

APPLICATION FOR AUTHORIZATION TO INJECT

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

EXHIBIT

CASE NO.

10822

II. Operator: Cross Timbers Operating CompanyAddress: P. O. Box 50847, Midland, Texas 79710Contact party: Gary L. MarkestadPhone: (915)682-8873

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: Gary L. MarkestadTitle: Operations EngineerSignature: *Gary L. Markestad*Date: 11/25/92

* 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.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, Kathi Bearden

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of _____

one _____ weeks.

Beginning with the issue dated

Nov. 17, 1992

and ending with the issue dated

Nov. 17, 1992

Kathi Bearden
General Manager

Sworn and subscribed to before

me this 20th day of

November, 1992

Reggie J. Terry
Notary Public.

My Commission expires _____

July 6, 1994

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

REC'D. / MIDLAND

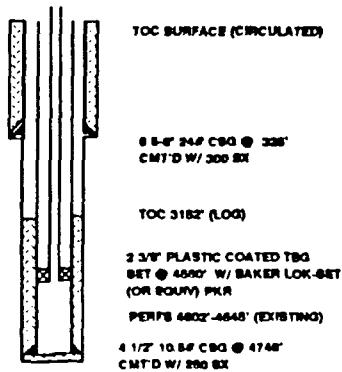
NOV 24 1992

LEGAL NOTICE
November 17, 1992
Cross Timbers Operating
Company, P.O. Box 60847,
Midland, Texas 79710 (915)
662-8873, is hereby giving
notice of our intent to inject
produced water and/or fresh
water into the State of New
Mexico Well No. 6 located 2310
FSL & 430, FEL of Section
32, T-17-S, R-33-E for sec-
ondary recovery purposes. The
water is to be injected into
the Grayburg formation from
4,602' to 4,708' at an ex-
pected rate of 2200 BWPD
and 1400 psig pressure. In-
terested persons objecting
to this application must file
a request for hearing with
the Oil Conservation Divi-
sion, P.O. Box 2088, Santa
Fe, New Mexico 87501 with-
in 15 days of this notice.

INJECTION WELL DATA SHEET

CROSS TIMBERS OPERATING COMPANY STATE BY
 OPERATOR LEASE
 6 2310' FSL, 430' FFL SEC 32, T17S, R33E
 WELL NO. FOOTAGE LOCATION SEC/TWP/RGE

SCHEMATIC



TABULAR DATA

SURFACE CASING
 SIZE 8 5/8"
 TOC SURFACE
 HOLE SIZE 11"
 CEMENTED WITH 300 SX.
 DETERMINED BY CIRCULATION

INTERMEDIATE CASING
 SIZE
 TOC
 HOLE SIZE
 CEMENTED WITH
 DETERMINED BY

LONG STRING 4 1/2"
 TOC 3152'
 HOLE SIZE 7 7/8"
 TOTAL DEPTH 4748'
 CEMENTED WITH 250 SX.
 DETERMINED BY LOG

INJECTION INTERVAL
 4602 FEET TO 4708 FEET

TUBING SIZE 2 3/8" LINED WITH PLASTIC SET IN A
 BAKER LOK-SET (OR EQUIV.) PACKER AT 4550'.

OTHER DATA

1. NAME OF INJECTION FORMATION GRAYBURG
2. NAME OF FIELD OR POOL MALJAMAR (G-SA)
3. IS THIS A NEW WELL DRILLED FOR INJECTION ? NO
 IF NO, FOR WHAT PURPOSE WAS THIS WELL ORIGINALLY DRILLED ?
 PRODUCTION
4. 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.
5. GIVE THE DEPTH TO AND NAME OF ANY OVERLYING AND/OR UNDERLYING OIL OR GAS
 ZONES (POOLS) IN THIS AREA.
 CORBIN (ABO) 8650', CORBIN (QUEEN) 3700'.

ATTACHMENT

ITEM VII
OPERATION DATA

- 1) Proposed average daily rate - 200 BWPD.
Proposed maximum daily rate - 400 BWPD @ 1400 psig.
- 2) Closed system.
- 3) Expected average injection pressure - 1000 psig.
Maximum injection pressure - 1500 psig.
- 4) Injection water is primarily produced water from the Cross Timbers State "BY" Lease and the Cross Timbers SMGSAU with some fresh water to augment the injection volume. The fresh water is being supplied to the SMGSAU by Conoco, Inc. and is used extensively in this area for secondary recovery purposes.
- 5) Injection is not for disposal purposes.

ITEM VIII
GEOLOGICAL DATA

Formation Name: Grayburg
Lithology: Sandstone
Thickness: 508' gross, 50' net
Depth: 4,205'

Sources of Drinking Water: None
Listed in State Engineer's Report

ITEM IX

- 1) Additional stimulation is not planned at this time.

ITEM X

Open hole logs not available.



AUG - 6 1991

Analysis By: CLYDE WILHOIT

Na ⁺	1000.0		Cl ⁻	1000.0			
Ca ⁺⁺	100.0		HCO ₃ ⁻	10.0			
Mg ⁺⁺	10.0		SO ₄ ⁻⁻	10.0			
Fe ⁺⁺⁺	1.0		CO ₃ ⁻⁻	1.0			
	12	8	4	0	4	8	12



A Baker Hughes company

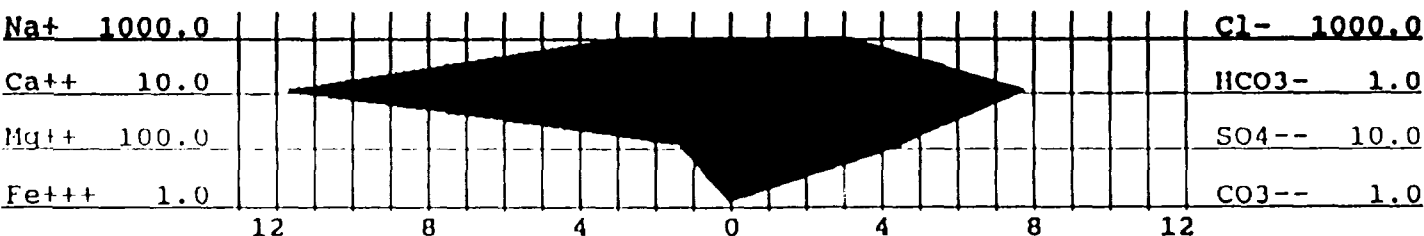
WATER ANALYSIS
for
CROSSTIMBERS

WPA-
Gm
file
copy mtr book
REC'D. MIDLAND
AUG - 6 1991

Date of Analysis:	JULY 11, 1991	Analysis #:	5407
Company:	CROSSTIMBERS	Company Address:	N/D
State:	N.M.	Field:	
Lease:	COCKBURN US MINERAL	Well #:	# 1
Oil (bbl/day):	N/D	Water (bbl/day):	N/D
Type of Water:	PRODUCED	Temp., C:	15
Sample Source:	WELLHEAD	Date of Sampling:	JULY 11, 1991
Representative:	STEVE STROUD	Analysis By:	CLYDE WILHOIT

WATER ANALYSIS PATTERN

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



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	260.00	
Calcium, (Ca++)	120.00	2405.77
Magnesium, (Mg++)	140.00	1701.20
Iron, (Fe+++)	0.05	1.00
Barium, (Ba++)	N/D	N/D
Sodium, Na+(calc)	3118.71	71730.31
Manganese, (Mn++)	0.00	0.00

ANIONS	me/l	mg/l
Chloride, Cl-	3323.94	117995.73
Sulfate, SO4--	46.82	2250.00
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.)		196572.10

DISSOLVED GASES

Hydrogen sulfide:	50.00	mg/l
Carbon dioxide	87.12	mg/l
Oxygen	N/D	mg/l

PHYSICAL PROPERTIES

pH	6.60
Spec Grav.	1.140
TDS (calc.)	196580.13

SCALE STABILITIES

Temp., C	CaCO3	CaSO4	BaSO4
15.0	0.24	5791	0
25.0	0.42	6088	0
35.0	0.65	6488	0
Max entity, (calc.)	3389		0
RESIDUAL HYDROCARBONS:		N/D	

N/D = not determined

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

@ 20'C...Moderately corrosive.

BAKER
Performance Chemicals
WATER ANALYSIS REPORT

Lab ID No. : 012791.002

Analysis Date: January 29, 1992

Company : Cross Timbers
 Field :
 Lease/Unit : SEMGSAU
 Well ID. : Fresh Water
 Sample Loc.: Water Tank Inlet

Sampled By : J. L. Enriquez
 Sample Date: 8-December-1991
 Salesperson: Clyde Wilhoit
 Formation : San Andres
 Location : Lovington, N. M.

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
Calcium as Ca++	54	3	Hydroxyl as OH-	0	0
Magnesium as Mg++	17	1	Carbonate as CO3=	0	0
Sodium as Na+ (Calc)	28	1	Bicarbonate as HCO3-	195	3
Barium as Ba++	Not Determined		Sulfate as SO4=	34	1
Oil Content	0		Chloride as Cl-	50	1

Total Dissolved Solids, Calculated: 378 mg/L.

Calculated Resistivity: 0.213 ohm-meters
 mg/L. Hydrogen Sulfide: 0
 mg/L. Carbon Dioxide: 8
 mg/L. Dissolved Oxygen: 5.5

pH: 8.300
 Specific Gravity 60/60 F.: 0.998
 Saturation Index @ 80 F.: -0.404
 @ 140 F.: +0.496

Total Hardness: 205 mg/L. as CaCO3
 Total Iron: 0.05 mg/L. as Fe++

PROBABLE MINERAL COMPOSITION		
COMPOUND	MG/L	MEQ/L
Ca(HCO3)2	220	2.7
CaSO4	0	0.0
CaCl2	0	0.0
Mg(HCO3)2	35	0.5
MgSO4	43	0.7
MgCl2	9	0.2
NaHCO3	0	0.0
Na2SO4	0	0.0
NaCl	71	1.2

Calcium Sulfate Scaling Potential
 Not Present

Estimated Temperature of Calcium
 Carbonate Instability is
 105 F.

Analyst 10:44 AM

ATTACHMENT
(cont'd)

ITEM XI
CHEMICAL ANALYSIS OF FRESH WATER

No fresh water wells within 1 mile of proposed injection well.

ITEM XII

All available data indicates that the injection interval is not in hydraulic communication with any sources of fresh water in this area.

BAKER
Performance Chemicals
WATER ANALYSIS REPORT

Lab ID No. : 012791.001

Analysis Date: January 29, 1992

Company : Cross Timbers
Field :
Lease/Unit : SEMGSAU
Well ID. : Injection Pump
Sample Loc.: Pump Suction

Sampled By : J. L. Enriquez
Sample Date: 8-December-1991
Salesperson: Clyde Wilhoit
Formation : San Andres
Location : Lovington, N. M.

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
Calcium as Ca++	2,473	124	Hydroxyl as OH-	0	0
Magnesium as Mg++	2,038	167	Carbonate as CO3=	0	0
Sodium as Na+ (Calc)	39,855	1,733	Bicarbonate as HCO3-	804	13
Barium as Ba++	Not Determined		Sulfate as SO4=	3,100	65
Oil Content	117		Chloride as Cl-	68,984	1,946

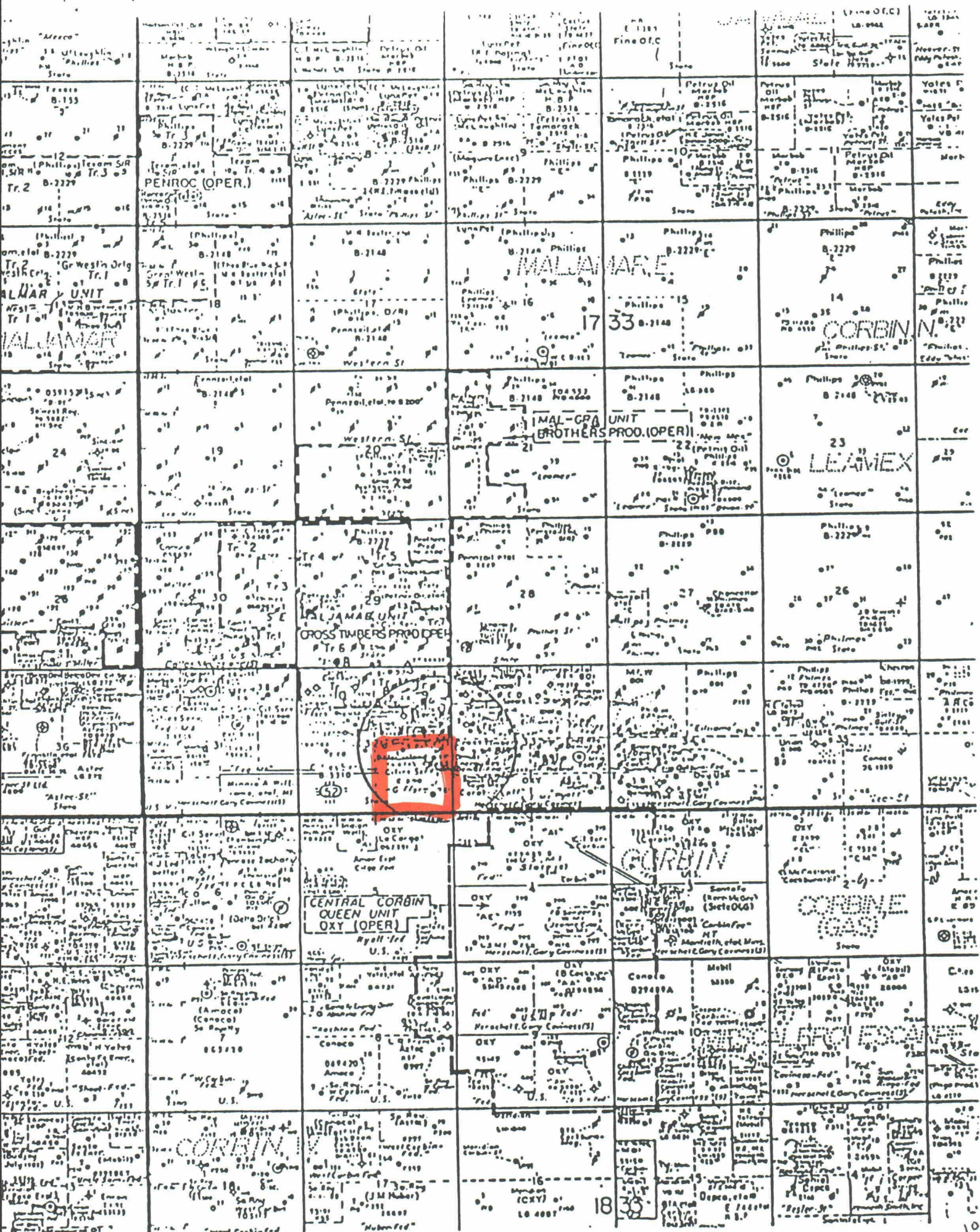
Total Dissolved Solids, Calculated: 117,255 mg/L.

Calculated Resistivity: 0.101 ohm-meters	pH: 6.810
mg/L. Hydrogen Sulfide: 75	Specific Gravity 60/60 F.: 1.081
mg/L. Carbon Dioxide: 140	Saturation Index @ 80 F.: +0.274
mg/L. Dissolved Oxygen: 0.005	@ 140 F.: +1.199

Total Hardness:	14,555	mg/L. as CaCO3
Total Iron:	8.00	mg/L. as Fe++

	PROBABLE MINERAL COMPOSITION	MG/L	MEQ/L
	COMPOUND		
	Ca(HCO3)2	1,068	13.2
	CaSO4	4,396	64.6
Calcium Sulfate Scaling Potential Marginal	CaCl2	2,547	45.9
	Mg(HCO3)2	0	0.0
Estimated Temperature of Calcium Carbonate Instability is 65 F.	MgSO4	0	0.0
	MgCl2	7,956	167.1
	NaHCO3	0	0.0
	Na2SO4	0	0.0
Analyst	NaCl	101,302	1,732.8

10:43 AM



WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR	CITIES SERVICE(ORIG CARPER DRUG CO)	CITIES SERVICE	CITIES SERVICE	BARNEY COCKBURN
WELL NAME	:OHIO STATE "A" #6(OHIO-STATE #6)	STATE CS #2	STATE "CS" #5	WATT-PHILLIPS #2
LOCATION	:2310 PNL & 330' FEL SEC 32, T17S, R33E	2310' PNL & 1700' FEL SEC 32, T17S, R33E	1650' PNL & 1650' FEL SEC 32, T17S, R33E	1980' PNL & 460' PNL SEC 33, T17S, R33E
WELL TYPE	:OIL	OIL	DRY HOLE	DRY HOLE
STATUS	:PLUGGED	PLUGGED 11/18/83.	PLUGGED	PLUGGED
SURFACE CASING	:8-5/8" @ 1,368' W/50 SX.	13-3/8" @ 331' W/250 SX.	13" 42# @ 205'.	8-5/8" @ 1,430' W/50 SX
TOP OF CEMENT	:1240'	SURFACE 8 5/8" @ 2897' W/ 500 SX. 1260'	10-3/4" 34# @ 856'.	
INTERMEDIATE CASING	:	4-1/2" @ 8,799' W/850 SX. 5515'	7" 20# @ 3,912'W/ 100 SX. 2916'	7" @ 3,649' W/320 SX.
TOP OF CEMENT	:7" @ 3,735' W/100 SX. :2660'			
PRODUCTION CASING	:			
TOP OF CEMENT	:			
LINER	:			
DATE DRILLED	:11/53	9/65	7/49	11/51
TOTAL DEPTH	:3,769'	8,780'	4500'	3,765'
COMPLETION INTERVAL	:3,735'-3,769' (OH)	8,750'-58' (PERPS)		3,649'-3,765'
				NO RECORD OF WELL @ NROC
PLUGGING PROCEDURE	CIBP @ 3700' 5 SX. @ 3700'-3660' CUT OFF 7" @ 1750' 50 SX 1800'-1650' 50 SX 1425'-1300' 10 SX 30'-0'	CIBP @ 8630' W/ 5 SX. 25 SX. 6234'-5985' 25 SX. 3993'-3743' SHOT CSG OFF @ 3,068'. 50 SX. 3219'-3019' 75 SX. 3019'-2719' CUT OFF 8 5/8" @ 386' 120 SX. 443'-143' 40 SX. 56'-0'	CIBP @ 3475'. PERP @ 1340'. RETAIRER @ 1305'. 502 W/ 500 SX. PERP @ 1150'. PMP 500 SX DMN CSG & DISPL TO 1050' PERP @ 250'. PMP 375 SX DMN CSG. CIRC 5 SX TO SURF.	

WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR	CROSS TIMBERS OPERATING COMPANY	CROSS TIMBERS OPERATING COMPANY	CROSS TIMBERS OPERATING COMPANY	CROSS TIMBERS OPERATING CO
WELL NAME	DENIUS FEDERAL #9	DENIUS FEDERAL #10	STATE "BY" #3	STATE "BY" #5
LOCATION	:2310' PSL & 940' FWL SEC 33, T-17-S, R-33-E	2310' PSL & 2117' FWL SEC 33, T-17-S, R-33-E	1980' PSL & 660' FWL SEC 32, T-17-S, R-33-E	2310' PSL, 1650' FWL SEC 32, T17S, R33E
WELL TYPE	:OIL	OIL	OIL	OIL
STATUS	:ACTIVE	PLUGGED	ACTIVE	SI
SURFACE CASING	:8 5/8" 24# @ 326' W/ 200 SX.	11 3/4" @ 314' W/ 275 SX.	8 5/8" 24# @ 1370' W/ 50 SX.	8 5/8" 24# @ 1334' W/ 50 S
TOP OF CEMENT	:SURFACE (CIRC.)	SURFACE (CIRC.)	1290'	1254' (CALC)
INTERMEDIATE CASING :				
TOP OF CEMENT :				
PRODUCTION CASING	:4 1/2" 10.5# @ 4750' W/ 850 SX.	4 1/2" 10.5# @ 4710' W/ 1200 SX.	7" 20# @ 3813' W/ 100 SX.	7" 20# @ 3797' W/ 100 SX.
TOP OF CEMENT	:1286' (CALC)	74' (CALC)	2570'	3364' (CALC)
LINER :				5 1/2" 14# 3700'-4701' W/
DATE DRILLED	:8/61	2/62	12/52	11/53 (DEEPENED 12/51)
TOTAL DEPTH	:4750'	4750'	4715' (PB TO 3940')	4701'
COMPLETION INTERVAL	:4612'-4630'	4659'-4667'	3813'-3940' (OPEN HOLE)	4568'-4680'

PLUGGING PROCEDURE

CIBP @ 4575' W/ 14SX.
 PERP @ 1400'. SQZ W/ 50 SX.
 PERP @ 350'. SQZ W/ 50 SX.
 50' SURF. PLUG
 DRY HOLE MARKER
 P&A'D 5/12/90

WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR : CROSS TIMBERS OPERATING COMPANY
WELL NAME : STATE "BY" #7
LOCATION : 660' PSL, 660' FEL
SEC 32, T-17-S, R-33-E
WELL TYPE : OIL
STATUS : ACTIVE
SURFACE CASING : 8 5/8" @ 1383' W/ 700 SX.
TOP OF CEMENT : SURFACE
INTERMEDIATE CASING :
TOP OF CEMENT :
PRODUCTION CASING : 5 1/2" @ 4767' W/ 800 SX.
TOP OF CEMENT : SURFACE (CIRC. 50 SX)
LINER :
DATE DRILLED : 12/79
TOTAL DEPTH : 4775'
COMPLETION INTERVAL : 2702'-4150'

PLUGGING PROCEDURE

CROSS TIMBERS OPERATING COMPANY
SHGSAD #707
100' PSL & 1430' FEL
SEC 29, T17S, R33E
DRY HOLE
PLUGGED
8-5/8" 24# @ 810' W/350 SX.
SURFACE
CROSS TIMBERS OPERATING COMPANY
SHGSAD #904
660' PNL & 660' FEL
SEC 32, T17S, R33E
OIL
PLUGGED
9-5/3" @ 1,300' .
7" @ 3,943' .
5-1/2" 14# @ 4,429' W/435 SX.
1740'
11/72
4,430'
4,272'-4,284' (PERP)

CROSS TIMBERS OPERATING COMPANY
SHGSAD #905
1650' PNL & 330' FEL
SEC 32, T17S, R33E
OIL
ACTIVE
8-5/8" 24# @ 1,345' W/50 SX.
1260'
CROSS TIMBERS OPERATING COMPANY
SHGSAD #904
660' PNL & 660' FEL
SEC 32, T17S, R33E
OIL
PLUGGED
9-5/3" @ 1,300' .
7" @ 3,943' .
7/46
4,306' (PSTD 4,266')
3,943'-4,266' (OH)

CROSS TIMBERS OPERATING COMPANY
SHGSAD #905
1650' PNL & 330' FEL
SEC 32, T17S, R33E
OIL
ACTIVE
8-5/8" 24# @ 1,345' W/50 SX.
1260'
CROSS TIMBERS OPERATING COMPANY
SHGSAD #905
1650' PNL & 330' FEL
SEC 32, T17S, R33E
OIL
ACTIVE
8-5/8" 24# @ 1,345' W/50 SX.
1260'
CROSS TIMBERS OPERATING COMPANY
SHGSAD #905
1650' PNL & 330' FEL
SEC 32, T17S, R33E
OIL
ACTIVE
8-5/8" 24# @ 1,345' W/50 SX.
1260'

CIBP @ 4207' W/ 5 SX
CUT OFF 5 1/2" CSG @ 1738'
25 SX @ 1788'-1688'
40 SX @ 1380'-1280'
30 SX 840'-740'
10 SX @ 30'-SURF
DRY HOLE MARKER
P&A'D 7/73

CIBP @ 3,891' W/9 SX CUT (3,846'-
3,891').
PULLED 2,215' 7" CSG.
45 SX 2,265'-2,165'.
45 SX 1,350'-1,250'.
15 SX 30' SURF.

7" 20# @ 3,523' W/50 SX.
2900'
4-1/2" 9.5# @ 4,474' W/50 SX.
9/50
4,476'
4,298'-4,407' (PEE2)

WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR	:CROSS TIMBERS OPERATING COMPANY	CROSS TIMBERS OPERATING COMPANY	CROSS TIMBERS OPERATING COMPANY	CROSS TIMBERS OPERATING COMPANY
WELL NAME	:SHGSAU #906	SHGSAU #907	U.S. MINERALS #1	U.S. MINERALS #2
LOCATION	:1200' PNL & 950' PEL	2310' PNL & 990' PEL	990' PNL, 330' PNL	990' PNL, 990' PNL
WELL TYPE	:OIL	SEC 32, T17S, R33E	SEC 33, T-17-S, R-33-E	SEC 33, T-17-S, R-33-E
STATUS	:ACTIVE	INJECTION	OIL	OIL
SURFACE CASING	:8-5/8" 24# @ 306' W/250 SX.	ACTIVE	ACTIVE	ACTIVE
TOP OF CEMENT	:SURFACE (CIRC.)	8-5/8" 24# @ 338' W/200 SX.	7" 20# @ 1427' W/ 50 SX.	8 5/8" 28# @ 1305' W/ 50 SX.
INTERMEDIATE CASING	:	SURFACE (CIRC.)	1365'	1225'
TOP OF CEMENT	:			
PRODUCTION CASING	:5 1/2" 17# @ 4545' W/ 1300 SX.	5 1/2" 15.5# & 17# @ 4600' W/ 1450 SX.	5 1/2" 14# @ 4278' W/ 100 SX.	7" 20# @ 4104' W/ 100 SX.
TOP OF CEMENT	:SURFACE (CIRC.)	SURFACE (CIRC.)	3770'	2860'
LINER	:			
DATE DRILLED	:12/91	12/91	9/53	7/53
TOTAL DEPTH	:4545'	4600'	4293'	4302'
COMPLETION INTERVAL	:4270'-4460'	4316'-4457'	4278'-4293' (OPEN HOLE)	4104'-4302' (OPEN HOLE2)

PLUGGING PROCEDURE

WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR	: H. R. DENIUS	H. R. DENIUS	JAMES P. DUNIGAN	OXY USA, INC.
WELL NAME	: COCKBURN-FEDERAL #5	COCKBURN-FEDERAL #9	COCKBURN #1	COCKBURN STATE "A" #4
LOCATION	: 2310' PSL, 330' FML SEC 33, T17S, R33E	2264' PSL, 990' FML SEC 33, T17S, R33E	990' FML & 430' FML SEC 33, T17S, R33E	1980' FEL & 990' FML SEC 32, T-17-S, R-33-E
WELL TYPE	: OIL	OIL	DRY HOLE	OIL
STATUS	: PSA	PSA	PLUGGED	ACTIVE
SURFACE CASING	: 8 5/8" @ 1380' W/ 50 SX.	8-5/8" @ 226' W/75SX	13-3/8" @ 308' W/340 SX.	13 3/8" @ 334' W/ 320 SX.
TOP OF CEMENT	: 1300' (CALC)	31' (CALC)	SURFACE	SURFACE
INTERMEDIATE CASING :			8-5/8" @ 4,557' W/1950 SX.	8 5/8" @2899' W/ 500 SX
TOP OF CEMENT :			1400'	2100'
PRODUCTION CASING :			NONE	4 1/2" @ 3819' W/700 SX
TOP OF CEMENT :				6085'
LINER :				
DATE DRILLED	: 11/53	2/60	4/61	3/66
TOTAL DEPTH	: 3880'	3854'	8,940'	8820'
COMPLETION INTERVAL	: 3840'-3862'	3806'-28'	NONE	8632'-8695'

PLUGGING PROCEDURE

100' PLUG @ 3865'-3765'	100' PLUG 3460'-3360'	CUT OFF 8 5/8" @ 1400'
CUT OFF 5 1/2" @ 2396'	CUT OFF 5 1/2" @ 2110'	30 SX. @ 1400'
100' PLUG @ 2400'-2300'	100' PLUG 2110'-2020'	30 SX @ 308'
100' PLUG @ 1430'-1330'	100' PLUG 1370'-1270'	10 SX. @ SURFACE
CUT OFF 8 5/8" @ 454'	10' SURFACE PLUG	
60' PLUG @ 270'-210'		
15' SURF PLUG		
PSA 6/16/61	PSA 6/16/61	

WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR	:OXY USA, INC.	OXY USA, INC.	OXY USA, INC.	OXY USA, INC.
WELL NAME	:GIFPOD STATE "A" #1	STATE "CB" #1	OHIO STATE "C" #1	STATE CD #1
LOCATION	:330' FEL & 2310' PSL SEC 32, T-17-S, R-33-E	2310' FML, 2310' FEL SEC 32, T-17-S, R-33-E	1980' FML & 330' FEL SEC 32, T-17-S, R-33-E	2310' PSL, 2310' FML SEC 32, T17S, R33E
WELL TYPE	:OIL	OIL	OIL	OIL
STATUS	:ACTIVE	ACTIVE	ACTIVE	ACTIVE
SURFACE CASING	:11 3/4" 28# @ 314' W/ 225 SX.	8 5/8" @ 329' W/ 300 SX.	13 3/8" @ 311' W/ 340 SX.	8 5/8" 24# @ 319' W/ 320 SX.
TOP OF CEMENT	:SURFACE	SURFACE	SURFACE	SURF (CIRC)
INTERMEDIATE CASING	:8 5/8" 24# & 32# @ 2915' W/ 250 SX.		8 5/8" @ 3168' W/ 800 SX.	
TOP OF CEMENT	:2180'		820'	
PRODUCTION CASING	:4 1/2" 10.5# & 11.6# @ 8829' W/ 1500 SX. 4 1/2" @ 4810' W/ 250 SX.		4 1/2" 11.6# @ 8825' W/ 1600 SX.	4 1/2" 10.5# @ 4954' W/ 250
TOP OF CEMENT	:3030'	3845'	2645	3930' (CALC)
LINER	:			
DATE DRILLED	:9/61	12/61	11/60	1/62
TOTAL DEPTH	:8829'	4810	8828'	4955'
COMPLETION INTERVAL	:8561'-8586' & 8594'-8644' (PERP)	4345'-4492' (PERP)	8615'-8650' (PERP)	4512'-4604'

PLUGGING PROCEDURE

WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR : PHILLIPS PETROLEUM COMPANY
 WELL NAME : ELLIAMS #6
 LOCATION : 2311' FWL & 659' FWL
 SEC 33, T17S, R33E
 WELL TYPE : OIL
 STATUS : ACTIVE ABO
 SURFACE CASING : 13-3/8" @ 320' W/350 SX.
 TOP OF CEMENT : SURFACE
 INTERMEDIATE CASING : 8-5/8" @ 4,589' W/700 SX.
 TOP OF CEMENT : 2530
 PRODUCTION CASING : 5-1/2" @ 8,788' W/361 SX.
 TOP OF CEMENT : 6950
 LINER :
 DATE DRILLED : 7/61
 TOTAL DEPTH : 8,788'
 COMPLETION INTERVAL : 8,562'-8,734' (PERFS)

PLUGGING PROCEDURE

PHILLIPS PETROLEUM CO.
 WYATT "A" FEDERAL #3
 1650' FWL & 330' FWL
 SEC 33, T-17-S, R-33-E
 OIL
 ACTIVE
 7" @ 1318' W/ 50 SX.
 1260
 5 1/2" @ 3718' W/ 50 SX.
 3465
 4" 11.438' @ 4430' W/ 400 SX.
 6/52
 4432'
 4378'-4357, 4320'-4323' (PERF)

PHILLIPS PETROLEUM CO.
 WYATT "A" FEDERAL #13
 1980' FWL, 660' FWL
 SEC 33, T-17-S, R-33-E
 OIL
 ACTIVE
 10" 348' @ 20' W/ 5 SX.
 SURFACE
 7" 204' @ 3995' W/ 100 SX.
 3625
 8/47
 4582'
 3995'-4582' (OPEN HOLE, PLUGGED)
 3695'-3720' (PERFS)

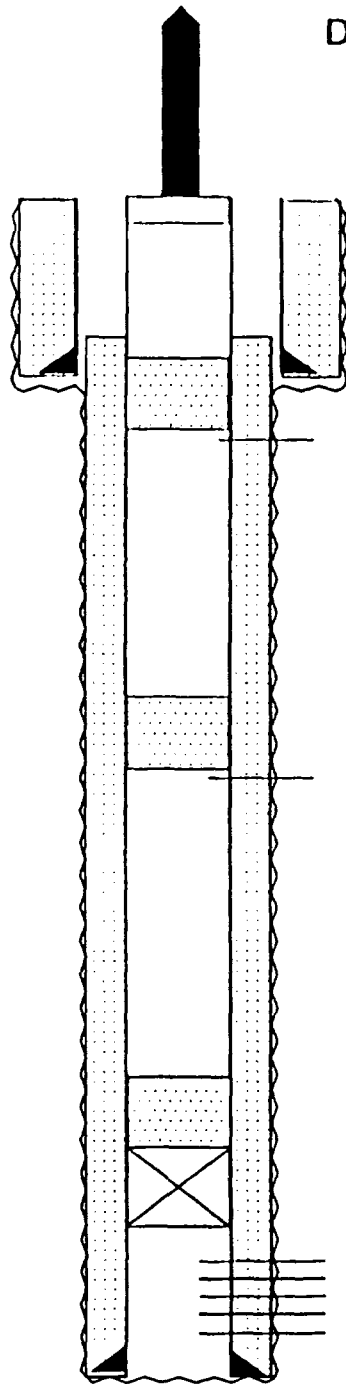
L.R. SIMMONS ENERGY
 DENNIS FEDERAL #6
 2310' FWL, 990' FWL
 SEC 33, T17S, R33E
 OIL
 ACTIVE
 13-3/8" @ 315' W/325SX
 SURF
 8-5/8" @ 2962' W/1050SX
 1283' (CALC)
 4-1/2" @ 8809' W/1510SX
 3814' (CALC)
 1/61
 8809'
 8605'-60'

WELLS WITHIN STATE BY WELL NO. 6 AREA OF REVIEW

OPERATOR	: L.B. SIMMONS ENERGY
WELL NAME	: DENIUS FEDERAL #3
LOCATION	: 1980' PSL, 1980' PML SEC 33, T17S, R33E
WELL TYPE	: OIL
STATUS	: SI
SURFACE CASING	: 13-3/8" @ 309' W/340SX
TOP OF CEMENT	: SURF
INTERMEDIATE CASING	: 9-5/8" @ 2920' W/850SX
TOP OF CEMENT	: SURFACE (CALC)
PRODUCTION CASING	: 4-1/2" @ 9068' W/250SX. SQZ @ 5475' W/35
TOP OF CEMENT	: 4389' (CALC)
LINER	:
DATE DRILLED	: 8/60
TOTAL DEPTH	: 9071
COMPLETION INTERVAL	: 8690'-8740' (CIBP @ 8660' W/ 25 SX) 8576'-8608'

PLUGGING PROCEDURE

CROSS TIMBERS OPERATING CO.
DENIUS FEDERAL NO. 10
(FORMERLY GRAUTEN & PEPPER)
(P&A 5/12/90)



DRY HOLE MARKER

50' SURF. PLUG

11 3/4" @ 314' W/ 275 SX
CIRC CMT TO SURF.

TAGGED TOP OF PLUG @
193'
PERF @ 350' & SQZ W/ 50
SX.

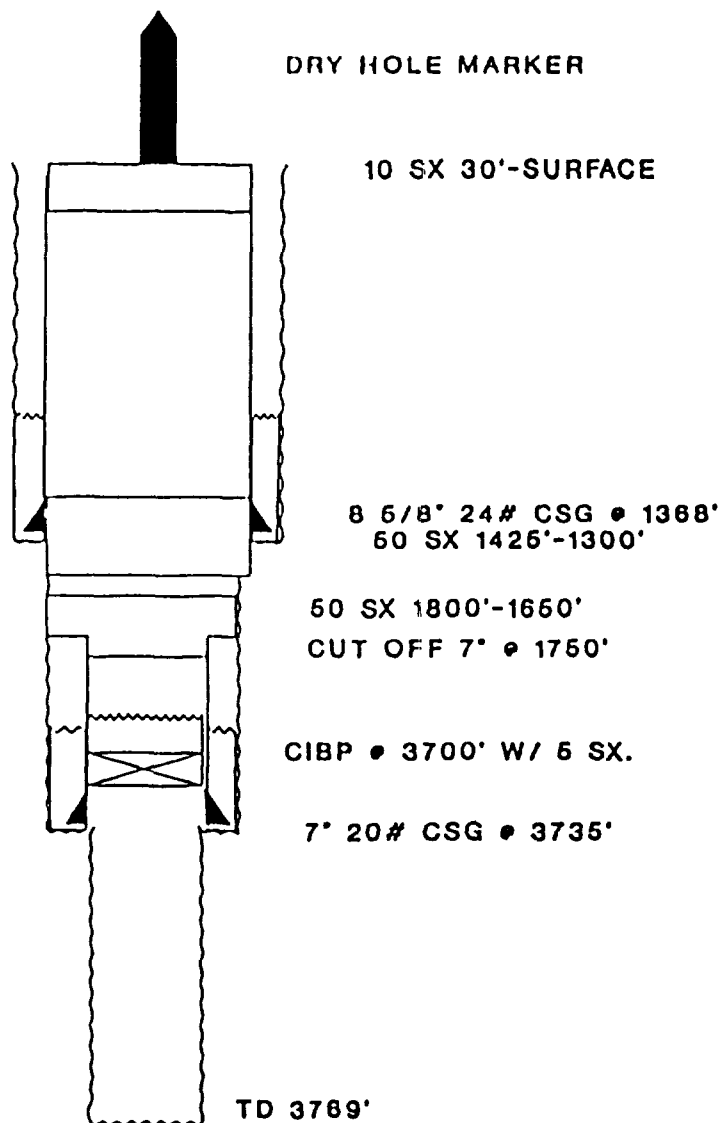
TAGGED TOP OF PLUG @
1325'
PERF @ 1400' & SQZ W/ 50
SX.

CIBP @ 4575' W/ 14 SX CMT
ON TOP.

PERFS: 4659'-4667'

4 1/2" CSG @ 4710' CMT'D W/
1200 SX.

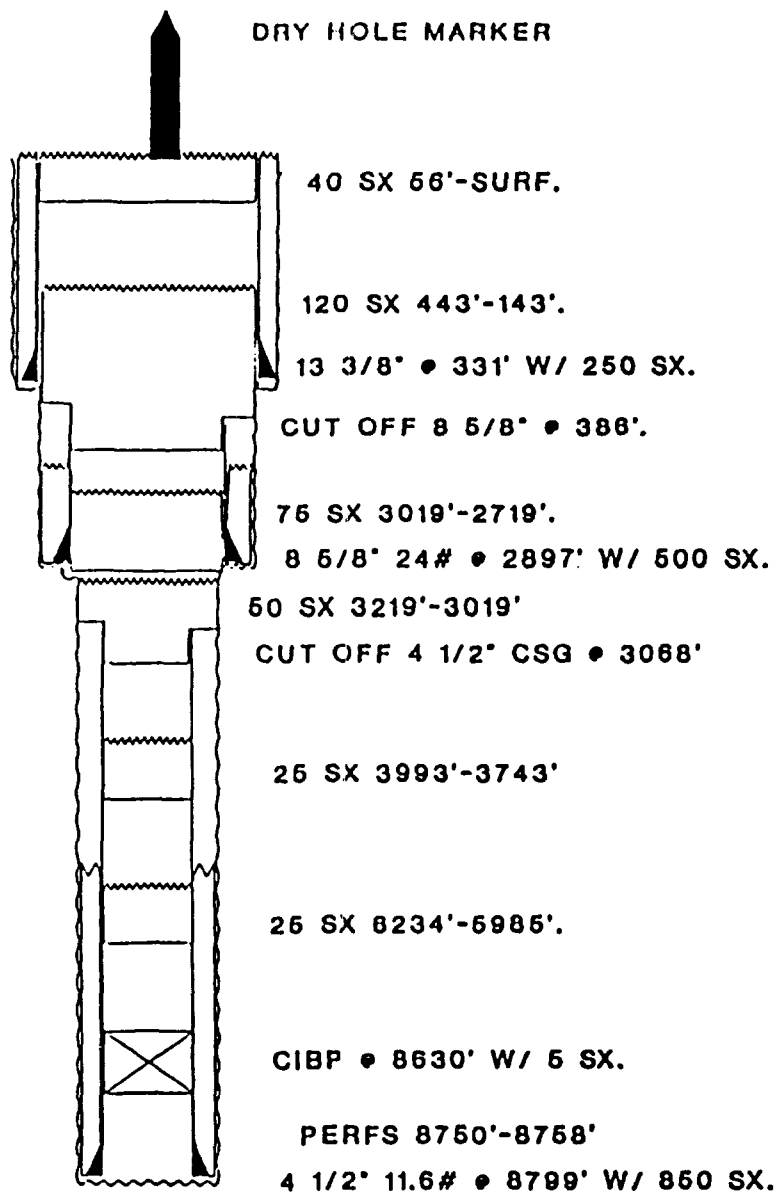
CITIES SERVICE
OHIO STATE "A" #6
(P&A 8/70)



2310' FNL, 330' FEL, SEC 32, T17S, R33E

20

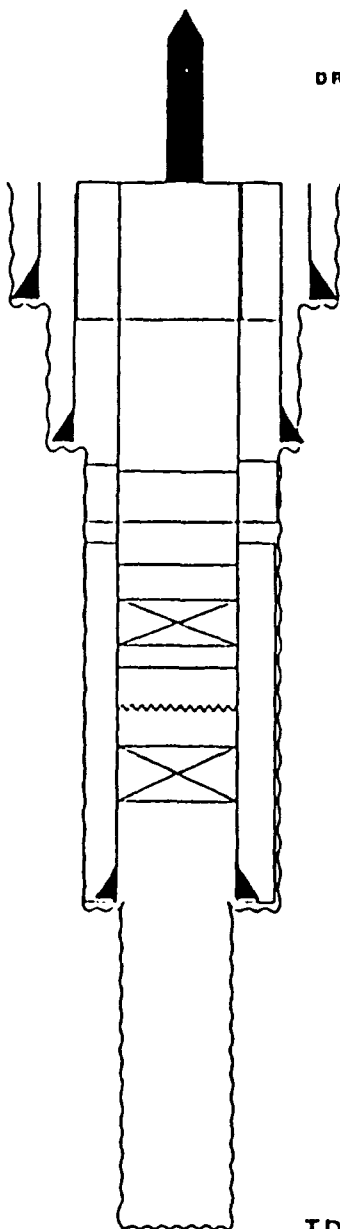
CITIES SERVICE
STATE "CB" #2



2310' FNL, 1700' FEL, SEC 32, T17S, R33E

CITIES SERVICE
STATE "CB" #5
(P&A 2/80)

DRY HOLE MARKER



13 3/8" • 208' W/ 0 SX.
PERF • 260'. 8QZ W/ 378 SX.
CIRC. 6 SX TO SURF.

10 3/4" 34# CSG • 866' W/ 0 SX.
TOC 926'
PERF • 1180'. 8QZ W/ 600 SX.
DISPLACE TO 1060'
TOC 1260'

RETAINER • 1306'. 8QZ W/ 600 SX.

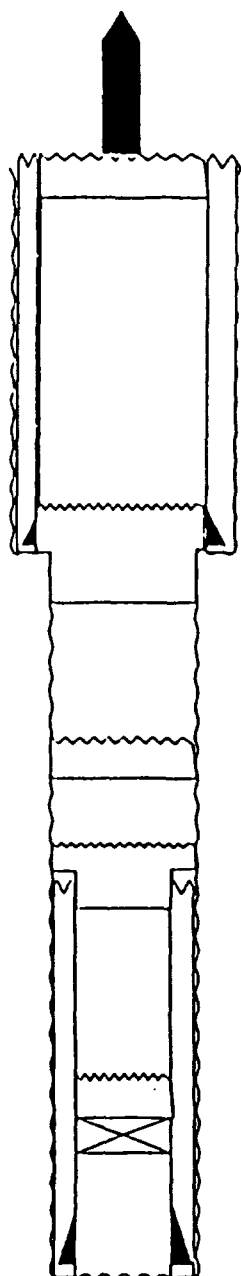
CIBP • 3476' W/ 7 SX.
8QZ • 3276' W/ 16 SX.
PERF 3686'-3700'

7" 20# CSG • 3912' W/ 100 SX.

TD 4500'

1660' FNL, 1660' FEL, SEC 32, T17S, R33E

**CROSS TIMBERS OPERATING COMPANY
SMGSAU TRACT 7 WELL #7
(P&A 7/73)**



DRY HOLE MARKER

10 SX 30'-SURF.

30 SX 840'-740'.

**8 5/8" 24# • 810' W/ 350 SX.
(CMT CIRC.)**

40 SX 1380'-1280'

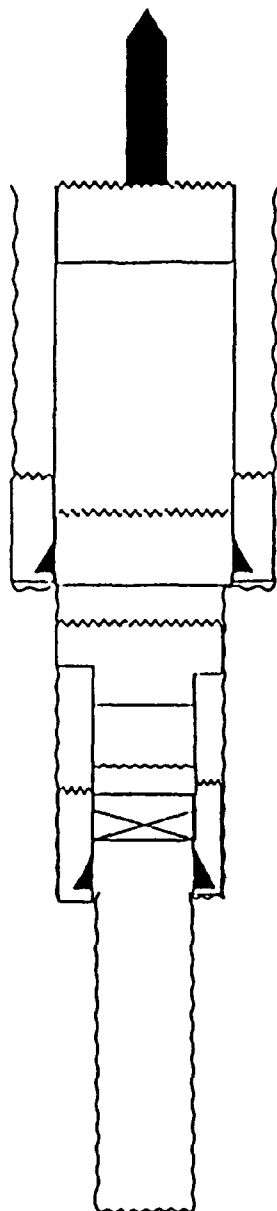
**25 SX 1788'-1688'
CUT OFF 5 1/2" CSG • 1738'
TOC 1740'**

**CIBP • 4207' W/ 5 SX.
PERF 4272'-4380'**

**5 1/2" 14# • 4430' W/ 435 SX.
TD 4430'**

100' FSL, 1430' FEL, SEC 29, T 17S, R33E

CROSS TIMBERS OPERATING COMPANY
 SMGSAU TRACT 9 WELL #4
 (P&A 7/10/73)



DRY HOLE MARKER

15 SX 30'-SURF.

45 SX 1350'-1250'.

9 5/8" • 1300'

45 SX 2265'-2165'

CUT OFF 7" • 2215'

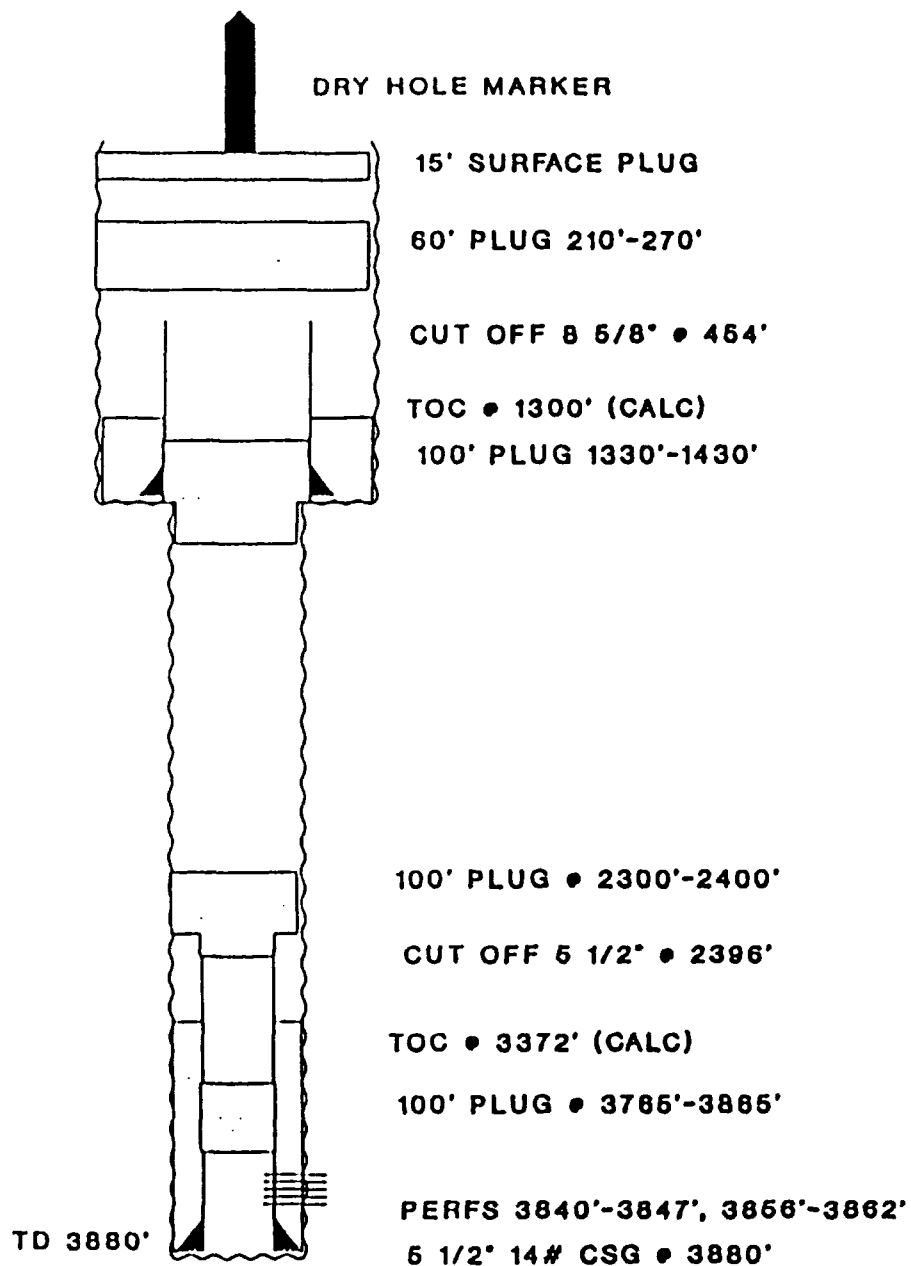
CIBP • 3991' W/ 7 SX.

7" • 3943'

TD 4308'

660' FNL, 660' FEL, SEC 32, T17S, R33E

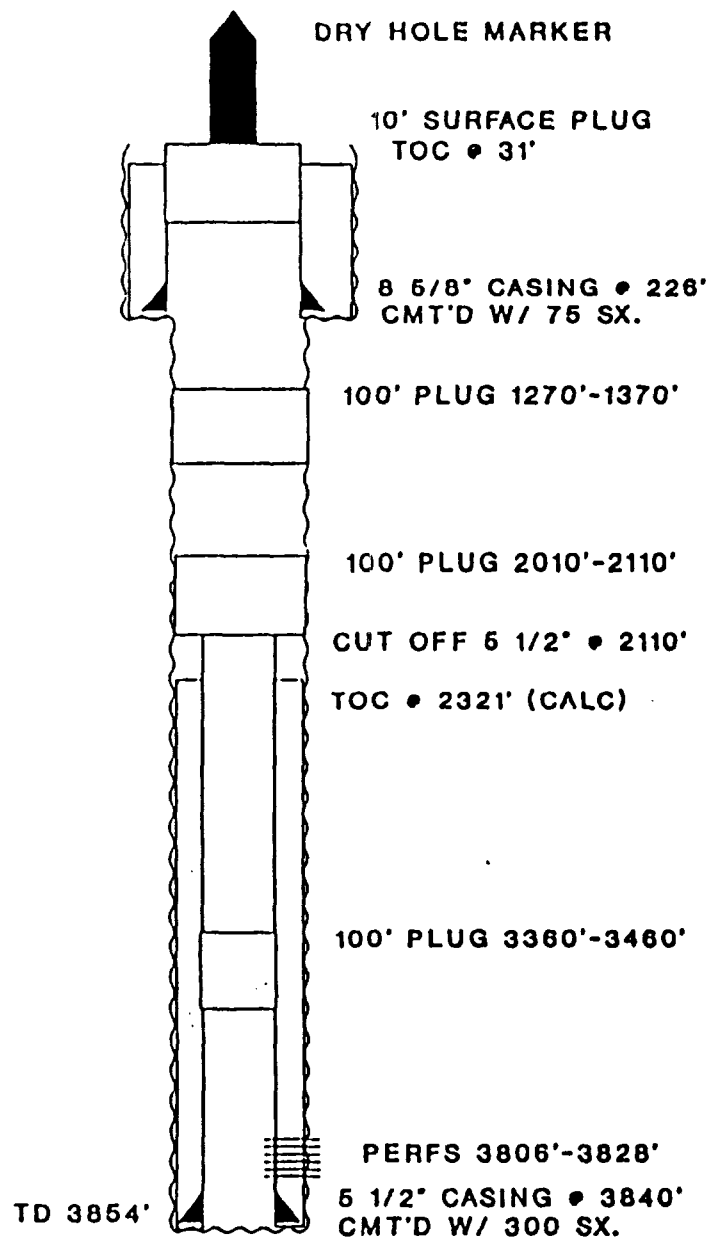
**H.R. DENIUS
COCKBURN FEDERAL #5
(P&A 6/16/61)**



2310' FSL, 330' FWL, SEC 33, T17S, R33E, NMPM

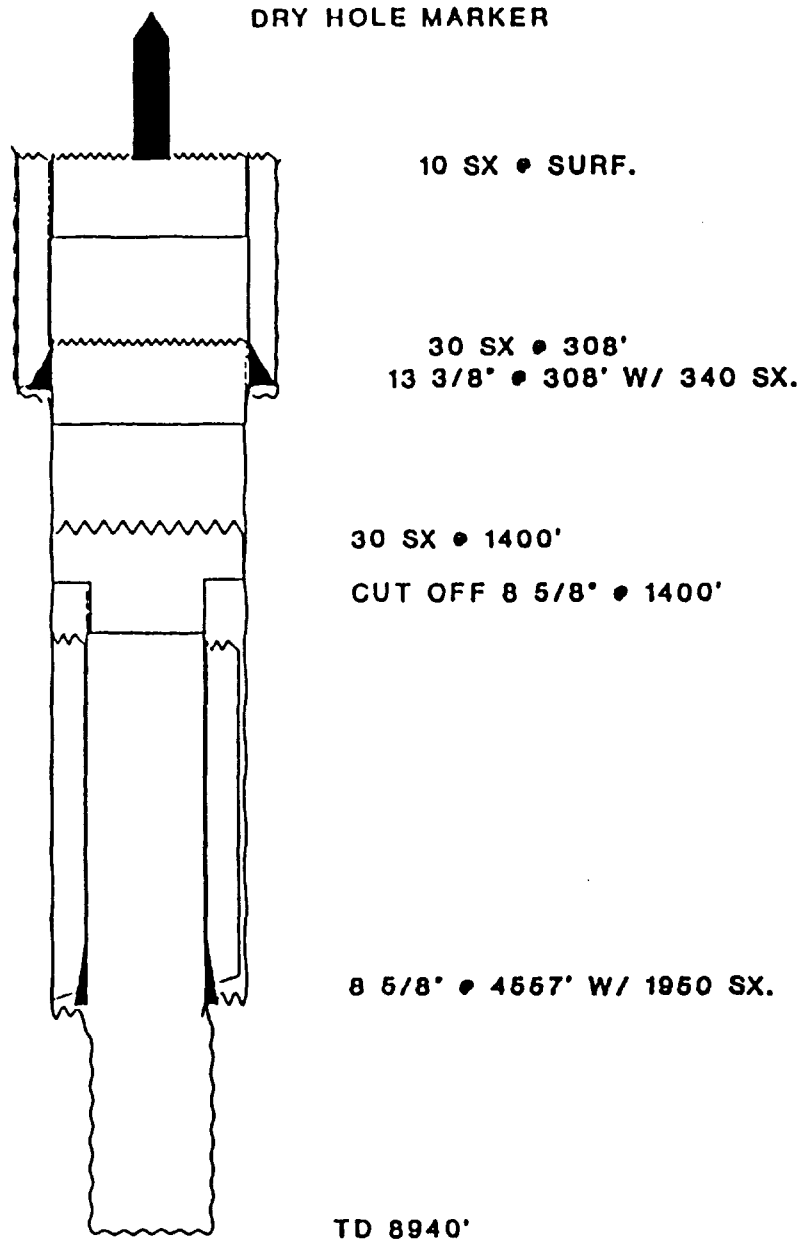
H.R. DENIUS
COCKBURN FEDERAL #9

(P&A 6/16/61)



2264' FSL, 990' FWL, SEC 33, T17S, R33E NMPM

JAMES P. DUNIGAN
COCKBURN #1



990' FNL, 430' FWL, SEC 33, T17S, R33E