

Case No. 7872

5/25/83 Examiner Hearing

Exhibit No. 1

APPLICATION FOR AUTHORIZATION TO

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no

II. Operator: Yates Petroleum Corporation

Address: 207 S. 4th Street; Artesia, N.M. 88210

Contact party: Nelson Muncy Phone: (505) 746-3558

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: Nelson Muncy

Title: Engineer

Signature: Nelson Muncy

Date: 4/29/83

* 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. Subject well logs, were submitted to NMOC in Hobbs.

FORM C-108 Supplement

Swan "VB" State #2

I. Purpose:

To deepen the Swan "VB" State #2 from the present PBTD of 10,101' (5½" csg. to 10,156' TD) to 10,350' and convert to salt water disposal status injecting in 10,156-350' (Open hole) and 10,071-77', 10,104-36' (cased hole)

II. The Operator is Yates Petroleum Corporation
207 South Fourth Street
Artesia, New Mexico 88210

Attn: Nelson Muncy

III. Well Data:

See attached well data sheet.

V. Ownership map attached (Midland Map Co.) with a scale of:
1" = 2,000'.

Well and lease information posted through 4-15-83. Map has a two-mile radius circle and a one-half mile radius circle.

VI. There are six wells, not including the proposed disposal well within the area of review, as indicated by the attached map. All available data concerning the six wells is included in the attached tabulation and schematic.

VII. Data on proposed operations:

- (1). The proposed average daily rate of injection is 2,000 bbls per day and the estimated ultimate maximum daily rate is 4,000 bbls per day. The estimated total volume of fluids to be injected is 2.19×10^7 bbls.
- (2). The system will be closed with an oil seal.
- (3). The average injection pressure is 0 to 2,031 PSIG.
- (4). The source of the injection fluid will be produced water from the following Yates Petroleum Corporation wells that are producing from the Permo-Upper penn zone in the general area of the subject well, identified as follows:
 - a. Woodpecker "SY" St. #1
660' FNL & 660' FEL
Sec. 21-T14S-R33E
See attached analysis.
 - b. Woodpecker "SY" St. #2
1980' FNL & 660' FEL
Sec. 21-T14S-R33E
See attached analysis
 - c. Woodpecker "SY" St. #3
660' FNL & 1800' FEL
Sec. 21-T14S-R33E
See attached analysis.
 - d. Woodpecker "SY" St. #4
660' FNL & 1980' FWL
Sec. 21-T14S-R33E
See attached analysis

- e. Woodpecker "SY" St. #5
1980' FNL & 1980' FEL
Sec. 21-T14S-R33E
No analysis available at this time. Any analysis should be consistent with those of other wells in this area.
- f. Swan "VB" St. #1
1980' FSL & 660' FEL
Sec. 21-T14S-R33E
See attached analysis.
- g. Dove "VK" St. #1
1980' FSL & 660' FEL
Sec. 3-T14S-R33E
See attached analysis.
- h. Hanladdie "WR" St. #1
1980' FSL & 1980' FWL
Sec. 9-T14S-R33E
See attached analysis.

The water produced from subsequently drilled wells in this area will also utilize the disposal well covered by this application.

(4). & (5).

The produced chlorides range from 10,897-38,991 MG/L in the wells that are proposed to be the source of injected fluids. The subject well is not open in the proposed injection zones and a water analysis is not available. However, a water analysis for the proposed injection zone is available from the LDM Amoco "GX" St. #1 (2½ miles west in Sec. 19-T14S-R33E), which reported the chlorides as 18,000 MG/L from the attached DST #5 (10,410-450'). Therefore, injection compatibility appears acceptable.

The proposed injection zone is included within the vertical limits of the Saunders Permo-Upper Penn pool, as correlative with the Adobe Gray 35-1 in Unit N of Sec. 36-T14S-R33E, the type well for the field rules. However, the proposed injection zones are stratigraphically lower than the oil productive zone in this field.

VIII. Geological data:

Injection zone: Lower Cisco (Permo-Upper Penn) 10071-10136' limestone, buff, to white, calc, sli. fragmented, xln.
Canyon (Permo-Upper Penn) 10,156-350', dolomite, wht creamy, xln, vuggy good porosity, decreasing with depth.

The underground source of drinking water in this area is Ogollala formation of Tertiary age, the base of which is estimated at 250' at the location of the proposed disposal well. The Chinlee formation is also a fresh water aquifer which immediately underlies the Ogollala formation. Both of these aquifers are behind the surface pipe of the well covered by this application.

IX. The proposed stimulation program is to selectively treat the proposed Cisco perforations 10071-10136 and open hole Canyon zone 10156-10350 with 5,000 gallons of 15% acid each.

X. CNL, FDC, DLL, logs have been submitted to the NMOCD in Hobbs.

- XI. The only water well of record within the one-mile radius circle is located in Unit L of Sec. 27-T14S-R33E. A water analysis from a sample obtained on February 4, 1983 is attached.
- XII. Available geological and engineering data have been examined and no evidence of open faults or any other hydrologic connections between the disposal zone and any underground fresh water aquifers have been found.
- XIII. The off-set operators listed below have been furnished a copy of this application by certified mail.

Yates Petroleum Corporation
207 S. 4th Street
Artesia, N.M. 88210

American Petrofina
P.O. Box 2159
Dallas, Tx 75250

McGraw & Smith
209 Gihls Tower West
Midland, Tx 79701

MWJ Producing Company
1804 1st Natl Bank Bldg.
Midland, Tx 79701

Texaco, Inc.
P.O. Box 2767
Houston, Tx 77097

The surface owners listed below have been furnished a copy of this application by certified mail.

Geraldine Tulk
Box 666
Lovington, NM 88260

Raymond M & Marsha Hilburn
Box 303
Caprock, NM 88213

Texaco, Inc.
402 W. Ave E
Lovington, NM 88260

Jerry & Bob Dean
Box 845
Lovington, NM 88260

Additional data submitted:

Petroleum information (P.I.) cards submitted on all wells within a two-mile radius circle.

INJECTION WELL DATA SHEET

OPERATOR		LEASE			(St. Lse #LG-3675)
Yates Petroleum Corporation		Swan "VB" 22			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE	
2	1980' FSL & 1980' FEL	21	14S	33#	

Schematic

see attached

Tabular DataSurface CasingSize 13 3/8" " Cemented with 400 sx.TOC Surface feet determined by visualHole size 17 1/2"Intermediate CasingSize 8 5/8" " Cemented with 2598 sx.TOC Surface feet determined by visualHole size 12 1/4"Long stringSize 5 1/2" " Cemented with 925 sx.TOC 7790' feet determined by Cmt. Bond LogHole size 7 7/8"Total depth 10,350'Injection interval1007' feet to 10136' feet (perforated)
(perforated or open-hole, indicate which)10156' to 10350' (Open hole)

Tubing size 2 7/8" (or) 3 1/2" OD lined with Plastic set in a
(material)
guiberson UNI VI packer at 1-000' feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Cisco Canyon
- Name of field or pool (if applicable) Saunders Permo-Upper 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) 9793-9805, 9825-27'
9837-39, 9843-54', 9887-9909, 9933-35', 9947-52, to be squeezed with 125 sxs cement.
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Bough A,B, & C, 9793-9952'.

TABULATION

Swan "VB" St. #2
Form C-108 attachment

Wells within the area of review:

Atlantic Hondo State #1: (Formerly the "U" State #1) 660' FSL & 660' FEL. Sec. 21-T14S-R33E. Originally spudded on 10-5-51, P/A 12-21-51. TD 10,028, Permo-Penn. Casing: 13 3/8" at 377' with 400 sacks, 17 1/2" hole size. 9 5/8" at 4109' with 3500 sacks 12 1/4" hole. P/A on 12-21-51 with 200 sacks, at 9274-9800' and 100 sack plug at 3856-4109'. Surface plug from 0-38'. Carl J. Westlund Inc. re-entered this well on 1-22-61. Cleaned out and ran 4 1/2" casing at 10,025' with 200 sacks in 8 3/4" hole. Perforations 9925-9939', 9882-9898', 9840-9852'. Tested 5 bbls oil per day on 7-23-61.

Operator changed to McGraff & Smith on 5-6-63, effective 9-1-63. Well was P/A on 1-28-64. A plug was set at 10,000' with 25 sacks, Shot off 4 1/2" casing at 5216', ran 25 sack plug, ran 25 sack plug at 4100' base of 9 5/8", 10 sacks plug at surface. Schematic attached.

Swan "VB" #1: An oil well. Operated by Yates Petroleum Corporation. Located 1980' FSL & 660' FEL of Sec. 21-T14S-R33E. Spudded on 8-24-82, completed on 11-3-82 in the Permo-Upper-Penn (Bough). TD 10,324'. Production perforations from 9872-9948'. Perforated at 10,169-239' Squeezed 75 sacks. Perforated at 10,107-137'. Set cast iron BP at 10,090.

Woodpecker "SY" #2: An Oil well. Operated by Yates Petroleum Corporation. Located 1980' FNL & 660' FEL of Sec. 21-T14S-R33E. Spudded on 5-12-82 and completed on 8-9-82. TD 10,100'. 284 bbls oil per day (Bough). 9790-9963'. Casing 13 3/8" at 450' with 500 sacks. 5 1/2" at 10,100 with 750 sacks. Production perforations from 9790-9964' (Bough).

Woodpecker "SY" #3: An oil well. Operated by Yates Petroleum Corporation. Located 660' FNL & 1800 FEL of Sec. 21-T14S-R33E. Spudded on 7-5-82 and completed on 8-26-82. TD 10,150'. 428 bbls oil per day (Bough). Casing 13 3/8" at 452' with 450 sacks, 8 5/8" at 4100' with 1815 sacks, and 5 1/2" at 10,150 with 700 sacks. Production perforations from 9910-42, 9816-72'.

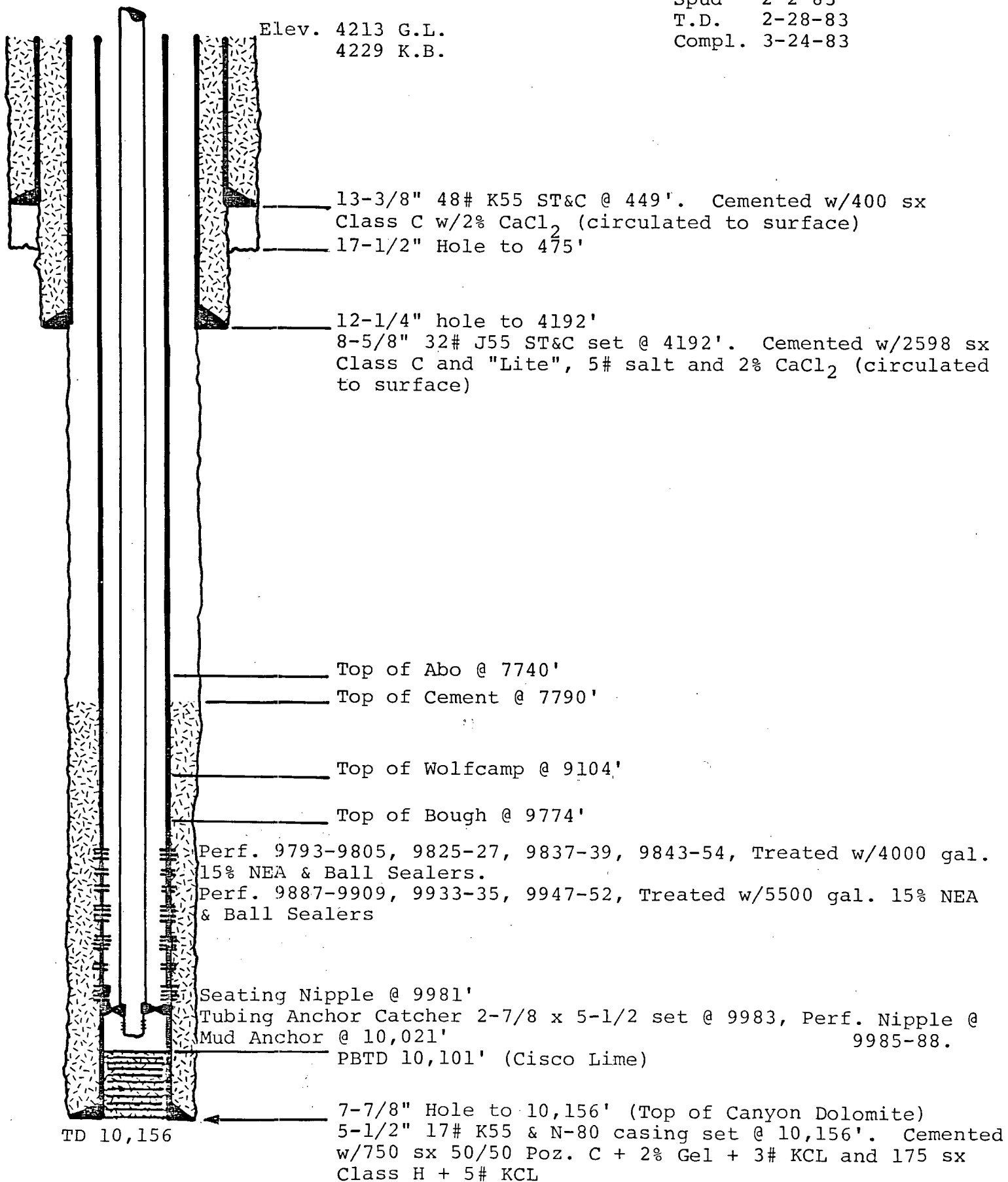
Woodpecker "SY" #5: An oil well. Operated by Yates Petroleum Corporation. Located 1980' FNL & 1980' FEL of Sec. 21-T14S-R33E. Spudded on 10-9-82 and completed on 1-10-83. TD, 10,160'. 290 bbls oil per day from Permo-Penn. Casing 13 3/8" at 450' with 450 sacks, 8 5/8" at 4185' with 1350 sacks and 5 1/2" at 10,071 with 1300 sacks. Perforations 9941-42', 9949-53', 9955-62', 9886-99', 9903-05'. Production perforations; 9886-9962'.

Woodpecker "SY" #6: Operated by Yates Petroleum Corporation. Located 1980' FNL & 1980' FWL of Sec. 21-T14S-R33E. Spudded on 3-10-83. TD 10,131'. Casing, 13 3/8" at 472' with 450 sacks, 8 5/8" at 4185' with 425 sacks and 5 1/2" at 10,015' with 900 sacks, top of cement by temperature survey, 6900'. Well is in process of being completed. Perforated at 9936-55'. Squeezed with 50 sacks. In process of perforating next Bough zone up the hole at this time.

Present Well Condition

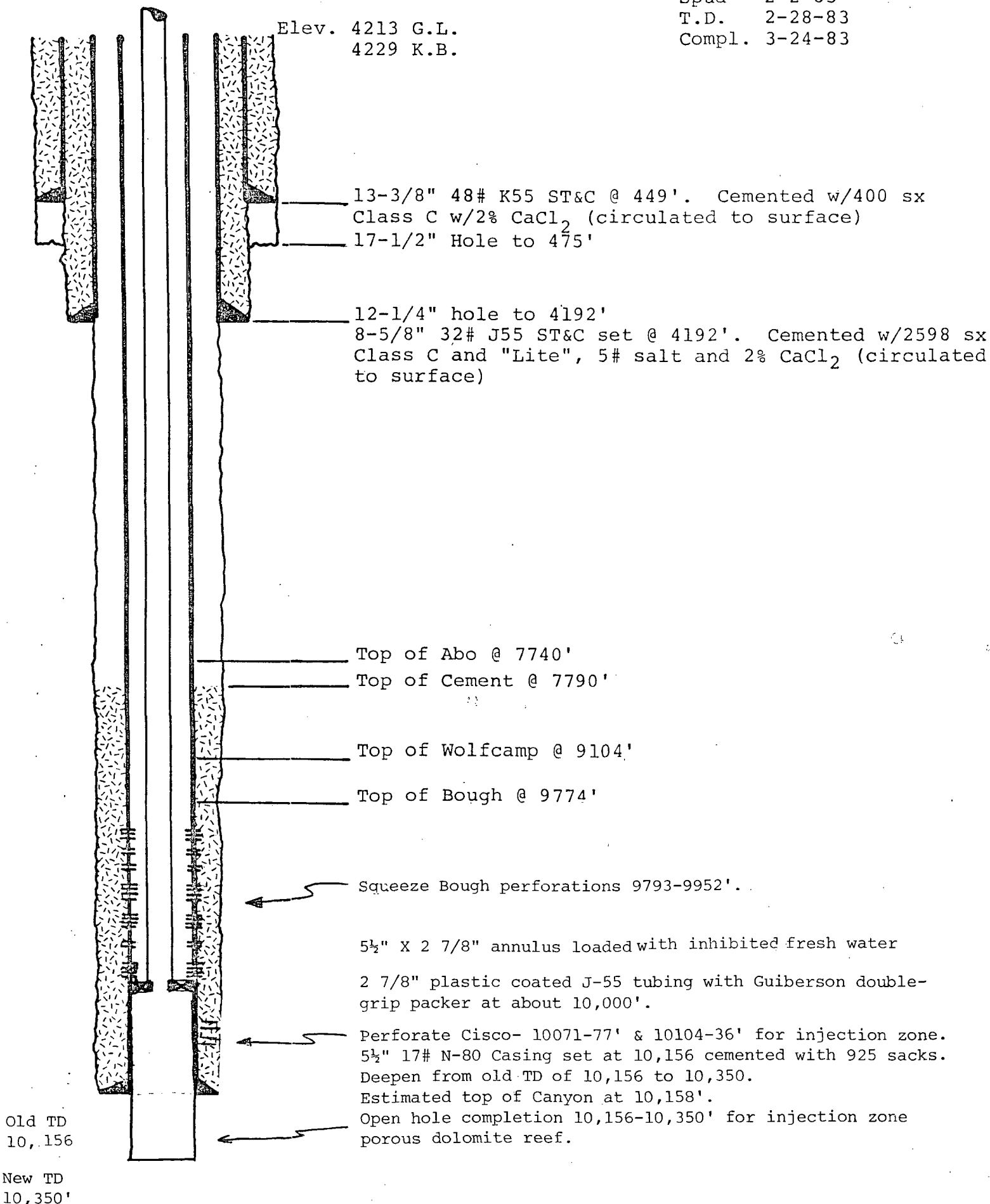
YATES PETROLEUM CORP.
SWAN "VB" ST. #2
CISCO FORMATION
LEA COUNTY, NEW MEXICO

Spud 2-2-83
T.D. 2-28-83
Compl. 3-24-83



Proposed Disposal Well Diagram

YATES PETROLEUM CORP.
SWAN "VB" ST. #2
CISCO FORMATION
LEA COUNTY, NEW MEXICO
Spud 2-2-83
T.D. 2-28-83
Compl. 3-24-83



ATLANTIC HONDO STATE #1
 (Formerly "U" State #1)
 S21-T14S-R33E
 660' FSL & 660' FEL
 Lea Co., New Mexico

Spud: 10-5-51
 P/A: 12-21-51
 Oil String not run

Re-entry: 1-22-61
 Comp: 7-23-61

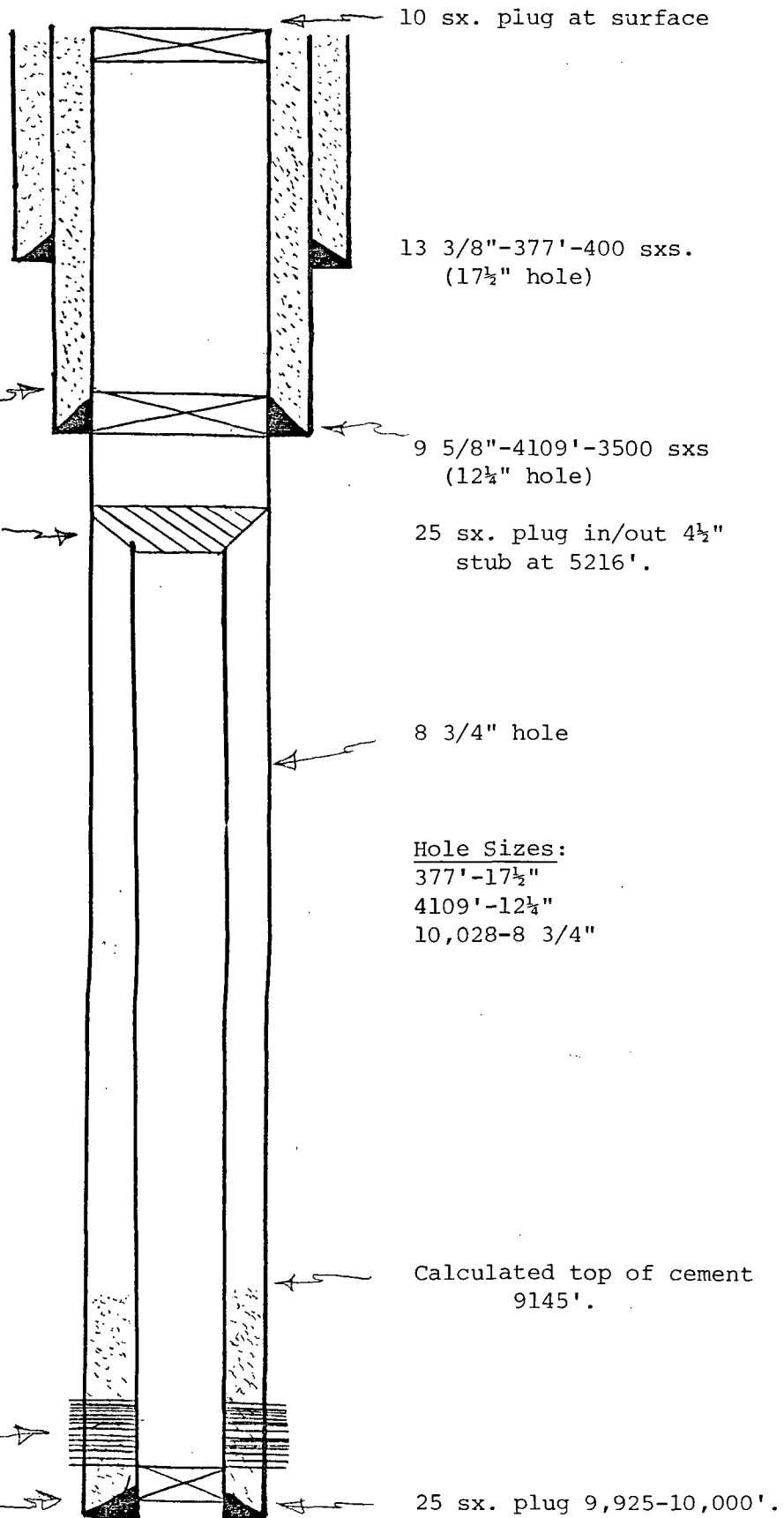
P/A: 1-28-64

25 sx. plug base
 9 5/8" at 4100'

4 1/2" csg. cut at 5216'

Perfs:
 9840-9939'

4 1/2" set at
 10,025'.



TD 10,028'

STATE OF NEW MEXICO
OIL AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

TYPE OF WELL

TYPE OF COMPLETION

NEW WELL ☒WORK OVER ☐DEEPEN ☐PLUG BACK ☐DIFF. RESVR. ☐

OTHER

Name of Operator

Yates Petroleum Corporation

Address of Operator

207 South 4th St., Artesia, NM 88210

Location of Well

LETTER J LOCATED 1980 FEET FROM THE South LINE AND 1980 FEET FROM

East

LINE OF SEC. 21

TWP. 14S

RGE. 33E

NMPM

Date Spudded

2-2-83

16. Date T.D. Reached

2-28-83

17. Date Compl. (Ready to Prod.)

3-24-83

18. Elevations (DF, RKB, RT, GR, etc.)

4213' GR

19. Elev. Casinghead

Total Depth

10155'

21. Plug Back T.D.

10101'

22. If Multiple Compl., How Many

23. Intervals Drilled By

Rotary Tools

Cable Tools

Producing Interval(s), of this completion - Top, Bottom, Name

9793-9952' Permo Penn

Type Electric and Other Logs Run

CNL/FDC; DLL

25. Was Directional Survey Made

No

27. Was Well Cored

No

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	48#	449'	17-1/2"	400	
8-5/8"	32#	4192'	12-1/4"	2598	
5-1/2"	17#	10155'	7-7/8"	925	

LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-7/8"	9982'	

Perforation Record (Interval, size and number)

9887-9909' w/15 .40" holes

9933-9952' w/9 .40" holes

9793-9854' w/22 .40" holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
9887-9909'	w/3500 g. 15% NEA + balls.
9933-9952'	w/2000 g. 15% NEA + balls.
9793-9909'	Treat all perfs w/4000g. 15% NEA & balls.

PRODUCTION

First Production	3-22-83	Production Method (Flowing, gas lift, pumping - Size and type pump)	Pumping	Well Status (Prod. or Shut-in)	Producing									
Date of Test	3-24-83	Hours Tested	24	Choke Size	Open	Prod'n. For Test Period	Oil - Bbl.	20	Gas - MCF	203	Water - Bbl.	605	Gas - Oil Ratio	10150/1
Flow Tubing Press.	20#	Casing Pressure	20#	Calculated 24-Hour Rate	20	Oil - Bbl.	20	Gas - MCF	203	Water - Bbl.	605	Oil Gravity - API (Corr.)	40°	
Disposition of Gas (Sold, used for fuel, vented, etc.)	Sold	Test Witnessed By	Darrel Atkins											

List of Attachments

Deviation Survey

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

TITLE Production Supervisor

DATE 4-6-83

INSTRUCTIONS

This form is to be filled with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filled in quadruplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
Rustler							
T. Anhy	1702	T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt Base	2550	T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt		T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates	2665	T. Miss		T. Cliff House		T. Leadville	
T. 7 Rivers		T. Devonian		T. Menefee		T. Madison	
T. Queen	3440	T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg		T. Montoya		T. Mancos		T. McCracken	
T. San Andres	4060	T. Simpson		T. Gallup		T. Ignacio Qtzte	
T. Glorieta	5615	T. McKee		Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinbry		T. Gr. Wash		T. Morrison		T.	
T. Tubb	7027	T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo	7762	T. Bone Springs		T. Wingate		T.	
T. Wolfcamp Ls	9112	T. XX Marker	9330	T. Chinle		T.	
T. Penn.		T. Virgilian	9741	T. Permian		T.	
T. Cisco (Bough C)		T.		T. Penn. "A"		T.	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....	No. 4, from.....to.....
No. 2, from.....to.....	No. 5, from.....to.....
No. 3, from.....to.....	No. 6, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
No. 2, from.....to.....feet.....
No. 3, from.....to.....feet.....
No. 4, from.....to.....feet.....

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	650	650	Surface, Redbeds				
650	1725	1075	Redbeds, Anhydrite				
1725	3780	2055	Anhydrite, Salt				
3780	3882	102	Anhydrite				
3882	3971	89	Dolomite				
3971	4173	202	Anhydrite				
4173	7707	3534	Dolomite				
7707	7860	153	Dolomite, Shale				
7860	8032	172	Shale				
8032	8182	150	Lime, Shale				
8182	9284	1102	Dolomite, Shale				
9284	9373	89	Lime, Shale				
9373	9415	42	Dolomite, Lime, Shale				
9415	10105	690	Lime, Shale				
10105	10155	50	Dolomite, Shale				

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-455To Yates Petroleum CorporationDate 4-20-83207 S. 4th StreetArtesia, New MexicoATTN: Mr. Eddie Mahfood

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 4-19-83Well No. Woodpecker #6 Depth _____ Formation _____

County _____ Field _____ Source _____

Resistivity _____ 0.190 @ 74°F.Specific Gravity _____ 1.032pH _____ 6.0Calcium (Ca) _____ 5,000

*MPL

Magnesium (Mg) _____ 1,200Chlorides (Cl) _____ 23,000Sulfates (SO₄) _____ 2,700Bicarbonates (HCO₃) _____ 1,220Soluble Iron (Fe) _____ Nil

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst BrewerHarvey Apple - GeoVann, Inc.Box 38Artesia, New Mexico

HALLIBURTON COMPANY

By

W. L. Brewer
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : YATES PETROLEUM
DATE : 11-22-82
FIELD, LEASE & WELL : WOODPECKER #2
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 11-19-82

SPECIFIC GRAVITY = 1.014
TOTAL DISSOLVED SOLIDS = 65676
PH = 6.92

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	106	2137
MAGNESIUM	(MG)+2	183	2228
SODIUM	(NA).CALC.	859	19765
ANIONS			
BICARBONATE	(HCO3)-1	11.8	719
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	38.1	1833
CHLORIDES	(CL)-1	1099	3899
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	45	19.9
HYDROGEN SULFIDE	(H2S)	30	511
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		
BARIUM	(BA)+2	NOT RUN	17.6
MANGANESE	(MN)	NOT RUN	

SCALING INDEX

TEMP

CARBONATE INDEX
CALCIUM CARBONATE SCALING
SULFATE INDEX
CALCIUM SULFATE SCALING

30C
84F
406
LIKELY
-27
UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : YATES PETROLEUM
DATE : 11-22-82
FIELD/LEASE/Well : WOODPECKER #3
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 11-19-82

SPECIFIC GRAVITY = 1.018
TOTAL DISSOLVED SOLIDS = 27850
pH = 7.56

CATIONS		ME/L	MG/L
SODIUM	(CA)+2	48.6	
POTASSIUM	(MG)+2	39.3	975
AMMONIUM	(NA).CALC.	370	478
			8513
ANIONS			
CARBONATE	(HCO3)-1	23.4	1427
BICARBONATE	(CO3)-2	0	0
CHLORIDE	(OH)-1	0	0
SULFATE	(SO4)-2	82.4	3758
OXIDES	(CL)-1	352	12497
DISSOLVED GASES			
WATER DIOXIDE	(CO2)	22	9.9
HYDROGEN SULFIDE	(H2S)	18	306
HYDROGEN	(O2)	NOT RUN	
IRON (TOTAL)	(FE)		
COPPER	(BA)+2	NOT RUN	309
MANGANESE	(MN)	NOT RUN	

SCALING INDEX

TEMP

BICARBONATE INDEX
SODIUM CARBONATE SCALING

30C
86F
1.19
LIKELY

SULFATE INDEX
SODIUM SULFATE SCALING

-2.9
UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : YATES PETROLEUM
DATE : 11-22-82
WELL : LEASEWELL
SAMPLING POINT : WELLHEAD
DATE SAMPLED : 11-19-82

SWAN #1

SPECIFIC GRAVITY = 1.016
TOTAL DISSOLVED SOLIDS = 24376
H = 2.49

CATIONS		ME/L	MC/L
ALCIUM	(CA)+2	46	921
MAGNESIUM	(MG)+2	17	571
NAIUM	(NA), CALC.	309	7116
ANIONS			
CARBONATE	(HCO3)-1	22.4	1366
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	72.8	3500
CHLORIDES	(CL)-1	307	10897
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	0	0
NITROGEN SULFIDE	(H2S)	21	357
HYDROGEN	(O2)	NOT RUN	0
IRON (TOTAL)	(FE)	NOT RUN	2.1
NIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

SCALING INDEX

TEMP

CARBONATE INDEX
CUM CARBONATE SCALING
SULFATE INDEX
CUM SULFATE SCALING

30C
86F
1.11
LIKELY
-5.1
UNLIKELY

Deviation 0002 5/4 000-...

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-335To Yates Petroleum CorporationDate 3-16-83207 S. 4th StreetArtesia, New MexicoATTN: Mr. Eddie Mahfood

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____

Date Rec. 3-16-83Well No. As Marked

Depth _____

Formation _____

County _____

Field _____

Source _____

	<u>Swann #2 3-10-83</u>	<u>Swann #2 3-15-83</u>	<u>Dove #2 3-15-83</u>
Resistivity	<u>0.227 @ 70°F.</u>	<u>0.157 @ 70°F.</u>	<u>0.155 @ 70°F.</u>
Specific Gravity	<u>1.030</u>	<u>1.044</u>	<u>1.042</u>
pH	<u>6.2</u>	<u>5.7</u>	<u>5.8</u>
Calcium (Ca)	<u>6,000</u>	<u>8,000</u>	<u>7,700</u> *MPL
Magnesium (Mg)	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>
Chlorides (Cl)	<u>21,000</u>	<u>35,000</u>	<u>33,000</u>
Sulfates (SO ₄)	<u>2,450</u>	<u>2,300</u>	<u>2,200</u>
Bicarbonates (HCO ₃)	<u>1,040</u>	<u>780</u>	<u>510</u>
Soluble Iron (Fe)	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: BrewerHarvey Apple - GeoVann, Inc.Box 38Artesia, New Mexico

HALLIBURTON COMPANY

By W. J. Brewer

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-001

To Yates Petroleum Corporation

Date 1-1-83

207 S. 4th Street

Artesia, New Mexico

ATTN: Mr. Eddie Mahfood

This report is the property of Halliburton Company and neither the report nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or company and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 1-1-83

Well No. Dove #1 Depth _____ Formation _____

County _____ Field _____ Source _____

Resistivity 0.063 @ 70°F.

Specific Gravity 1.110

pH 5.3

Calcium (Ca) 11,250

Magnesium (Mg) 6,000

Chlorides (Cl) 89,500

Sulfates (SO₄) 800Bicarbonates (HCO₃) 805

Soluble Iron (Fe) 125

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Thompson
Harvey Apple, GeoVann, Inc.
Box 38
Artesia, New Mexico

HALLIBURTON COMPANY

By

W. L. Brown
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON COMPANY SHALL NOT BE LIABLE FOR ANY AND ALL DAMAGES OR LOSSES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING OUT OF OR IN CONNECTION WITH THE USE OF THIS REPORT.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-195

To Yates Petroleum Corporation

Date 2-14-83

207 S. 4th Street

Artesia, New Mexico

ATTN: Mr. Eddie Mahfood

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 2-14-83

Well No. Hanladdie "WR" St. #1 Depth 9,900' Formation _____

County Eddy Field Saunders Source _____

	2-11-83	2-12-83	
Resistivity	0.082 @ 74°F.	0.082 @ 74°F.	
Specific Gravity	1.104	1.104	
pH	5.7	5.8	
Calcium (Ca)	24,000	23,200	*MPL
Magnesium (Mg)	2,520	2,400	
Chlorides (Cl)	92,000	92,000	
Sulfates (SO ₄)	1,150	1,200	
Bicarbonates (HCO ₃)	1,030	1,050	
Soluble Iron (Fe)	110	100	
API Gr.	31.0 @ 60°F.	31.2 @ 60°F.	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc:

By

W L Brewer
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

DRILL STEM TESTS

Yates Petroleum Corporation
LDM-AMOCO GX State No. 1 (L-45 Lease #)
Section 19-T14S-R33E
Lea County, New Mexico

DST No. 1 - 10052-10168' TO 30", SI 60", OP 60", SI 120". TO w/blow
Reop w/blow and died. Recovered: - 700' DM 3100' SW - no gas.
Sampler: 1800 cc salt water. Pressures: HP 4828-4786'; IFP 518-1549;
ISIP 1679; FFP 1549-1634; FSIP 1677. BHT 146 deg.

DST #2 - 10190-10321' - TO 30", SI 90", OP 120", SI 240". Op w/fair
blow, GTS in 18" increased to 50# on 1/4" choke. Reop w/weak blow, 2#
on 1/4" choke, decreased to 1/2#. Recovered: 4 BOCM, 12 BO&GCM, 5 BGC
sulphur water. Sampler: 1400 cc O & G cut water. Pressures: HP 4845-
4803; IFP 345-432; ISIP 3655; FFP 432-1079; FSIP 3312.

* DST #3 - 10332-10386' - TO 30", SI 90", TO 30", SI 60". Op w/good blow,
2# on 1/4" choke decreasing. Reop w/weak blow, dead in 15". Recovered:
300' of black mud and water, 8250' of salty sulphur water, no oil or gas.
Sampler: 160#, 1900 cc sulphur water, no oil or gas. Pressures: HP 4972-
4930' IFP 1036-3655; ISIP 3826; FFP 3655-3826; FSIP 3826.

DST #4 - 12656-830' - TO 30", SI 90", OP 120", SI 180". Op w/weak blow.
Reop w/weak blow. No GTS. Recoveree: 1500' WC, 289' GCM. Sampler:
No fluid. 540 psi 1.4 cfg. Pressures: HP 6205-6205; IFP no reading.
ISIP 909; FFP 909-974; FSIP 1509.

* DST #5 - 10410-450' (Straddle) - TO 30", SI 60", TO 60", SI 90". TO
w/strong blow. Reop w/strong blow, 5# on 1/8" choke after 45", decreased
to weak blow. Recovered: 1000' WB, sli GC slphur wtr at 7646'.
Sampler: 2800 cc sulphur water, 18000 ppm cl. Pressures: HP 5204-5204,
IFP 1388-3393, ISIP 3850, FFP 3419-3850, FSIP 3850.

* Proposed injection zone

* THIS WELL IS OUTSIDE (1/2 MILE) AREA REVIEW.

Form C-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY COSDEN PETROLEUM CORPORATION, BOX 1311, Big Spring, Texas
(Address)

LEASE State "E" WELL NO. 1 UNIT M S 21 T -14-S R 33-E
DATE WORK PERFORMED February 4, 1962 POOL Undesignated

This is a Report of: (Check appropriate block) ☒ Results of Test of Casing Shut-off

☐ Beginning Drilling Operations

☐ Remedial Work

☐ Plugging

☐ Other _____

Detailed account of work done, nature and quantity of materials used and results obtained.

T.D. 4,179'

Ran 8-5/8" 244 & 324 J-55, 8 Rd ST&C R-2 casing set at 4,179'

Cemented w/ 1600 sx Incor Pozmix / 6% Gel & 200 Sx Incor Neat cement. Cement circulated
P.D. @ 12:15 A.M. Feb. 4, 1962.

Tested casing w/ 1,000 psi for 30 minutes - o.k.

To WOC 36 hrs and drill ahead.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:

BEFORE

AFTER

Date of Test _____

Oil Production, bbls. per day _____

Gas Production, Mcf per day _____

Water Production, bbls. per day _____

Gas-Oil Ratio, cu. ft. per bbl. _____

Gas Well Potential, Mcf per day _____

Witnessed by _____

(Company)

☐ Beginning Drilling Operations☐ Remedial work☐ Plugging☐ Other _____

Detailed account of work done, nature and quantity of materials used and results obtained.

T.D. 4,179'

Ran 8-5/8" 244 & 324 J-55, 8 Rd ST&C R-2 casing set at 4,179'

Cemented w/ 1600 sx Incor Pozmix / 6% Gel & 200 Sx Incor Neat cement. Cement circulated P.D. @ 12:15 A.M. Feb. 4, 1962.

Tested casing w/ 1,000 psi for 30 minutes - o.k.

To WOC 36 hrs and drill ahead.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:

BEFORE

AFTER

Date of Test _____

Oil Production, bbls. per day _____

Gas Production, Mcf per day _____

Water Production, bbls. per day _____

Gas-Oil Ratio, cu. ft. per bbl. _____

Gas Well Potential, Mcf per day _____

Witnessed by _____

(Company) _____

OIL CONSERVATION COMMISSION

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

Name _____

Name _____ H.L. Weeks

Title _____

Position Supt. of Production

Date _____

Company COSDEN PETROLEUM CORPORATION

☒ Beginning Drilling Operations

☐ Remedial Work

☐ Plugging

☐ Other _____

Detailed account of work done, nature and quantity of materials used and results obtained.

Spudded 12:30 PM 1-26-62

T.D. 356' - Set 13-3/8" 48# H-40 Casing at 310'

Cemented w/ 325 Sx Incor Heat Cement. Cement circulated

P.D. 9:55 AM 1-27-62 W.O.C. 24 hrs

Tested casing w/ 600 psi for 30 minutes. test o.k.

Drilling ahead

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:

BEFORE

AFTER

Date of Test

Oil Production, bbls. per day

Gas Production, Mcf per day

Water Production, bbls. per day

Gas-Oil Ratio, cu. ft. per bbl.

Gas Well Potential, Mcf per day

Witnessed by _____

(Company)

OIL CONSERVATION COMMISSION

Name

Title

Date

Leslie A. Clements

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

Name

Position

Company

H.L. Weeks

Supt. of Production

COSDEN PETROLEUM CORPORATION

NOTICE OF INTENTION TO DRILL

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in **QUINTUPLICATE**. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

If State Land submit 6 Copies Attach Form C- 128 in triplicate to first 3 copies of form C-101

Big Spring, Texas

January 15, 1962

(Place)

(Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the Drilling of a well to be known as
Cosden Petroleum Corporation

(Company or Operator)

State "B"

(Lease)

Well No. **1**, in **M** (Unit)

The well is

located **660** feet from the **South** line and **660** feet from the

West

line of Section **21**, T. **14-S**, R. **33-E**, NMPM.

(GIVE LOCATION FROM SECTION LINE)

Saunders

Pool,

Lea

County

If State Land the Oil and Gas Lease is No. **E-6475**

If patented land the owner is

Address

We propose to drill well with drilling equipment as follows: **Adequate Rotary**

drilling equipment

The status of plugging bond is **in effect**

Drilling Contractor **not known**

We intend to complete this well in the **Pennsylvanian**

formation at an approximate depth of **10,200** feet

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
17-1/4"	13-3/8 OD	48	New	300	Approx. 275
11	8-5/8 OD	24 - 32	New	Approx 4200	" 1500
7-7/8"	5-1/2 OD	15.5 - 17	New	T.D.	300

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

Approved
Except as follows:

19

OIL CONSERVATION COMMISSION

By

Sincerely yours,

COSDEN PETROLEUM CORPORATION
(Company or Operator)

By

E.L. Wee

Position **Supt. of Production**

Send Communications regarding well to

Name **Cosden Petroleum Corporation**

Address **Box 1311, Big Spring, Texas**

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

FORM C-128
Revised 3/1/57

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

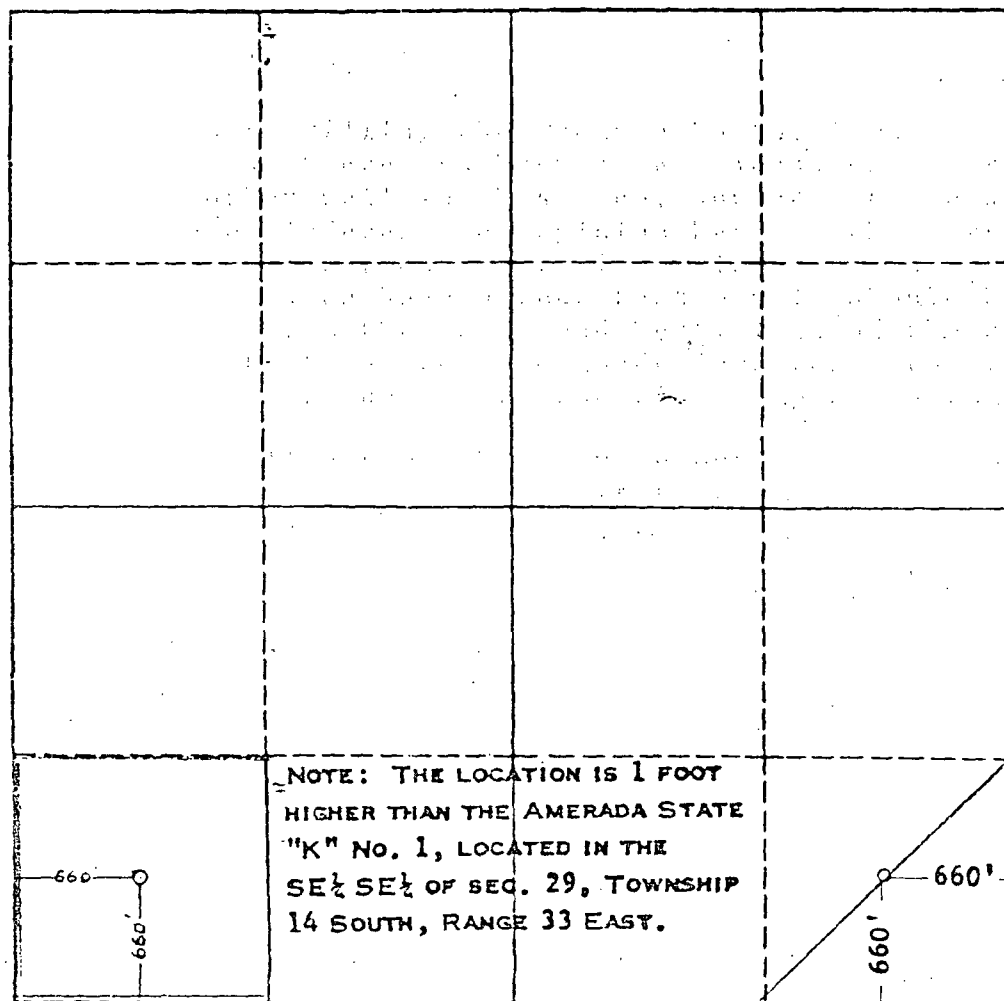
SECTION A

Operator COSDEN PETROLEUM CORP.		Lease STATE "E"		Well No. 1
Unit Letter R M	Section 21	Township 14 SOUTH	Range 33 EAST	County LEA COUNTY
Actual Footage Location of Well: 660 feet from the SOUTH line and 660 feet from the WEST line				
Ground Level Elev. 4210'	Producing Formation Pennsylvanian		Pool Saunders	Dedicated Acreage: 40 Acres

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES XX NO ____ ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ____ NO ____ If answer is "yes," Type of Consolidation ____
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description

SECTION B



0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500

CERTIFICATION

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

Name
H. L. Weeks
Position
Supt. of Production
Company
COSDEN PETROLEUM CORP.
Date
January 15, 1962

I hereby certify that the well location shown on the plat in SECTION B was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
JANUARY 13, 1962
Registered Professional Engineer and/or Land Surveyor, **JOHN W. WEST**
Certificate No.
N.M. - P.E. & L.S. NO. 676

NEW MEXICO OIL CONSERVATION COMMISSION

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY COSDEN PETROLEUM CORPORATION, Box 1311, Big Spring, Texas
(Address)

LEASE State "E" WELL NO. 1 UNIT M S 21 T 14S R 33E
DATE WORK PERFORMED 3-6-62 POOL Undesignated

This is a Report of: (Check appropriate block) ☒ Results of Test of Casing Shut-off

☐ Beginning Drilling Operations

☐ Remedial Work

☐ Plugging

☐ Other _____

Detailed account of work done, nature and quantity of materials used and results obtained.

T.D. 10,030'

Ran 320 Jts 5-1/2" 17# J-55 & N-80 LT&C Rge 2 & 3 8rd smls casing. Set at 10,030'
Cmt w/ 300 sx Slo-set + 2% Gel
Plug down at 11:35 A.M. 3-6-62
W.O.C. 24 hrs - tested csg w/ 1500# for 30 mins. - test o.k.

To Log and Perforate

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:

BEFORE

AFTER

Date of Test = _____

Oil Production, bbls. per day _____

Gas Production, Mcf per day _____

Water Production, bbls. per day _____

Gas-Oil Ratio, cu. ft. per bbl. _____

Gas Well Potential, Mcf per day _____

Witnessed by _____

(Company)

☐ Beginning Drilling Operations☐ Remedial Work☐ Plugging☐ Other _____

Detailed account of work done, nature and quantity of materials used and results obtained.

T.D. 10,030'

Ran 320 Jts 5-1/2" 17# J-55 & N-80 LT&C Rge 2 & 3 8rd smls casing. Set at 10,030'
Cmt w/ 300 sz S10-set + 2% Gel
Plug down at 11:35 A.M. 3-6-62
W.O.C. 24 hrs - tested csg w/ 1500# for 30 mins. - test o.k.

To Log and Perforate

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:

BEFORE

AFTER

Date of Test

Oil Production, bbls. per day

Gas Production, Mcf per day

Water Production, bbls. per day

Gas-Oil Ratio, cu. ft. per bbl.

Gas Well Potential, Mcf per day

Witnessed by _____

(Company)

OIL CONSERVATION COMMISSION

Name _____

Title _____

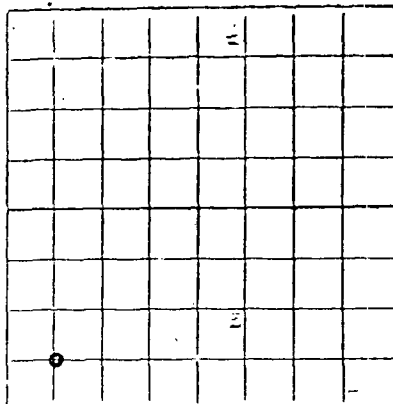
Date _____

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

Name H.L. Weeks

Position Supt. of Production

Company COSDEN PETROLEUM CORPORATION

AREA 640 ACRES
LOCATE WELL CORRECTLY

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

WELL RECORD

Mail to District Office, Oil Conservation Commission, to which Form C-101 was sent not later than twenty days after completion of well. Follow instructions in Rules and Regulations of the Commission. Submit in QUINTUPLICATE. If State Land submit 6 Copies

COSDEN PETROLEUM CORPORATION

(Company or Operator)

State E

(Lease)

Well No. 1, in SW $\frac{1}{4}$ of SW $\frac{1}{4}$, of Sec. 21, T. 14-S, R. 33-E, NMPM.

Undesignated

Pool,

Lea

County.

Well is 660 feet from South line and 660 feet from West lineof Section 21. If State Land the Oil and Gas Lease No. is _____Drilling Commenced 1-26, 19 62 Drilling was Completed 3-3, 19 62Name of Drilling Contractor Brantly Drilling Co., Inc.Address P. O. Box 4935, Midland, TexasElevation above sea level at Top of Tubing Head 4,221. The information given is to be kept confidential until _____, 19 _____

OIL SANDS OR ZONES

No. 1, from 9,830 to 9,915 No. 4, from _____ to _____No. 2, from 9,915 to 9,970 No. 5, from _____ to _____

No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from _____ to _____ feet.

No. 2, from _____ to _____ feet.

No. 3, from _____ to _____ feet.

No. 4, from _____ to _____ feet.

CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13-3/8	48#	New	310	T.P.	-	-	Surface
8-5/8	32# - 24#	New	4179	Guide	-	-	Intermediate
5-1/2	17#	New & Used	10,030	Guide	-	9836 to 10,000	Production

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17-1/2	13-3/8	310	325	pump & plug		cement circulated
11	8-5/8	4179	1800	blend & plug		

Well No. 1, in SW $\frac{1}{4}$ of SW $\frac{1}{4}$, of Sec. 21, T. 14-S, R. 33-E, NMPM.

Undesignated

Pool,

Lea

County.

Well is 660 feet from South line and 660 feet from West line

of Section 21. If State Land the Oil and Gas Lease No. is

Drilling Commenced 1-26, 19 62. Drilling was Completed 3-3, 19 62.

Name of Drilling Contractor Brantly Drilling Co., Inc.

Address P. O. Box 4935, Midland, Texas

Elevation above sea level at Top of Tubing Head 4,221. The information given is to be kept confidential until
- , 19

OIL SANDS OR ZONES

No. 1, from 9,830 to 9,915 No. 4, from to

No. 2, from 9,915 to 9,970 No. 5, from to

No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.

No. 2, from to feet.

No. 3, from to feet.

No. 4, from to feet.

CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13-3/8	48#	New	310	T.P.	-	-	Surface
8-5/8	32# - 24#	New	4179	Guide	-	-	Intermediate
5-1/2	17#	New & Used	10,030	Guide	-	9836 to 10,000	Production

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17-1/2	13-3/8	310	325	pump & plug		cement circulated
11	8-5/8	4179	1800	pump & plug		cement circulated
7-7/8	5-1/2	10,030	300	pump & plug		

RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

Acidize csg perfs 9972-80; 9950-52; 9925-35 w/ 500 gal, 2,000 gal, 5,000 gal, 10,000 gal acid.

Acidize csg perfs 9887-95; 9873-81; 9866-70; 9856-62; 9836-42 w/ 2,000 gal acid. Squeezed perfs 9836-9895 w/ 150 sx cement & 125 sx cement. Acidize csg perfs 9972-80 w/ 400 gal, pkr failed - Acidize csg perfs 9925-80 w/ 550 gal, pkr failed - Acidize csg perfs 9887-9980 w/ 2,000 gal, 3,500 gal, & 7,100 gal. Acidize csg perfs 9994-10,000 w/ 500 gal.

Result of Production Stimulation 20 EO & 95 BW in 24 hrs pumping.

Depth Cleaned Out 10,010

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Form C-110
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator COSDEN PETROLEUM CORPORATION Lease State "E"
Well No. 1 Unit Letter M S 21 T 14-S R 33-E Pool Undesignated
County Lea Kind of Lease (State, Fed. or Patented) State
If well produces oil or condensate, give location of tanks: Unit M S 21 T 14-S R 33-E
Authorized Transporter of Oil or Condensate Indiana Oil Purchasing Company
Address Box 1725, Midland, Texas
(Give address to which approved copy of this form is to be sent)
Authorized Transporter of Gas Warren Petroleum Corporation
Address Box 1589, Tulsa 2, Oklahoma
(Give address to which approved copy of this form is to be sent)
If Gas is not being sold, give reasons and also explain its present disposition:

Reasons for Filing: (Please check proper box) New Well (XX)
Change in Transporter of (Check One): Oil () Dry Gas () C'head () Condensate ()
Change in Ownership () Other ()
Remarks: (Give explanation below)

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 2 day of July 19 62

By H. L. Weeks H. L. Weeks

Approved 19

Title Supt. of Production

OIL CONSERVATION COMMISSION

By Lester J. Clements

Company COSDEN PETROLEUM CORPORATION

Address Box 1311, Big Spring, Texas

Title

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Form C-110
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

RECEIVED JUL 5 AM 8:32

Company or Operator COSDEN PETROLEUM CORPORATION Lease State "E"

Well No. 1 Unit Letter M S 21 T 14-SR 33-E Pool Undesignated

County Lea Kind of Lease (State, Fed. or Patented) State

If well produces oil or condensate, give location of tanks: Unit M S 21 T 14-S R 33-E

Authorized Transporter of Oil or Condensate Indiana Oil Purchasing Company

Address Box 1725, Midland, Texas
(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas Warren Petroleum Corporation

Address Box 1589, Tulsa 2, Oklahoma
(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Reasons for Filing: (Please check proper box) New Well XX

Change in Transporter of (Check One): Oil () Dry Gas () C'head () Condensate ()

Change in Ownership () Other ()

Remarks: (Give explanation below)

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 2 day of July 19 62

By H.L. Weeks H.L. Weeks

Approved 19

Title Supt. of Production

OIL CONSERVATION COMMISSION

Company COSDEN PETROLEUM CORPORATION

By L. A. Clements

Address Box 1311, Big Spring, Texas

Title

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

(Form C-104)
Revised 7/1/57

REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well
~~EXISTING WELL~~

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Big Spring, Texas

May 29, 1962

(Place)

(Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

COSDEN PETROLEUM CORPORATION STATE **"E"** Well No. **1** in **SW** $\frac{1}{4}$ **SW** $\frac{1}{4}$,
(Company or Operator) (Lease).

M Sec. **21** T. **14-S** R. **33-E** NMPM, **Undesignated** Pool
(Unit Letter)

Lea County. Date Spudded **1-26-62** Date Drilling Completed **3-3-62**

Please indicate location:

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

Elevation **4221** Total Depth **10,030** FBTD **10,010**

Top Oil/Gas Pay **9,925** Name of Prod. Form. **Penn.**

PRODUCING INTERVAL -

Perforations **9925-35; 9950-52; 9972-80; 9994-10,000**

Open Hole Depth Casing Shoe **10,030** Depth Tubing **9,900**

OIL WELL TEST -

Natural Prod. Test: _____ bbls. oil, _____ bbls water in _____ hrs, _____ min. Size _____ Choke

Test After Acid or Fracture Treatment (after recovery of volume of oil equal to volume of load oil used): **20** bbls. oil, **95** bbls water in **24** hrs, **0** min. Size _____ Choke

GAS WELL TEST -

Natural Prod. Test: _____ MCF/Day; Hours flowed _____ Choke Size _____

Tubing, Casing and Cementing Record

Size	Feet	Sax
13-3/8	310-	325
8-5/8	4179	1800
5-1/2	10,030	300
2-1/2	9,900	-0-

Method of Testing (pitot, back pressure, etc.): _____

Test After Acid or Fracture Treatment: _____ MCF/Day; Hours flowed _____

Choke Size _____ Method of Testing: _____

Acid or Fracture Treatment (Give amounts of materials used, such as acid, water, oil, and sand): **500 gal mud acid**

Casing Tubing Date first new Press. _____ oil run to tanks **May 14, 1962**

Oil Transporter **Unknown at this time - will notify**

Gas Transporter **Warren Petroleum Corporation**

Remarks: _____

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

Approved: _____, 19. _____ **COSDEN PETROLEUM CORPORATION**

(Company or Operator)

By: *[Signature]* **H.L. Weeks**
(Signature)

Title **Supt. of Production**
Send Communications regarding well to:

Name **Cosden Petroleum Corporation**

Address **P. O. Box 1311, Big Spring, Texas**

OIL CONSERVATION COMMISSION

By: *[Signature]*

Title _____

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Form C-110
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

1962 AUG 27 PM 2 45

Company or Operator COSDEN PETROLEUM CORPORATION Lease STATE R

Well No. 1 Unit Letter M S 21 T 14S R 33E Pool Saunders (Permo-Penn)

County Lea County, New Mexico Kind of Lease (State, Fed. or Patented) State

If well produces oil or condensate, give location of tanks: Unit M S 21 T 14S R 33E

Authorized Transporter of Oil or Condensate Indiana Oil Purchasing Company

Address Box 1725, Midland, Texas

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas Warren Petroleum Corporation

Address Box 1589, TULSA-2, Oklahoma

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Reasons for Filing: (Please check proper box) New Well ()

Change in Transporter of (Check One): Oil () Dry Gas () C'head () Condensate ()

Change in Ownership () Other (XX)

Remarks: (Give explanation below)

Well placed in pool.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 24 day of August 19 62

By H. L. Weeks H. L. Weeks

Approved 19

Title Supt. of Production

OIL CONSERVATION COMMISSION

Company COSDEN PETROLEUM CORPORATION

By [Signature]

Address Box 1311

Title [Signature]

Big Spring, Texas

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator American Petrofina Company of Texas Lease State E

Well No. 1 Unit Letter M S 21 T 14S R 33E Pool Saunders Permo-Penn

County Lea Kind of Lease (State, Fed. or Patented) State

If well produces oil or condensate, give location of tanks: Unit M S 21 T 14S R 33E

Authorized Transporter of Oil or Condensate Indiana Oil Purchasing Co.

Address Box 1725, Midland, Texas

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas Vented

Address

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

TSTM

Reasons for Filing: (Please check proper box) New Well ()

Change in Transporter of (Check One): Oil () Dry Gas () C'head () Condensate ()

Change in Ownership (x) Other ()

Remarks: (Give explanation below)

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 6 day of May 19 63

By L.M. Thompson L.M. Thompson

Approved 19

Title Agent

OIL CONSERVATION COMMISSION

Company American Petrofina Company of Texas

By

Address Box 1311

Title

Big Spring, Texas

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE O. C. C.

MISCELLANEOUS NOTICES

AUG 23 10 40 AM '64

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL	XXX	NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICOBig Spring, Texas
(Place)August 24, 1964
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the American Petrofina Company of Texas

(Company or Operator) State E Well No. 1 in H
(Unit)
SN 1/4 SW 1/4 of Sec. 21, T. 14-S, R. 33-E, NMPM, Saunders (Permo-Penn) Pool
(40-acre Subdivision)
Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

This well was shut in in May 1963, and temporarily abandoned in August 1963. Prior to being shut in the production was only 40-50 bbls of oil per month.

Load hole with mud. Spot 25 sacks regular cement at FETD of 10,010'.
Spot 25 sacks regular cement at approximately 8,000 and cut 5-1/2" casing at this depth.
Spot 25 sacks regular cement at approx. 5600' at the top of the Glorieta formation.
Spot 25 sacks regular cement at approx. 4250', in and out the bottom of 8-5/8" intermediate casing.
Set 10 sacks regular cement at surface with marker.

Approved AUG 24 1964, 19____
Except as follows:
6400

Approved
OIL CONSERVATION COMMISSION

By [Signature]
Title Engineer District 3

AMERICAN PETROFINA COMPANY OF TEXAS
Company or Operator

By [Signature] J. M. Danson

Position District Engineer
Send Communications regarding well to:

Name American Petrofina Co. of Texas

Address Box 1311, Big Spring, Texas

NUMBER OF COPIES RECEIVED	
DISTRIBUTION	
SALES	
FILE	
U.S.G.S.	
LAND OFFICE	
TRANSPORTER	OIL GAS
PRODUCTION OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 4106)

Name of Company American Petrofina Company of Texas				Address Box 1311, Big Spring, Texas			
Lease State "E"	Well No. 1	Unit Letter M	Section 21	Township 14-S	Range 33-E		
Date Work Performed 9-16-64 - 9-24-64		Pool Saunders (Permo-Penn)			County Lea		

THIS IS A REPORT OF: (Check appropriate block)

<input type="checkbox"/> Beginning Drilling Operations	<input type="checkbox"/> Casing Test and Cement Job	<input type="checkbox"/> Other (Explain):
<input checked="" type="checkbox"/> Plugging	<input type="checkbox"/> Remedial Work	

Detailed account of work done, nature and quantity of materials used, and results obtained.

Circulated hole with mud.
Set 25 sack plug @ 9,993 (G.L.)
Shot pipe @ 7975 (wireline - G.L.)
Pulled casing.
Set 25 sack plug @ 7960 (G.L.)
Set 25 sack plug @ 6432 (G.L.)
Set 25 sack plug @ 5591 (G.L.)
Set 25 sack plug @ 4210 (G.L.)
Set 10 sack plug @ surface and placed marker - 9-24-64.

Witnessed by W. J. Priobe H.L. Weeks	Position Prod. Foreman	Company American Petrofina Co. of Texas
--	----------------------------------	---

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

D F Elev.	T D	P BTD	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION		I hereby certify that the information given above is true and complete to the best of my knowledge.	
Approved by <i>Leslie A. Clement</i>	Name <i>H. L. Weeks</i>		
Title	Position Production Advisor		
Date	Company American Petrofina Company of Texas		

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

Name of Company McGrath & Smith				Address 726 Vaughn Building, Midland, Texas			
Lease Hondo State		Well No. 1	Unit Letter F	Section 21	Township 14-South	Range 33-East	
Date Work Performed Jan. 28, 1964		Pool Saunders Field (Permo-Penn)			County Lea		
THIS IS A REPORT OF: (Check appropriate block)							
<input type="checkbox"/> Beginning Drilling Operations		<input type="checkbox"/> Casing Test and Cement Job		<input type="checkbox"/> Other (Explain):			
<input checked="" type="checkbox"/> Plugging		<input type="checkbox"/> Remedial Work					
Detailed account of work done, nature and quantity of materials used, and results obtained. The above described well was plugged and abandoned on January 28, 1964 as follows: used tubing, a 25 sx plug @ 10,000'; 25 sx plug @ 5216', shot-off point of 4½" csg.; 25 sx plug @ 4100' base of 9-5/8" csg. and a 10 sx plug @ surface. Installed appropriate marker, and cleaned off location. Mud is present between all plugs. Hobbs Pipe and Supply called the New Mexico State Engineer to get information where to set the plugs.							
Witnessed by Harry Mitchell			Position Engineer		Company McGrath & Smith		
FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY							
ORIGINAL WELL DATA							
D F Elev.		T D		P B T D		Producing Interval	
Completion Date		Tubing Diameter		Tubing Depth		Oil String Diameter	
Oil String Depth		Perforated Interval(s)		Open Hole Interval		Producing Formation(s)	
RESULTS OF WORKOVER							
Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD	
Before Workover							
After Workover							
OIL CONSERVATION COMMISSION				I hereby certify that the information given above is true and complete to the best of my knowledge.			
Approved by <i>John W. [Signature]</i>				Name Harry Mitchell			
Title				Position Engineer			
Date				Company McGrath & Smith			