

Permit # 20029
 County: Atkinson
 CONFIDENTIAL UNTIL: _____

Date Issued: 4-24-87
 Date Cancelled: _____
 Date Plugged: _____

COMMENTS:

OGC FORMS	Date Received
1	
2	
3	4-20-87
3i	
4	4-20-87
4i	
5	6-22-87
6	
7	
8	
11	
12	
Misc. Form 2	

	TYPE	ID #	Date Received
Logs	MES	28678	10-6-87
Samples	chip core		
	water	F28498	8-21-87
Analyses	core		

Additional Submitted Data:
Formation Test Report

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

APPLICATION TO DRILL DEEPEN PLUG BACK
for an oil well or gas well

NAME OF COMPANY OR OPERATOR JAMES K. ANDERSON, INC. DATE 4/9/87
13760 Noel Rd. Suite 325 Dallas TEXAS 75240
Address City State

DESCRIPTION OF WELL AND LEASE

Name of lease Schoder Well number 1 Elevation (ground) ± 880'

WELL LOCATION 770 (give footage from section lines)
820 ft. from (N) (S) sec. line 500 ft. from (E) (W) sec. line

WELL LOCATION Section 15 Township 63N Range 40W County Atchinson

Nearest distance from proposed location to property or lease line: 500' feet
Distance from proposed location to nearest drilling, completed or applied for well on the same lease: NONE feet

Proposed depth 3400 Drilling contractor, name & address RAINS & WILLIAMS OIL CO., INC. Rotary or Cable Tools Rotary Approx. date work will start Late April - Early May 1987
435 Page Court Bldg, Wichita

Number of acres in lease 240 Number of wells on lease, including this well, completed in or drilling to this reservoir: 1
Number of abandoned wells on lease: 0
KANSAS 67202

If lease, purchased with one or more wells drilled, from whom purchased: Name N/A No. of Wells: producing _____
Address _____ injection _____
inactive _____
abandoned _____

Status of Bond Single Well Amt. \$4000.00 Blanket Bond Amt. _____
 ON FILE ATTACHED

Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone) use back of form if needed.
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Proposed casing program:				Approved casing - To be filled in by State Geologist			
amt.	size	wt./ft.	cem.	amt.	size	wt./ft.	cem.
<u>400'</u>	<u>8 5/8</u>	<u>23.0</u>	<u>175SX</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>3400'</u>	<u>4 1/2</u>	<u>10.5</u>	<u>200SX</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

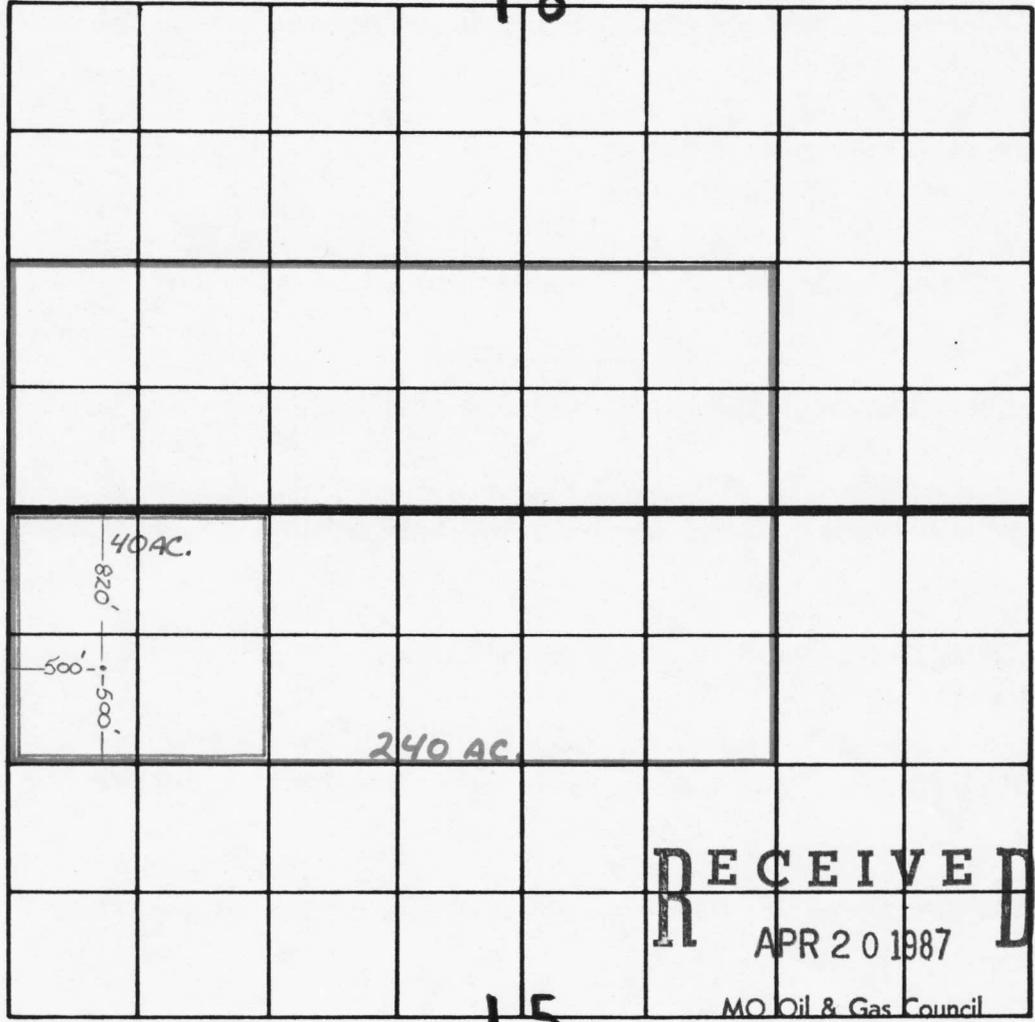
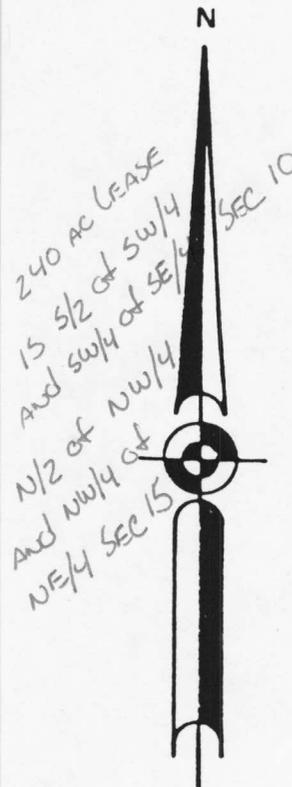
I, the undersigned, state that I am the Geologist of the JAMES K. ANDERSON, INC. (company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.
Signature Mark C. Rain

Permit Number: 20029 Drillers log required Drill stem test info. required if run
Approval Date: 4-24-87 E-logs required if run Samples required
Approved By: James K. Anderson Core analysis required if run Samples not required
Note: This Permit not transferable to any other person or to any other location.
Remit two copies to: Missouri Oil and Gas Council P.O. Box 250 Rolla, Mo. 65401
One will be returned for driller's signature
WATER SAMPLES REQUIRED @

Owner: JAMES K. ANDERSON, INC.

Lease Name: Schoeder No. 1 County: Atchinson

820 feet from North section line and 500 feet from WEST section line of Sec. 15, Twp. 63 N., Range 40W
(N)-(S) (E)-(W)



5/2
SEC 10

N/2
SEC 15

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MO Oil & Gas Council
Economic Geology

SCALE
1" =

REMARKS: 240 AC. LEASE 1/2 of SW 1/4 & SW 1/4 of SE 1/4 SEC. 10
N/2 of NW 1/4 & NW 1/4 of NE 1/4 SEC. 15

INSTRUCTIONS

On the above plat, show distance of the proposed well from the two nearest section lines, the nearest lease line, and from the nearest well on the same lease completed in or drilling to the same reservoir. Do not confuse survey lines with lease lines. See rule 10 CSR 50-2.030 for survey requirements. Lease lines must be marked.

This is to Certify that I have executed a survey to accurately locate oil and gas wells in accordance with 10 CSR 50-2.030 and that the results are correctly shown on the above plat.



(SEAL)

Remit two copies to: Missouri Oil and Gas Council
P.O. Box 250, Rolla, MO 65401

One will be returned.

Registered Land Surveyor

Number

4-27-83

Missouri Oil and Gas Council
WELL LOCATION PLAT

Form OGC-4

Owner: James K. Anderson, Inc. Stone Tower, Suite 325, 13760 Noel Rd., Dallas, TX 75240

Lease Name: Schooler #1 County: Atchison

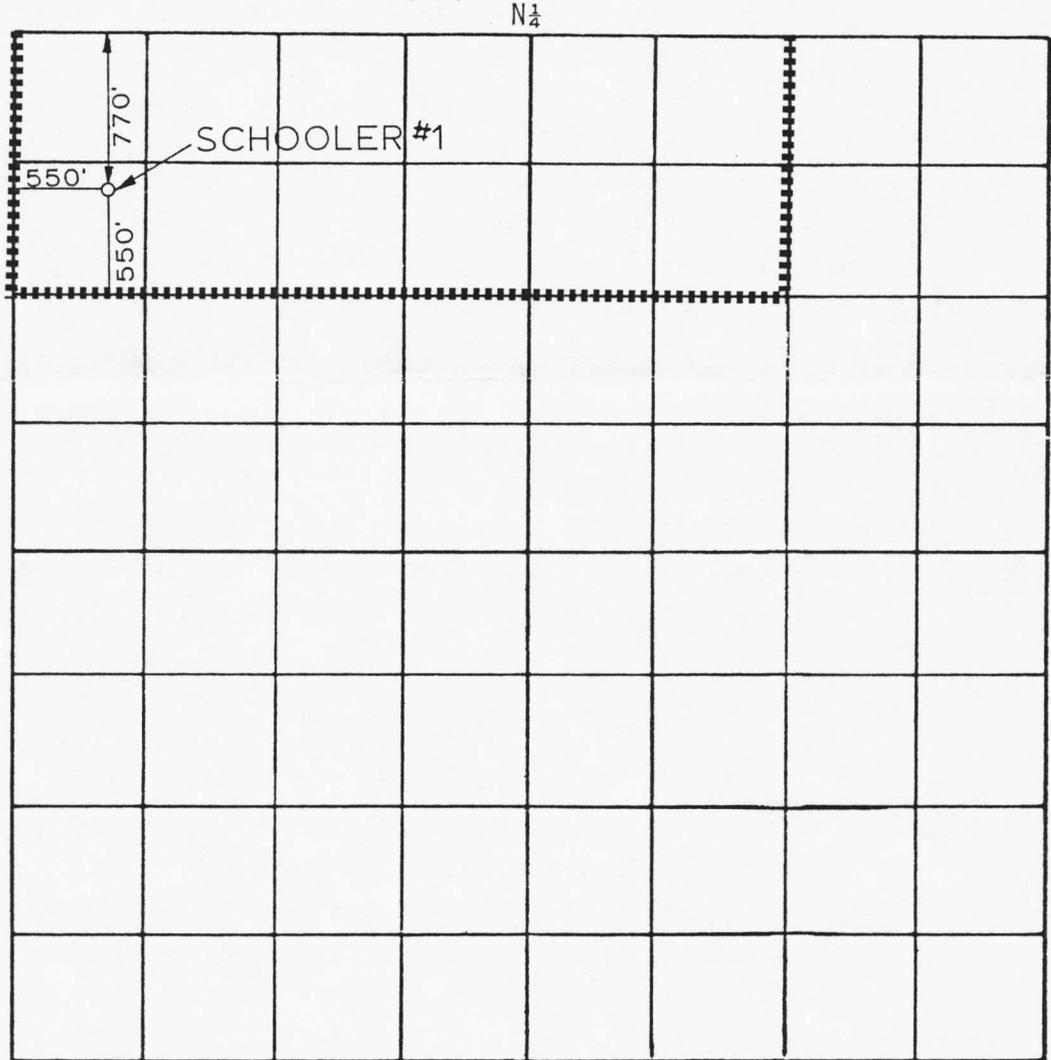
770 feet from N section line and 550 feet from W section line of Sec. 15, Twp. 63 N., Range 40
(N)-(S) (E)-(W)

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Missouri Oil and Gas Council
Economic Geology



SCALE
1" = 1173'
1320'



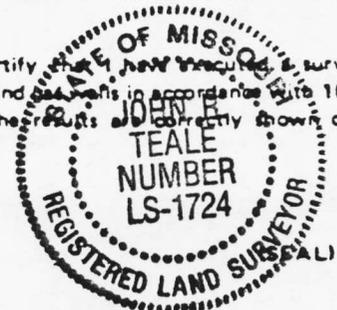
----- Denotes Lease Line

REMARKS: All elevations are in reference to U.S.G.S. vertical datum.
Ground elevation proposed well = 877.0

INSTRUCTIONS

On the above plat, show distance of the proposed well from the two nearest section lines, the nearest lease line, and from the nearest well on the same lease completed in or drilling to the same reservoir. Do not confuse survey lines with lease lines. See rule 10 CSR 50 2 030 for survey requirements. Lease lines must be marked.

This is to Certify that a new survey to accurately locate oil and gas wells in accordance with 10 CSR 50-2.030 and that the results are correctly shown on the above plat.



Remit two copies to: Missouri Oil and Gas Council
P.O. Box 250, Rolla, MO 65401
One will be returned.

John E. Teale
Registered Land Surveyor

1724
Number

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

New Well Workover Deepen Plug Back Injection Same Reservoir Different Reservoir Oil Gas Dry

Owner: James K. Anderson, Inc. Address: 13760 Noel Rd., Suite 325, Dallas, Texas 75240

Lease Name: Schooler Well Number: 1

Location: 550' FWL, 790' FNL of Sec. 2 Miles NE of Corning Sec. Twp. and Range or Block and Survey: Sec. 15, T63N., R40W

County: Atchison Permit number (OGC 3 or OGC 3I): 20029

Date spudded: 5-8-87 Date total depth reached: 5-13-87 Date completed, ready to produce or inject: 6-7-87 Elevation (DF, RKR, RT, or Gr.) feet: Gr. 877', Kb. 882' Elevation of casing hd. flange feet: Ground Level

Total depth: 2805' P. B. T. D.: 2805'

Producing or injection interval(s) for this completion: Open Hole Rotary tools used (interval): From Surface to 2805' Drilling Fluid used: Fresh Mud Cable tools used (interval): From N/A to

Was this well directionally drilled? No Was directional survey made? Yes Was copy of directional survey filed? No Date filed:

Type of electrical or other logs run (list logs filed with the State Geologist): Dual Induction, Dual Compensated Porosity, Microresistivity Date filed: 6-19-87

CASING RECORD

Casing (report all strings set in well - conductor, surface, intermediate, producing, etc.)

Purpose	Size hole drilled	Size casing set	Weight (lb. ft.)	Depth set	Sacks cement	Amt. pulled
Surface	12 1/4	8 5/8	24	327'	200	
Production	7 7/8	4 1/2	10.5	2796'	125	

TUBING RECORD

LINER RECORD N/A

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
2 3/8 in.	2801 ft.	----- ft.	----- in.	----- ft.	ft.		

PERFORATION RECORD N/A

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD N/A

Number per ft	Size & type	Depth Interval	Amount and kind of material used	Depth Interval

INITIAL PRODUCTION

Date of first production or injection: 6-7-87		Producing method (indicate if flowing, gas lift, or pumping -- if pumping, show size and type of pump): Pumping 1 1/2" X 12' TBBHD Rag Pump					
Date of test: 6-9-87	Hrs. tested: 24	Choke size: 2"	Oil produced during test: 107 bbls.	Gas produced during test: None MCF	Water produced during test: Trace bbls.	Oil gravity: 32 API (Corr.)	
Tubing pressure: 45	Casing pressure: -0-	Cal'd rate of Production per 24 hours: 107	Oil: 107 bbls.	Gas: None MCF	Water: Trace bbls.	Gas - oil ratio:	

Disposition of gas (state whether vented, used for fuel or sold): N/A--vented

Method of disposal of mud pit contents: Fresh water mud, will let dry out and then cover up.

CERTIFICATE: I, the undersigned, state that I am the Geologist of the James K. Anderson, Inc. (company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

RECEIVED JUN 22 1987

Signature: *Mark A. Rain*

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description (See * below)
Top Lansing	600'		
Base Kansas City		930'	
Base Mississippian		1936'	
Top Hunton	2187'		
Base Hunton		2754'	
Top Viola	2788'		Dolomite, Off-white to light brown, good vuggy porosity, good cut, good odor, gold Px with visible free oil.

*Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

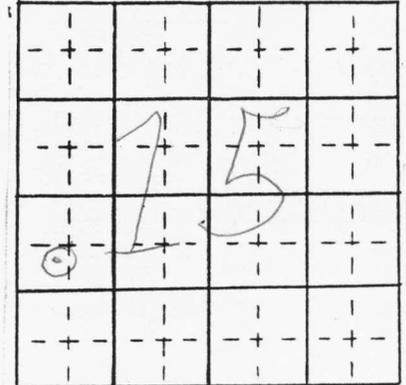
INSTRUCTIONS

Attach drillers log or other acceptable log of well. Submit analysis of injection interval formation waters.

MISSOURI GEOLOGICAL SURVEY AND WATER RESOURCES, ROLLA, MISSOURI

COUNTY Atchison
 COMPANY OR OWNER James K. Anderson
 FARM NE SW NW SW WELL NO. Schooler #1
 LOCATION 770'FNL & 500'FWL SEC _____ T _____ R _____
 CONTRACTOR/DRILLER Rains & Williamson
 COMMENCED _____ COMPLETED _____
 PRODUCTION _____
 CASING RECORD _____
 WATER RECORD _____
 SOURCE OF LOG _____
 REMARKS Logged by Ken Deason 3/89
Permit #20029

MGS LOG NO. 28678



NO. SAMPLES 244 SAMPLES RECEIVED 10-6-87

ELEV. 880'
 TOTAL DEPTH 2805
 SWL _____

FORMATION	FROM (ft)	TO (to)	*	FORMATION	FROM (ft)	TO (to)
No samples	0	340	*			
Douglas Group	340	600	*			
Pennsylvanian System Kansas City - Lansing Group	600	940	*			
Marmaton - Pleasanton Group	940	1092	*			
Cherokee Group	1092	1805	*			
Mississippian System Kinderhook Shale	1805	2192	*			
Silurian System - Devonian System	2192	2752	*			
Maquoketa Fm.	2752	2790	*			
Ordovician System Kimmswick Fm.	2790	2805	*			



General Testing Laboratories, Inc.

Engineering — Chemical Consultants

1517 WALNUT STREET / KANSAS CITY, MISSOURI 64108 / 816-471-1205



Date July 27 1987

Number 68185

Sample of Water

Marked From Oil Well Schodde No. 1

Client James K. Anderson, Attn: Mark Rainer

pH	7.4
Oil & Grease	6.6 mg/liter
Chlorides	2,049 mg/liter
Suspended Solids	14 mg/liter
Settleable Solids	less than 0.05 ml/liter

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Economic Geology

(1)ks

GENERAL TESTING LABORATORIES, INC.

By Lawrence Poisner



Petrolite Corporation

369 Marshall Avenue • St. Louis, Missouri 63119
314 961-3500 • Telex: 44-2417

WATER ANALYSIS REPORT

Company: JAMES K. ANDERSON

Sampling Date: 06/24/87

Analysis Date: 07/02/87

Sample ID: F28498

Sample Source

Lease: SCHOOLEY

Well: #1

Sample Pt: BLEEDER

Submitted by: NATION, P.W.

Sampled by:

Chem. Treatment:

Sample Condition: V SLT OG/CLR

ANALYTICAL RESULTS

pH at the time of sampling: 6.50 > GTL 7.4
pH at the time of analysis: 8.00
Density: 1.006
Hydrogen Sulfide (H2S): NEG
TDS: Calculated 6445.5 mg/L

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GTL 2049

CONSTITUENT		mg/L	meq/L	method	comments
ANIONS					
*Bicarbonate	HCO3-	366.0	6.00	FLD	
Boron	B(OH)4-	57.0	.72	ICP	
*Carbonate	CO3--	.0	.00	N.A.	
*Chloride	Cl-	2090.0	58.95	FIA	
Phosphate	PO4---	0.0	0.00	ICP	DL= 2.020
*Sulfate	SO4--	1670.0	34.77	FIA	
SUM OF ANIONS=			100.44		
CATIONS					
Aluminum	Al+++	0.0	0.00	ICP	DL=10.100
*Barium	Ba++	0.0	0.00	ICP	DL= 2.020
*Calcium	Ca++	439.0	21.91	ICP	
Chromium	Cr+++	0.0	0.00	ICP	DL=10.100
Copper	Cu++	4.6	.14	ICP	
*Iron	Fe++	20.0	.72	FLD	
Lead	Pb++	0.0	0.00	ICP	DL=10.100
Lithium	Li+	0.0	0.00	N.A.	
*Magnesium	Mg++	95.3	7.84	ICP	
Manganese	Mn++	0.0	0.00	ICP	DL= 2.020
Nickel	Ni++	0.0	0.00	ICP	DL= 2.020
Potassium	K+	294.0	7.52	ICP	
Silica	SiO2	28.7	0.00	ICP	
*Sodium	Na+	1381.0	60.07	ICP	
*Strontium	Sr++	0.0	0.00	ICP	DL= 2.020
Vanadium	V++	0.0	0.00	N.A.	
SUM OF CATIONS=			98.20		

Ratio of ANIONS:CATIONS 1.02

SATURATION INDEX TABLE

Sample ID: F28498
pH (at 25.0 deg C): 6.50

Temperature		Scale Component				
deg F	deg C	CaCO3 (Calcite)	CaSO4 (Anhydrite)	CaSO4*2H2O (Gypsum)	SrSO4 (Celestite)	BaSO4 (Barite)
32.00	.00	-.480	-1.027	-.208	-96.104	-92.326
68.00	20.00	-.310	-.778	-.285	-96.122	-92.656
77.00	25.00	-.261	-.720	-.295	-96.118	-92.733
104.00	40.00	-.100	-.551	-.307	-96.090	-92.952
140.00	60.00	.145	-.332	-.291	-96.025	-93.220
176.00	80.00	.418	-.113	-.251	-95.941	-93.466
212.00	100.00	.713	.114	-.199	-95.847	-93.695

S.I.=SATURATION INDEX

S.I.=log(Product of activities of component ions/Ksp)

- S.I. less than 0 The water is undersaturated and indicates a non-scaling situation.
- S.I. near or equal to 0 The water is saturated and scale formation is likely.
- S.I. greater than 0 The water is supersaturated and favors scale formation.

POSSIBLE SCALE FORMATION

Temperature		Scale Component (mg/1000 g H2O)				
deg F	deg C	CaCO3 (Calcite)	CaSO4 (Anhydrite)	CaSO4*2H2O (Gypsum)	SrSO4 (Celestite)	BaSO4 (Barite)
32.00	.00	0.	0.	0.	0.	0.
68.00	20.00	0.	0.	0.	0.	0.
77.00	25.00	0.	0.	0.	0.	0.
104.00	40.00	0.	0.	0.	0.	0.
140.00	60.00	32.	0.	0.	0.	0.
176.00	80.00	87.	0.	0.	0.	0.
212.00	100.00	138.	278.	0.	0.	0.

The POSSIBLE SCALE FORMATION predicts the maximum amount of any one scale component that could precipitate from the water as analyzed. As precipitation progresses, these predictions become less accurate.

To estimate the POSSIBLE SCALE FORMATION in lbs/1000 barrels (US 42 gal) use the following:

$$\text{APPROXIMATE lbs/1000 barrels} = (\text{mg/1000g H}_2\text{O}) \times 0.35$$

*****NOTES ON WATER ANALYSIS REPORT*****

****KEY****

DL=DETECTION LIMIT (mg/L)

FIA=FLOW INJECTION ANALYSIS

FLD=FIELD DATA

ICP=INDUCTIVELY COUPLED PLASMA EMISSION

meq/L=MILLIEQUIVALENTS PER LITER

mg/L=MILLIGRAMS PER LITER

N.A.=NOT ANALYZED

S.I.=SATURATION INDEX= $\log(\text{Activity Product}/K_{sp})$

TDS=TOTAL DISSOLVED SOLIDS

#=INDICATES THE CONCENTRATION OF THE CONSTITUENT HAS
SIGNIFICANTLY CHANGED SINCE THE LAST ANALYSIS*=USED IN SPECIES DISTRIBUTION CALCULATIONS
(SEE SECTION ON COMPUTER CALCULATIONS)

The following guidelines are useful when interpreting the results in the WATER ANALYSIS REPORT.

- 1) The pH is an indication of relative acidity or basicity of the water sample.
- 2) The Ratio of ANIONS:CATIONS determines if the balance between anions and cations is in agreement and consequently whether the results are reliable. If the ratio is significantly greater than or less than 1.0 the results should be interpreted with caution.
- 3) The COMMENTS column is reserved to indicate if a constituent has significantly changed since the last analysis (#), and to denote the analytical detection limits (DL) when the constituent can not be detected.
- 4) The SATURATION INDEX (S.I.) predicts scaling conditions in the analyzed water. The S.I. is an indicator and may not accurately represent some site water conditions. In some instances a S.I. near 0 could indicate that scaling has already occurred.

*****NOTES ON COMPUTER CALCULATIONS*****

A computer assisted model, WASEQ, has been utilized to calculate the equilibrium distribution of chemical species (single ions and ion pairs) in an aqueous system. The model is based on thermodynamic principles and calculations that incorporate activity coefficients, temperature corrected equilibrium constants and conservation of mass equations.

All of the ions listed in the constituent data are utilized for determining ionic strength, however, only the ions identified with a "*" are used in the ion pair distribution computations. The Saturation Index (S.I.) is a measure of the state of saturation and is determined from the free ions remaining after ion pairing.