE 4/9/82	
FIELD				COUNTY OR PARISH LEA		STATE N.M.	
LEASE OR UNIT		WELL(S) NAME OR NO.		WATER SOURCE (FORMATION)			
DEPTH, FT.	BHT, °F	SAMPLE SOURCE LONE TO S.W.D.	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
DATE SAMPLED 4/9/82		TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL					

WATER ANALYSIS PATTERN  
(NUMBER BESIDE ION SYMBOL INDICATES me/l\* SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l*	mg/l*
Total Hardness	1240	---
Calcium, Ca <sup>++</sup>	1160	23200
Magnesium, Mg <sup>++</sup>	80	976
Iron (Total) Fe <sup>+++</sup>	.27	5.0
Barium, Ba <sup>++</sup>	---	---
Sodium, Na <sup>+</sup> (calc.)	2102.03	48346.69

ANIONS	me/l*	mg/l*
Chloride, Cl <sup>-</sup>	3323.94	118000
Sulfate, SO <sub>4</sub> <sup>=</sup>	11.46	550
Carbonate, CO <sub>3</sub> <sup>=</sup>	-0-	-0-
Bicarbonate, HCO <sub>3</sub> <sup>-</sup>	6.90	420.9
Hydroxyl, OH <sup>-</sup>	-0-	-0-
Sulfide, S <sup>=</sup>	.08	1.25

DISSOLVED GASES

Hydrogen Sulfide, H <sub>2</sub> S	50 mg/l*
Carbon Dioxide, CO <sub>2</sub>	435.6 mg/l*
Oxygen, O <sub>2</sub>	---

PHYSICAL PROPERTIES

pH	6.45
Specific Gravity	1.125
Total Dissolved Solids (calc.)	191493.59 mg/l*
Stability Index @ 20 °C	+1.29
CaSO <sub>4</sub> Solubility @ 20 °C	9.94 me/l*
Max. CaSO <sub>4</sub> Possible (calc.)	11.46 me/l*
Residual Hydrocarbons	ppm(Vol/Vol)

TOTAL SOLIDS (QUANTITATIVE) 191499.84

REMARKS AND RECOMMENDATIONS:  
@20°C SEVERE CARBONATE SCALING IS INDICATED.  
@20°C CALCIUM SULFATE SCALING IS LIKELY.  
COLOR OF SAMPLES BEFORE MIXING; HALE, BLACK TINTED  
SHIPP "A", RUSTY TINTED

\*NOTE: me/l and mg/l are commonly used interchangeably for epm and ppm respectively. Where epm and ppm are used, corrections should be made for specific gravity.

BAKER OIL TREATING REPRESENTATIVE J.T. LEWIS		ADDRESS		TELEPHONE	
ANALYZED BY: R.D. HARDEN		DATE 4/9/82		DISTRIBUTION	

NOTICE OF PUBLICATION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
SANTA FE, NEW MEXICO

NOTICE: To all persons having any right, title, interest or claim in the following:

Pursuant to the rules and regulations of the New Mexico Oil Conservation Division, Consolidated Oil & Gas, Inc., hereby gives public notice that it has applied to the Division for an order approving its Midway State #1 well located 330 feet from the South line and 330 feet from the East line of Section 8, T17S, R37E, MNPM, Lea County, New Mexico as a disposal well in Glorieta formation at a depth of 6585' to ~~6690~~' at a maximum rate 2000 BPD at a maximum injection pressure of 1200 psi.

Any interested party must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days of the date of publication of this notice.