KDL

APPLICATION REFERRAL

STAFF REVIEW WITH NOTICE

FROM: **SAN JOAQUIN COUNTY**
COMMUNITY DEVELOPMENT DEPARTMENT
Development Services Division
1810 East Hazelton Avenue
Stockton, CA 95205

Contact Person: **CHANDLER MARTIN**
Phone: (209) 468-3190
FAX: (209) 468-3163

APPLICATION NUMBER: SA-94-44

APPLICANT: Henry & Linda Tosta
21070 Reeve Road
Tracy, CA 95376

c/o David Avila
903 El Vecino Avenue
Modesto, CA 95350

PROJECT DESCRIPTION:

A Site Approval application to remodel a dairy farm by constructing 256,100 square feet of new buildings, repairing 4,108 square feet of existing buildings, and removing an existing 45,099-square-foot building.

PROJECT LOCATION:

The project site is located on the northeast corner of Middle Road and San Jose Road, north of Tracy (APN: 209-290-06, 07; 14501 W. Middle Road, 20600 S. San Jose Road, Tracy) (Supervisorial District 5).

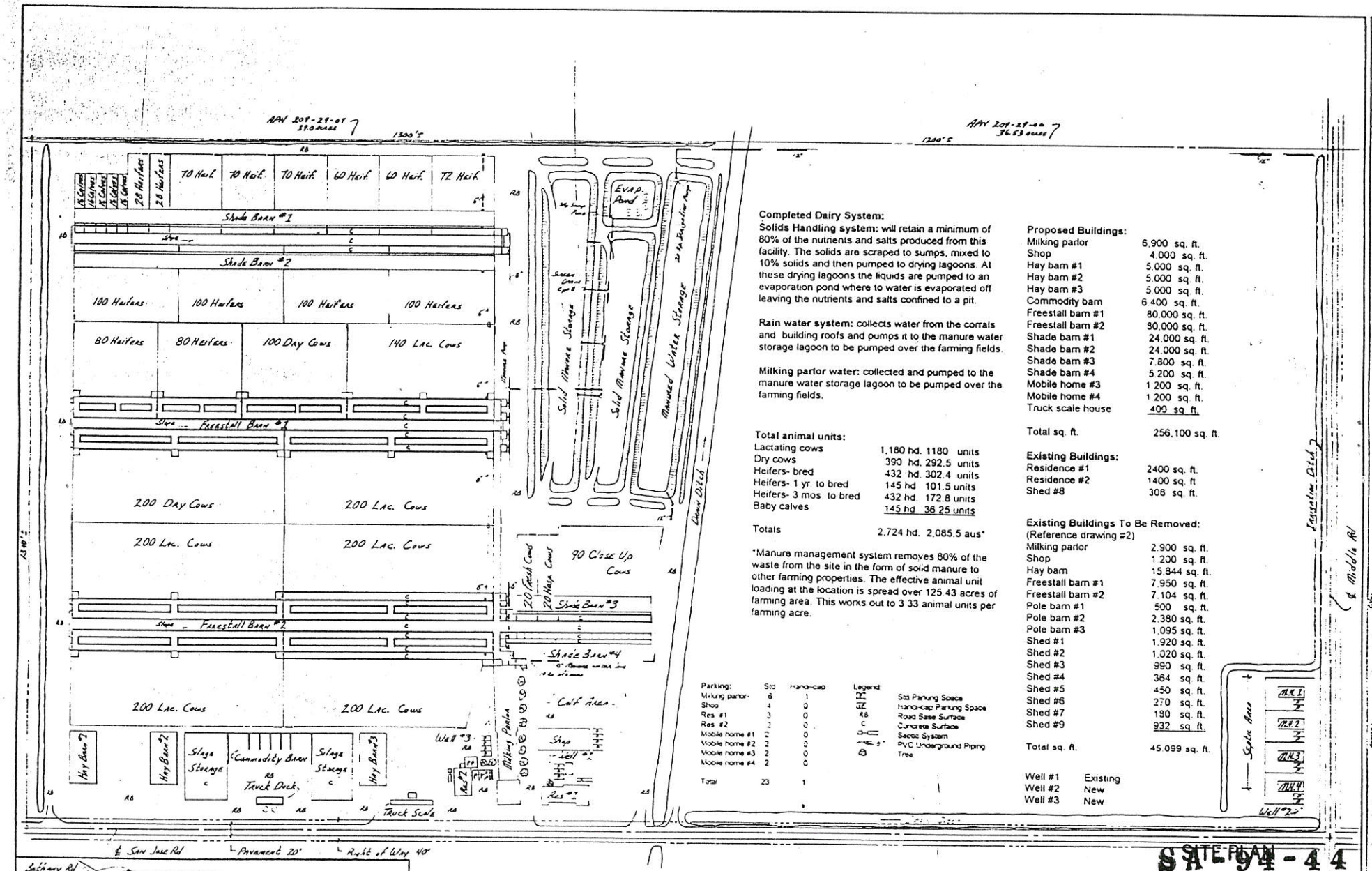
PROJECT REVIEW: The above application has been filed with the Development Services Division. Any environmental or planning comments should be received in this office no later than **November 8, 1994**. If no comments are received by this date, we will assume that you have no opinion and/or recommendation on the project.

SURROUNDING PROPERTY OWNERS: The environmental determination will be available for review in the Development Services Division office five days before the scheduled action date of **November 9, 1994**. If you would like to receive a copy of the Development Services Division action, please send a request, in writing, to the above contact person before **November 9, 1994**.

REFERRALS MAILED ON: October 5, 1994

TO:

- BUILDING INSPECTION
- PUBLIC HEALTH
- FLOOD CONTROL
- ASSESSOR
- CITY OF TRACY
- STATE DEPT. OF FISH & GAME
- TRACY RURAL FIRE DISTRICT
- TRACY PUBLIC SCHOOLS
- PACIFIC GAS & ELECTRIC
- ENFORCEMENT
- PUBLIC WORKS
- AIR POLLUTION CONTROL
- PARKS & RECREATION
- FIRE PREVENTION
- WATER QUALITY CONTROL, CENTRAL VALLEY
- DELTA PROTECTION COMMISSION
- TRACY JOINT UNION SCHOOL DISTRICT
- FARM BUREAU
- PACIFIC BELL



Completed Dairy System:

Solids Handling system: will retain a minimum of 80% of the nutrients and salts produced from this facility. The solids are scraped to sumps, mixed to 10% solids and then pumped to drying lagoons. At these drying lagoons the liquids are pumped to an evaporation pond where to water is evaporated off leaving the nutrients and salts confined to a pit.

Rain water system: collects water from the corrals and building roofs and pumps it to the manure water storage lagoon to be pumped over the farming fields.

Milking parlor water: collected and pumped to the manure water storage lagoon to be pumped over the farming fields.

Total animal units:

Lactating cows	1,180 hd.	1180 units
Dry cows	390 hd.	292.5 units
Heifers- bred	432 hd.	302.4 units
Heifers- 1 yr. to bred	145 hd	101.5 units
Heifers- 3 mos. to bred	432 hd.	172.8 units
Baby calves	145 hd.	36.25 units
Totals	2,724 hd.	2,085.5 aus*

*Manure management system removes 80% of the waste from the site in the form of solid manure to other farming properties. The effective animal unit loading at the location is spread over 125.43 acres of farming area. This works out to 3.33 animal units per farming acre.

Proposed Buildings:

Milking parlor	6,900 sq. ft.
Shop	4,000 sq. ft.
Hay barn #1	5,000 sq. ft.
Hay barn #2	5,000 sq. ft.
Hay barn #3	5,000 sq. ft.
Commodity barn	6,400 sq. ft.
Freestall barn #1	80,000 sq. ft.
Freestall barn #2	80,000 sq. ft.
Shade barn #1	24,000 sq. ft.
Shade barn #2	24,000 sq. ft.
Shade barn #3	7,800 sq. ft.
Shade barn #4	5,200 sq. ft.
Mobile home #3	1,200 sq. ft.
Mobile home #4	1,200 sq. ft.
Truck scale house	400 sq. ft.
Total sq. ft.	256,100 sq. ft.

Existing Buildings:

Residence #1	2400 sq. ft.
Residence #2	1400 sq. ft
Shed #8	308 sq. ft.

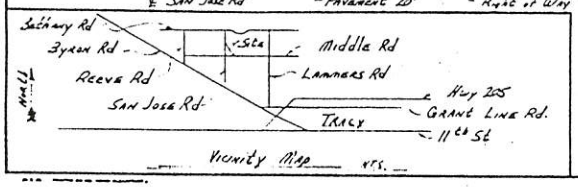
Existing Buildings To Be Removed:
(Reference drawing #2)

Milking parlor	2,900 sq. ft.
Shop	1,200 sq. ft.
Hay barn	15,844 sq. ft.
Freestall barn #1	7,950 sq. ft.
Freestall barn #2	7,104 sq. ft.
Pole barn #1	500 sq. ft.
Pole barn #2	2,380 sq. ft.
Pole barn #3	1,095 sq. ft.
Shed #1	1,920 sq. ft.
Shed #2	1,020 sq. ft.
Shed #3	990 sq. ft.
Shed #4	364 sq. ft.
Shed #5	450 sq. ft.
Shed #6	270 sq. ft.
Shed #7	180 sq. ft.
Shed #9	932 sq. ft.
Total sq. ft.	45,099 sq. ft.

Well #1	Existing
Well #2	New
Well #3	New

Parking:	Std	Hand-cap
Milking parlor	6	1
Shop	4	0
Res #1	3	0
Res #2	2	0
Mobile home #1	2	0
Mobile home #2	2	0
Mobile home #3	2	0
Mobile home #4	2	0
Total	23	1

Legend:
- Std Parking Space
- Hand-cap Parking Space
- Road Base Surface
- Concrete Surface
- Septic System
- PVC Underground Piping
- Tree



Development Plan - Proposed Site

Scale: 1"=50'

SITE PLAN

SA-94-44

Application # SA-94-044

Received By

OCT 5 1994

REVISIONS	BY

Job: Dodd & Sanchez Road
Tracy, CA 95376
APN 209-29-06 34.43 acres
209-29-07 71.0 acres

Owner: Henry J. Tesla
2000 Kavanagh Lane
Tracy, CA 95376

Engineer: Western Design
David Avila
821 E. Main Ave.
Modesto, Calif. 95350
209-538-4321

Site Plan
Floor Plan
Elevations
Details
Sheet 2 of 2 Sheets

SITE PLAN

Application # SA-94-44

Received By ______ On OCT 3 1994

Development Plan - Existing Site

Scale: 1" = 80'

SAN JOAQUIN COUNTY
PLANNING DEPT
1850 E. HAZELTON AVE
STOCKTON CA 95205

STOCKTON
OCT - 5 '94
CALIF
U.S. POSTAGE
.29
PB 887725

WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
3443 ROUTIER RD
SACRAMENTO, CA 95827-3098

LFP

ORNELLAS DAIRY

CAL ROY AL
REG. HOLSTEINS

October 17, 1994

San Joaquin County
Community Development Department
1810 East Hazelton Avenue
Stockton, Ca. 95205

Attn: Chandler Martin

Re: SA-94-44

Dear Mr. Martin,

We appreciate the opportunity to comment on the application referral #SA-94-44.

In a recent conversation with the applicant, Mr. Tosta, we were told that he planned to improve existing buildings on the site and milk approximately 400 cows.

Upon receipt of the application referral, we see that these plans have dramatically expanded to include over 2300 head of cattle on the entire 39 acre site. With an approximate 60 head per acre ratio, we are struck by the animal density on the proposed site. It should be considered that one mature cow creates the waste matter of 24 humans. The proposed plan, including young stock, is the equivalent of a city of 40,000 people.

We trust that the proper governmental agencies have "signed off" on this proposed plan and that the agency's officials are confident of its merits.

We wish all parties well in this proposed plan and do not wish to interfere in the business of area residents. Our concerns, and we trust that of the various governmental agencies, are for the health, safety, and well being of all area residents and their properties.

Our concerns are as follows: proper manure management, including containment, disposal and enforcement there of; air quality including containment of dust, odors, etc,; pest control and ground water quality.

Sincerely yours,

Leroy Ornellas

Leroy Ornellas

20749 South Lammers Road, Tracy, California 95376 • (209) 835-5204

LFP 3110

WESTERN UNITED DAIRYMEN

1315 K Street
Modesto, CA 95354-0917
Telephone: 209) 527-6453
FAX: 209-527-0630

DATE: 9-1-94

TO: Louis Pratt

FROM: Mel - John

REGARDING:

NUMBER OF PAGES: (including cover): 24

ADDITIONAL INFORMATION:

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-9661 • FAX (209) 892-2503

MRF Lands
Marc Frelier
P.O. BOX 2290
Carmel Valley, Ca 93924

August 8, 1994

Dear Mr. Frelier

As you requested, on August 6, 1994 I went to the Salles Dairy, San Jose Road in Tracy.

I retrieved the soil and water samples that were required for the sale of the Dairy to Henry and Linda Tosta. Except: I was unable to sample the #1 well and the #3 well. I am waiting for further instructions on that matter.

On, Friday August 5, 1994, Mr. Tosta contracted Robert Silva

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-9661 • FAX (209) 892-2503

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On, Friday August 5, 1994, Mr. Tosta contracted Robert Silva Backhoe Service to find the water table. We found it at 4 feet 1" below soil line.

I have enclosed a location map of the samples I took.

If you have any questions, please contact my office at the above number.

Sincerely,

Sharon Anderson

Sharon Anderson

Backhoe Service t[illegible]find the water table. We f[illegible]nd it at 4 feet 1"

below soil line.

I have enclosed a location map of the samples I took.

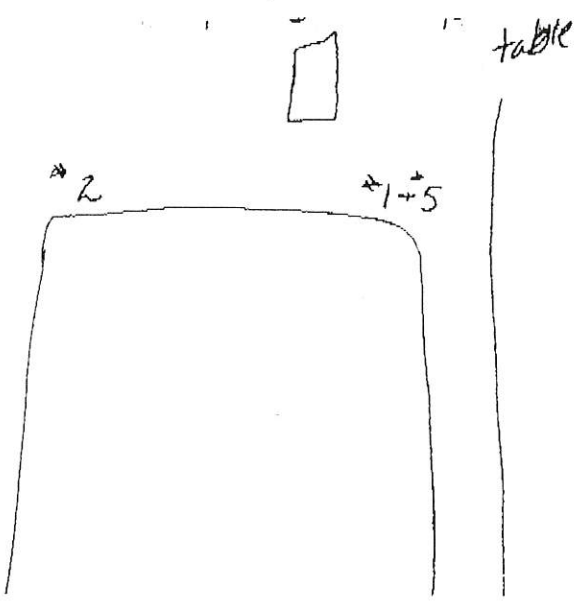
If you have any questions, please contact my office at the above number.

Sincerely,

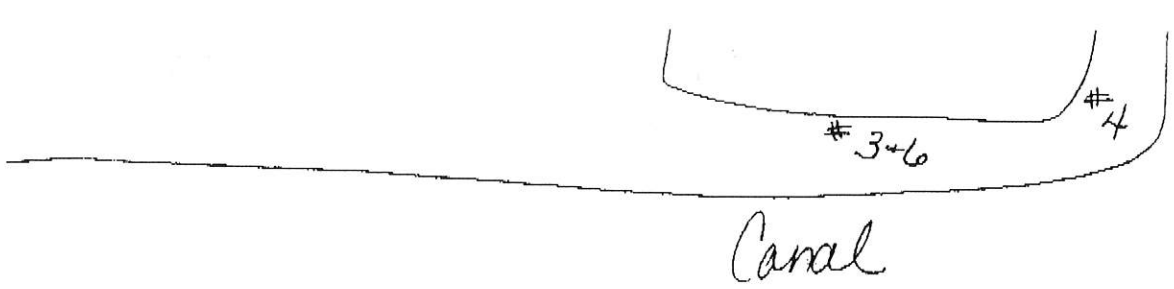
Sharon Anderson

Soils

(1) #1 6-12"
(2) #2 6-12"
(3) #3 6-12"
(4) [illegible] 6-12"
(5) #5 12-18"
(6) #6 12-18"
(7) 200ft from Lagoon



(4) #4 6



NUMBER OF PAGES SENT INCLUDING COVER SHEET IS ____.

Soil
NO3
TKN
mN

H2O
TDS
Nitr.
TKN

Silva Dairy

Harvey Laboratories, Inc.
P.O. Box 686, Patterson, CA 95363 • (209) 892-9661

*Henry and Linda Tosta 836-1286

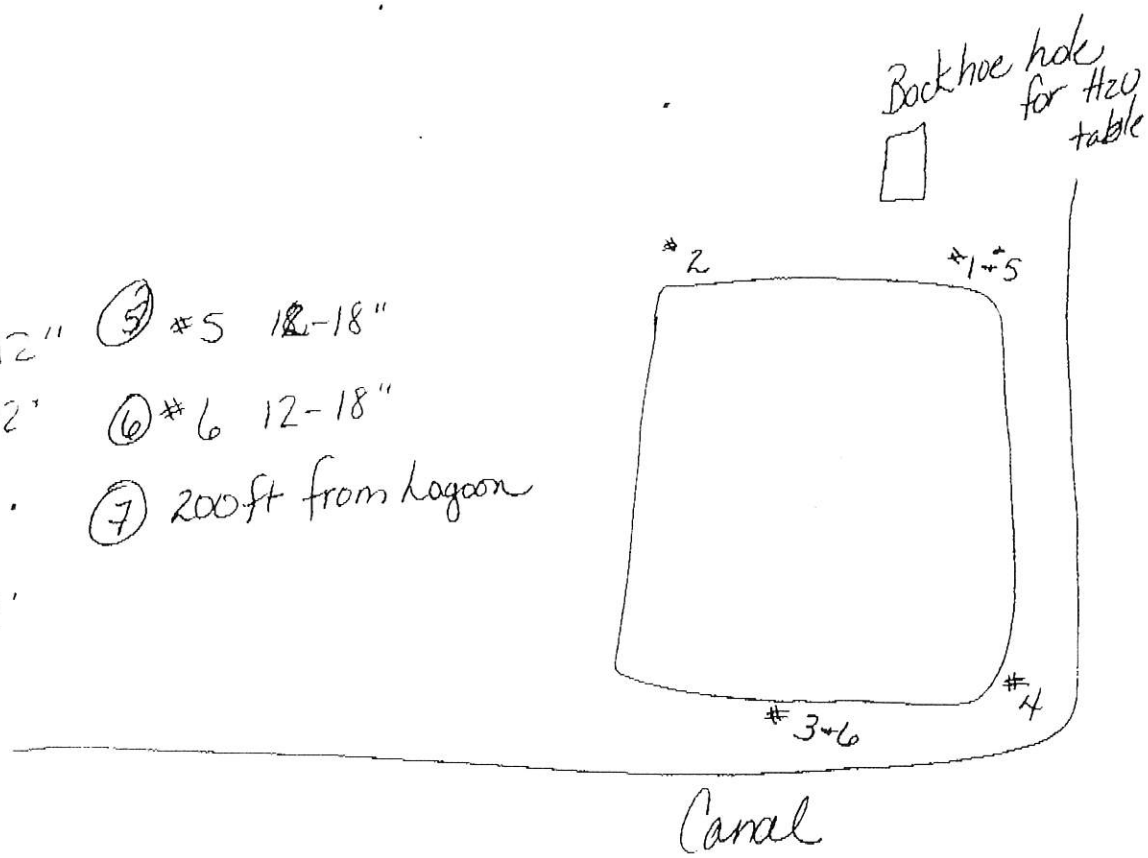
* Marc Fricker

H2O

1) New well #2
2) water table - 20ft from lagoon

Soils

(1) #1 6-12"
(2) #2 6-12"
(3) #3 6-12"
(4) #4 6-12"
(5) #5 12-18"
(6) #6 12-18"
(7) 200ft from lagoon



MRF LANDS

Real Estate Brokerage

P.O. Box 2290
Carmel Valley, Ca 93924
(408)625-2528

Francine Mandeville
Marc R. Frelier
FAX: (408)659-4328

FAX TRANSMITTAL COVER SHEET

DATE: August 3

TO: Harvey Laboratories - Sharon

FAX PHONE NO: 209-892-2503

FROM: Marc R. Frelier

RE: Tosta Dairy, Tracy

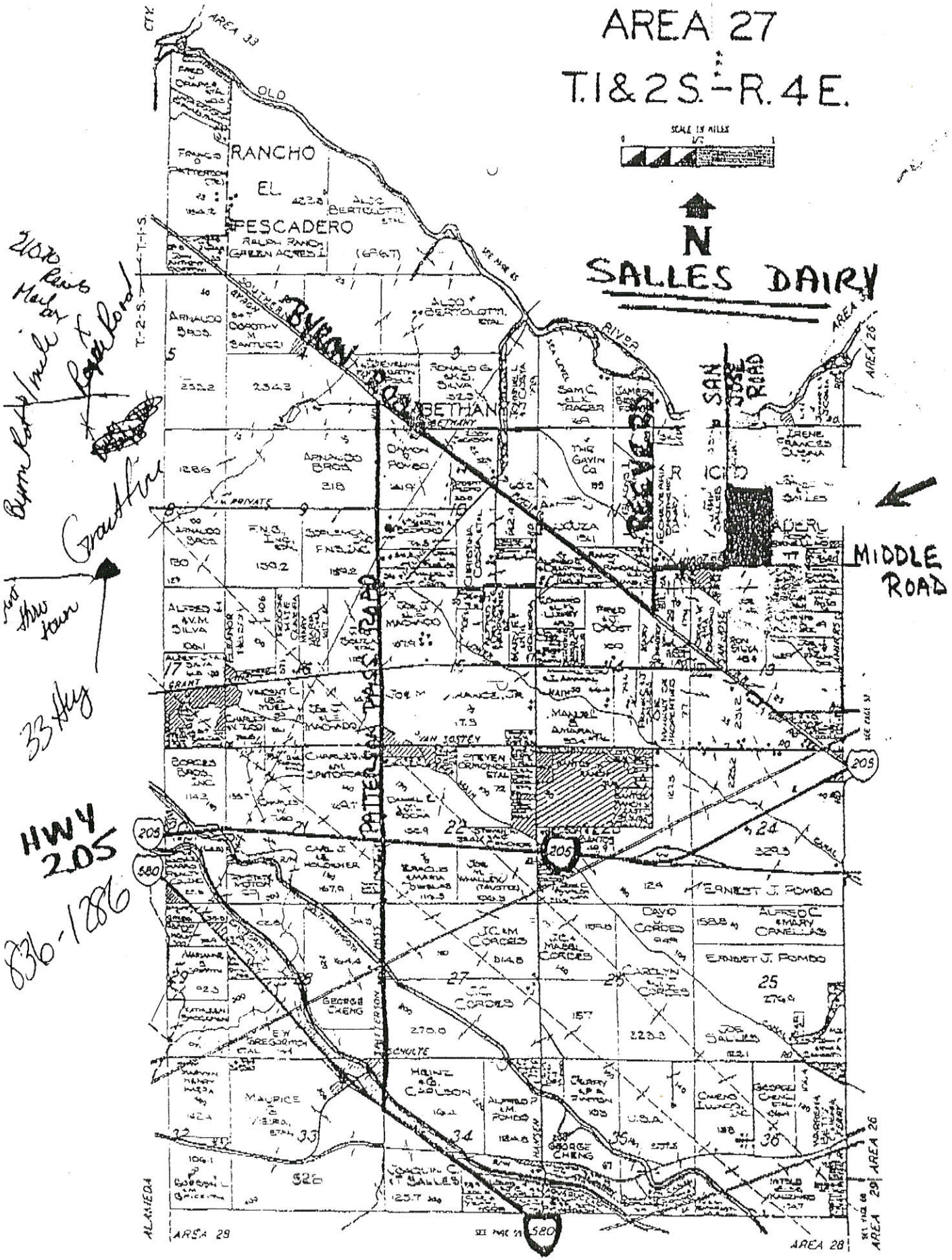
MESSAGE:

Sharon, We would like to get:
1. Soil tests around lagoon - 4 locations at 6"-12" 2 add'l tests at 18"-24"
2. Water tests on 3 wells include TKN, Nitrate testing
3. One soil sample at least 200' away from lagoon as benchmark
4. Water test for TKN & Nitrates on ground water in back hoe hole.

Site is at Salles Dairy, San Jose Rd, between Bethany & Middle Road, 3 miles N.W. of Tracy.

NUMBER OF PAGES SENT INCLUDING COVER SHEET IS ____.

Soil NO_3 N N H2O TDS Nitrate TKN


AREA 27
T.1&2S.-R.4E.
SCALE IN MILES
N
SALLES DAIRY
RANCHO EL PESCADERO
BETHANY
BYRON ROAD
PATTERSON PASS ROAD
SAN JOSE ROAD
MIDDLE ROAD
HWY 205
836-1286
Grant Ave
33 Hwy
AREA 33
AREA 26
AREA 29
AREA 28
ALAMEDA
OLD
RIVER
205
580
ERNEST J. POMBO
J.C. & M. CORDES
J.C. CORDES
GEORGE CHENG
HEINZ & G. CARLSON
MAURICE
JOAQUIN C. & T. SALLES
ALFRED C. & MARY CANELLAS
DAVID J. CORDES
CAROLYN & J.C. CORDES
JOE SALLES
ARNAUDO BROS.
ALFRED J. & V.M. SILVA
BORGES BROS. INC.
THE GAVIN CO.
IRENE FRANCES CUSINA
SAM C. & L.K. TRAGER
DAMON POMBO
F.N.S. INC.
SOPLENICA
JOE M. FRANCE, JR.
MANUEL & AMARAL
STEVEN ORMONDE ETAL
CARL J. & L.E. HOLDIGHER
ERACLIS & MARIA DOUBLAS
JOE M. WHALLEY (TAUSTEE)
ALFRED P. & M. POMBO
GEORGE CHENG
U.S.A.
CHENG ILLINOIS, INC.
GEORGE CHENG ETAL
MARIANNE & SPRATTON
E.W. GREGORITCH ETAL
SCHULTE
VAN JOSTEY
PRIVATE
GRANT
SOUTHERN
T-1-S.
T-2-S.
SEE PAGE 25
SEE PAGE 29
SEE PAGE 33
21070 Rivers Marlboro
Byron Rd & 1 mile
Ropper Road
Grant Ave
33 Hwy
HWY 205
836-1286

1 Soil 200 feet from lagoon @ 12

6 soil with 20' of lag

4-6-12" deep

2-12-24" deep

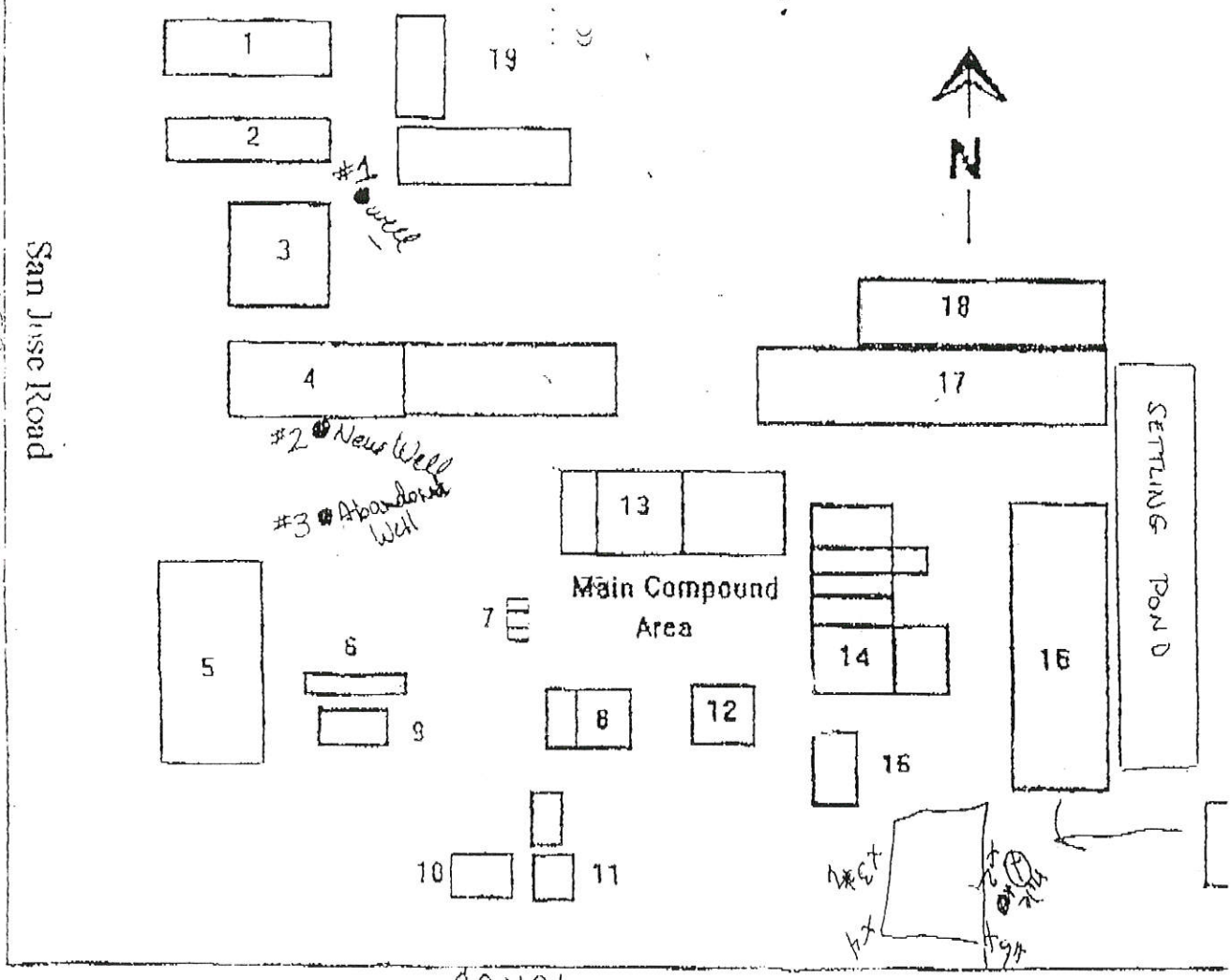
open

Plot Plan

1. Rental Trailer No. 2
2. Rental Trailer No. 1
3. Rental Home
4. Dairy Barn and Holding Area
5. Main Residence
6. Storage Area
7. Fuel Storage Tanks
8. Garages
9. Lawn over inground pool
10. Garage
11. Pole Barn
12. Barn
13. Tool Shed and Garages
14. Old Barn and Tool Shed
15. Pole Stable
16. Loafing Barn
17. Hay Barn
18. Loafing Barn
19. Pole Barn and Pole Stable

Water Table 20 feet from lagoon

Robert Silva 835-3895



HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-9661 • FAX (209) 892-2503

WATER ANALYSIS

Lab Number W57915 For: HENRY & LINDA TOSTA

Water: SALAS DAIRY
Date Rcvd: 08/08/94
Date Rptd: 08/08/94
Sample ID: WATER TABLE 20FT FROM L

Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

ANALYSIS

RESULTS

		PPM	Meq/L	VL	L	M	H	VH
pH		7.30						
E.C.w.		6.91	mmhos/cm					
Soluble Salts		4422.40	--					
Nitrate Nitrogen (NO3-N)		6.30	0.10					
Bicarbonates (HCO3)		488.08	8.00					
Carbonates (CO3)		0.00	0.00					
Calcium (Ca)		571.00	28.49					
Magnesium (Mg)		79.00	6.50					
Calcium + Magnesium		--	34.99					
Sodium (Na)		150.00	6.52					
Potassium (K)		1.20	--					
Boron (B)		0.50	--					
Chloride (Cl)		971.60	27.40					
Sodium Adsorption Ratio (SAR)		--	1.56					
Adj. Sodium Adsorption Ratio		--	4.83					
Exchangeable Sodium Percent (ESP)		--	1.03					
				VL	L	M	H	VH

CHART KEY

VL = Very Low L = Low M = Moderate H = High VH = Very High

Reviewed and approved by Sharon Anderson

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-9661 • FAX (209) 892-2503

WATER ANALYSIS

Lab Number W57914 For: HENRY & LINDA TOSTA

Water: SALLAS DAIRY
Date Rcvd: 08/08/94
Date Rptd: 08/08/94
Sample ID: WELL #2

Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

ANALYSIS	RESULTS		VL	L	M	H	VH
pH	8.00						
E.C.w.	0.71	mmhos/cm					
	PPM	Meq/L					
Soluble Salts	454.40	---					
Nitrate Nitrogen (NO3-N)	3.20	0.05					
Bicarbonates (HCO3)	219.64	3.60					
Carbonates (CO3)	0.00	0.00					
Calcium (Ca)	60.00	2.99					
Magnesium (Mg)	44.00	3.62					
Calcium + Magnesium	---	6.61					
Sodium (Na)	142.00	6.17					
Potassium (K)	0.46	---					
Boron (B)	0.05	---					
Chloride (Cl)	49.64	1.40					
Sodium Adsorption Ratio (SAR)	---	3.40					
Adj. Sodium Adsorption Ratio	---	7.13					
Exchangeable Sodium Percent (ESP)	---	3.61					

CHART KEY

VL = Very Low L = Low M = Moderate H = High VH = Very High

Reviewed and approved by Sharon Anderson

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA 95363 • (209) 892-2565 • FAX (209) 892-2503

Lab Number S57935 HENRY & LINDA TOSTA

Crop: OPEN
Date Rcvd: 08/09/94
Date Rptd: 08/09/94
Sample ID: #1 6-12"

Qty:
Acres:
Yield: 1.0 TONS

Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

Excess Carbonates: High

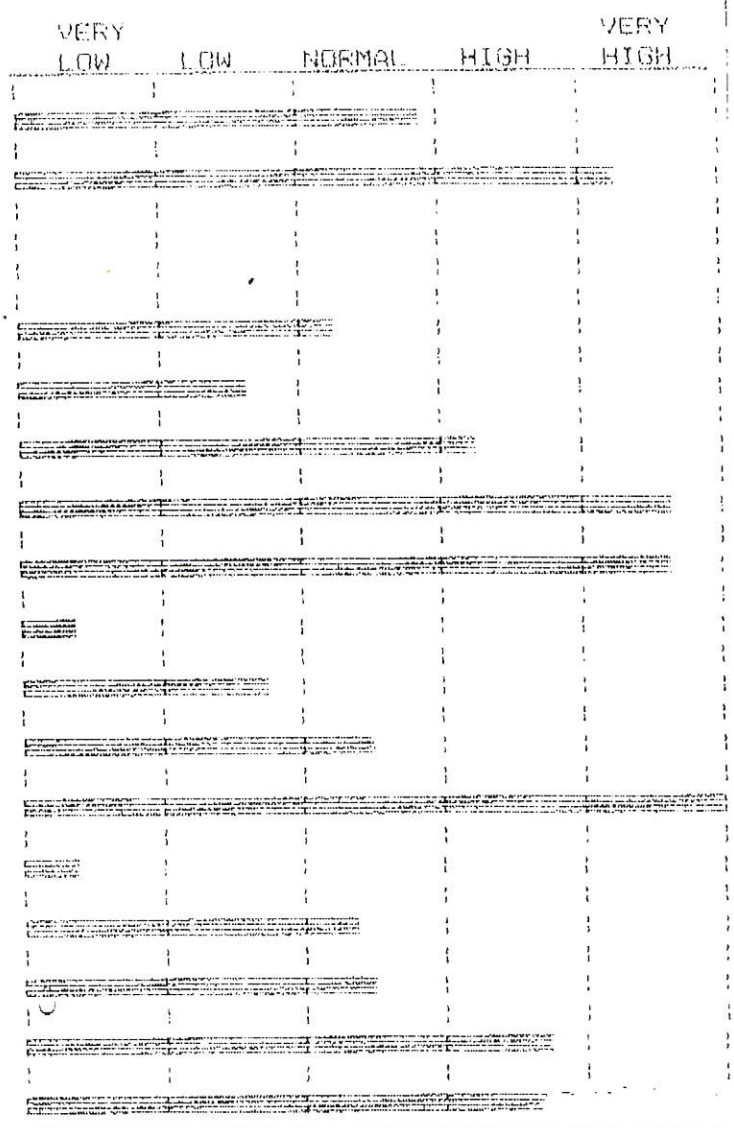
Soluble Salts: 3968 ppm

Percolation: Moderate

ANALYSIS RESULTS

RESULT FOR	UNIT
pH	7.50
E.C.e. (mmhos)	6.20
ELEMENT	**PPM**
NO3- Nitrate Nitrogen	14.00
NH4- Ammonium Nitrogen	21.00
P - Phosphorus	28.80
K - Potassium	775.00
Ca - Calcium	25200.00
Mg - Magnesium	354.00
Na - Sodium	198.00
B - Boron	0.90
Zn - Zinc	56.00
Fe - Iron	3.00
Cu - Copper	2.50
Mn - Manganese	13.00
S - Sulfate Sulfur	87.00
Cl - Chloride	149.00

NUTRIENT BALANCE CHART



The above PPM values can be converted to lbs/Acre 6" by multiplying times 2.

HARVEY LABORATORIES
P.O. BOX 1686 • 205 D STREET • PATTERSON, CA. 95363 (209) 892-8881 • FAX (209) 892-2503

BASE SATURATION

ELEMENT	OPTIMUM	YOUR RESULT
Calcium	65-80 %	95.70 %
Magnesium	10-20 %	1.87 %
Potassium	2-5 %	1.52 %
Sodium	1-5 %	4.38 %

SATURATION EXTRACT ANALYSIS

Ca + Mg:	46	meq/L
Na:	19	meq/L
Ca + Mg %:	70.8	
Na %:	29.2	

Estimated Cation Exchange Capacity: 130.87 meq/100 gm.

COMMENTS

The above ratings are based not only on individual crop critical levels. All known interactions and variables are included in making a rating.

REVIEWED AND APPROVED BY _____

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA 95363 • (209) 892-8687 • FAX (209) 892-2503

SOIL ANALYSIS

Lab Number S57933 HENRY & LINDA TOSTA

Crop: OPEN
Date Rcvd: 08/09/94
Date Rptd: 08/09/94
Sample ID: #3 6 - 12"

Vty:
Acres:
Yield: 1.0 TONS

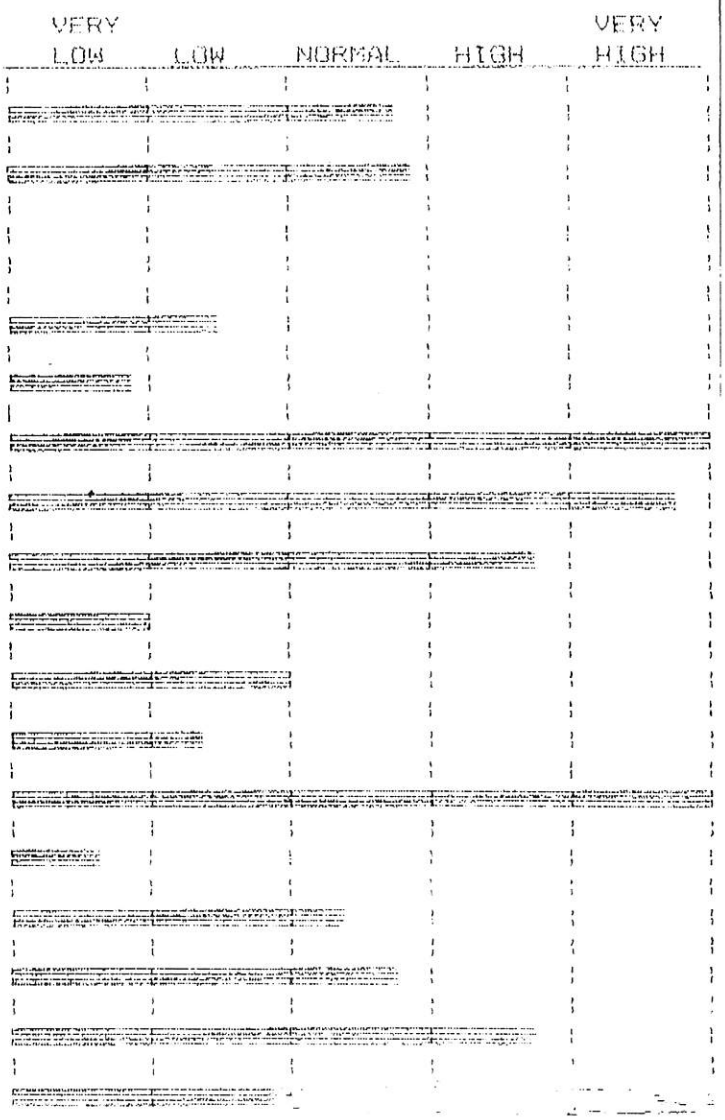
Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

Excess Carbonates	Soluble Salts	Percolation
Low	1984 ppm	High

ANALYSIS RESULTS

RESULT FOR	UNIT
pH	7.30
E.C.e. (mmhos)	3.10
ELEMENT	**PPM**
NO3- Nitrate Nitrogen	8.00
NH4- Ammonium Nitrogen	12.00
P - Phosphorus	96.00
K - Potassium	850.00
Ca - Calcium	8060.00
Mg - Magnesium	368.00
Na - Sodium	198.00
B - Boron	0.30
Zn - Zinc	107.00
Fe - Iron	3.70
Cu - Copper	2.70
Mn - Manganese	15.00
S - Sulfate Sulfur	88.00
Cl - Chloride	89.50

NUTRIENT BALANCE CHART



The above PPM values can be converted to lbs/Acre 6" by multiplying times 2.

HARVEY LABORATORIES
P.O. BOX 886 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-9081 • FAX (209) 892-2503

Lab Number [illegible] HENRY & LINDA TOSTA

BASE SATURATION

ELEMENT	OPTIMUM	YOUR RESULT
Calcium	65-80 %	86.83 %
Magnesium	10-20 %	6.29 %
Potassium	2-5 %	4.73 %
Sodium	1-5 %	4.93 %

SATURATION EXTRACT ANALYSIS

Ca + Mg:	19.4	meq/l
Na:	13.6	meq/L
Ca + Mg %:	58.8	
Na %:	41.2	

Estimated Cation Exchange Capacity: 46.10 meq/100 gm.

COMMENTS

The above ratings are based not only on individual crop critical levels. All known interactions and variables are included in making a rating.

REVIEWED AND APPROVED BY K. Anderson

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA 95363 • (209) 892-0661 • FAX (209) 892-2503

Lab Number 857937 — HENRY & LINDA TOSTA —

Crop: OPEN
Date Rcvd: 08/09/94
Date Rptd: 08/09/94
Sample ID: #4 6-12"

Vty:
Acres:
Yield: 1.0 TONS

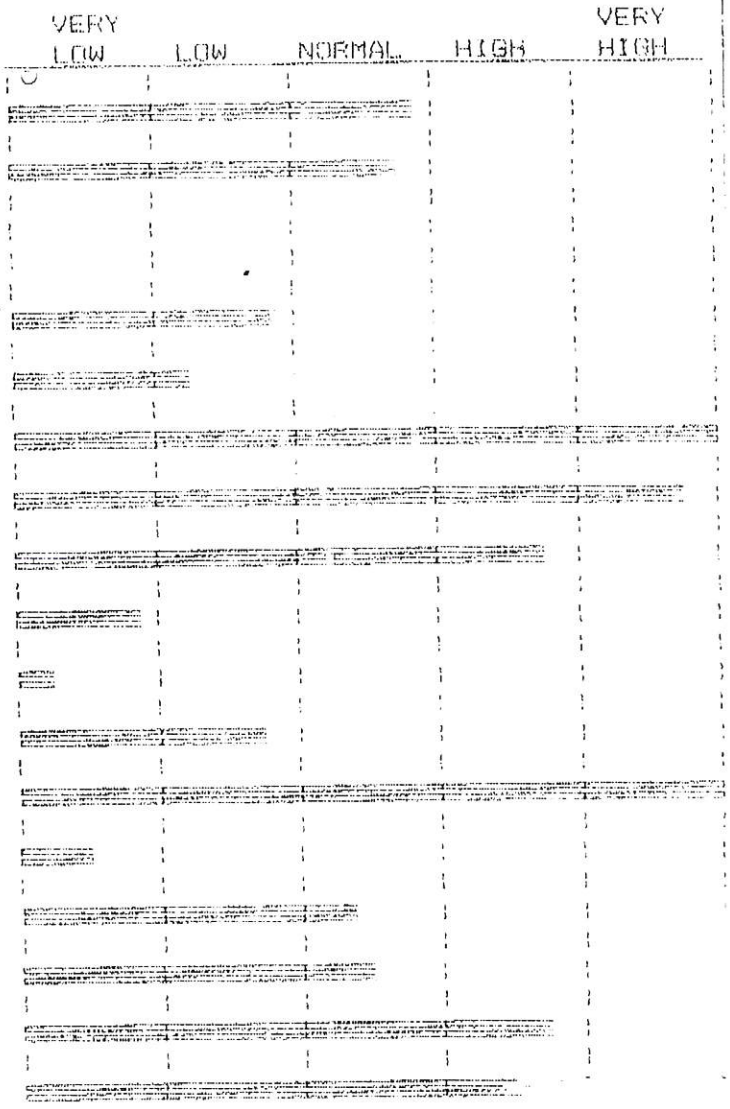
Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

Excess Carbonates	Soluble Salts	Percolation
NIL	1920 ppm	Moderate

ANALYSIS RESULTS

RESULT FOR	UNIT
pH	7.40
E.C.e. (mmhos)	3.00
ELEMENT	**PPM**
NO_3- Nitrate Nitrogen	11.00
NH_4- Ammonium Nitrogen	17.00
P - Phosphorus	96.00
K - Potassium	845.00
Ca - Calcium	7820.00
Mg - Magnesium	366.00
Na - Sodium	210.00
B - Boron	0.40
Zn - Zinc	111.00
Fe - Iron	3.40
Cu - Copper	2.60
Mn - Manganese	12.00
SO_4 - Sulfate Sulfur	86.00
Cl - Chloride	223.70

NUTRIENT BALANCE CHART



The above PPM values can be converted to lbs/Acre 6" by multiplying times 2.

HARVEY LABORATORIES
P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-8881 • FAX (209) 892-2503

Lab Number [illegible]

BASE SATURATION

ELEMENT	OPTIMUM	YOUR RESULT
Calcium	55-80 %	86.63 %
Magnesium	10-20 %	5.07 %
Potassium	2-5 %	4.96 %
Sodium	1-5 %	0.15 %

SATURATION EXTRACT ANALYSIS

Ca + Mg:	30	meq/L
Na:	2	meq/L
Ca + Mg %:	93.8	
Na %:	6.3	

Estimated Cation Exchange Capacity: 43.69 meq/100 gm.

COMMENTS

The above ratings are based not only on individual crop critical levels. All known interactions and variables are included in making a rating.

REVIEWED AND APPROVED BY H. Anderson

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET PATTERSON, CA 95363 • (209) 892-2566 • FAX (209) 892-2503

Lab Number S57938 — HENRY & LINDA TOSTA —

Crop: OPEN
Date Rcvd: 08/09/94
Date Rptd: 08/09/94
Sample ID: #5 18-24 "

Qty:
Acres:
Yield: 1.0 TONS

Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

Excess Carbonates
High

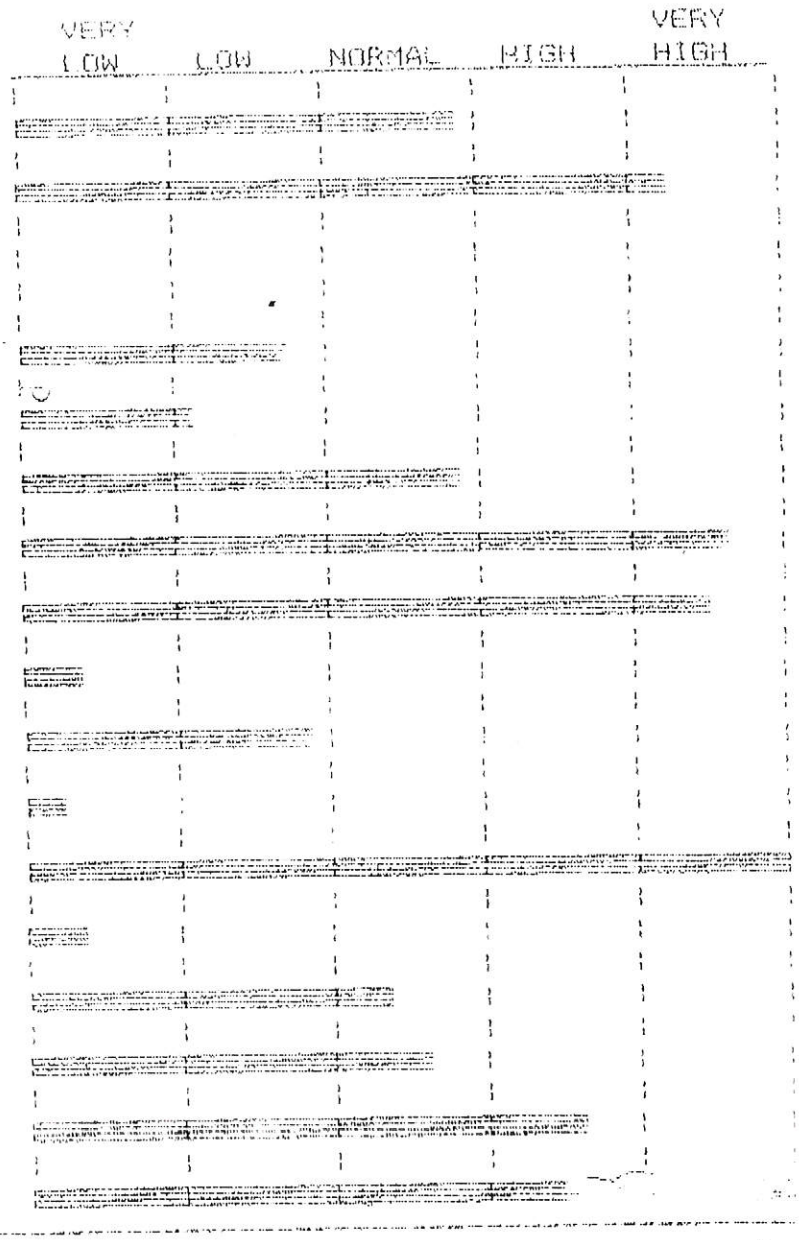
Soluble Salts
3712 ppm

Percolation
Moderate

ANALYSIS RESULTS

RESULT FOR	UNIT
pH	7.50
E.C.e. (mmhos)	5.90
ELEMENT	**PPM**
NO3- Nitrate Nitrogen	10.00
NH4- Ammonium Nitrogen	15.00
P - Phosphorus	22.20
K - Potassium	790.00
Ca - Calcium	21240.00
Mg - Magnesium	357.00
Na - Sodium	205.00
B - Boron	0.05
Zn - Zinc	63.00
Fe - Iron	3.00
Cu - Copper	2.70
Mn - Manganese	14.00
S - Sulfate Sulfur	79.00
Cl - Chloride	261.30

NUTRIENT BALANCE CHART



The above PPM values can be converted to lbs/Acre 6" by multiplying times 2.

HARVEY LABORATORIES
Lab Number 653032 HENRY & LINDA TOSTA
P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-9661 • FAX (209) 892-2503

BASE SATURATION

ELEMENT	OPTIMUM	YOUR RESULT
Calcium	65-80 %	94.97 %
Magnesium	10-20 %	1.79 %
Potassium	2-5 %	1.84 %
Sodium	1-5 %	4.63 %

SATURATION EXTRACT ANALYSIS

Ca + Mg:	42	meq/L
Na:	19	meq/L
Ca + Mg %:	68.9	
Na %:	31.1	

Estimated Cation Exchange Capacity: 110.24 meq/100 gm.

COMMENTS

The above ratings are based not only on individual crop critical levels. All known interactions and variables are included in making a rating.

REVIEWED AND APPROVED BY J. Anderson

HARVEY LABORATORIES

SOIL ANALYSIS

P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-8607 • FAX (209) 892-2503

Lab Number S57934 HENRY & LINDA TOSTA

Crop: OPEN
Date Rcvd: 08/09/94
Date Rptd: 08/09/94
Sample ID: #6 18-12"

Qty:
Acres:
Yield: 1.0 TONS

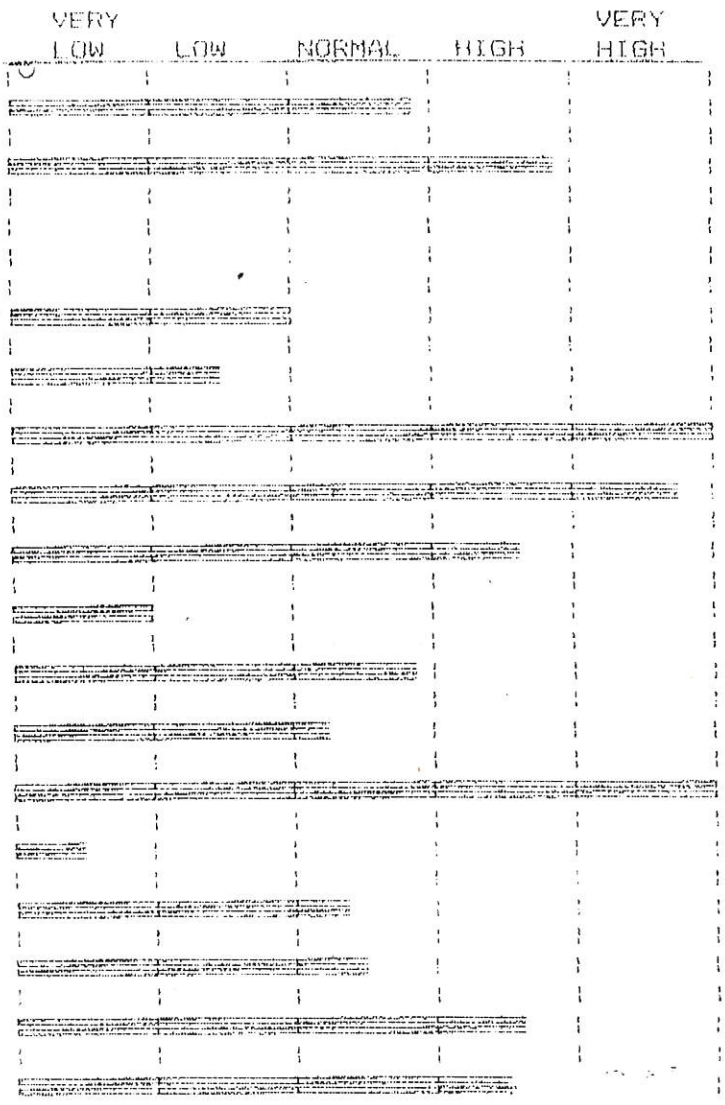
Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

Excess Carbonates	Soluble Salts	Percolation
Low	2944 ppm	Moderate

ANALYSIS RESULTS

RESULT FOR	UNIT
pH	7.50
E.C.e. (mmhos)	4.60
ELEMENT	**PPM**
NO3- Nitrate Nitrogen	12.00
NH4- Ammonium Nitrogen	19.00
P - Phosphorus	79.70
K - Potassium	835.00
Ca - Calcium	7420.00
Mg - Magnesium	370.00
Na - Sodium	203.00
B - Boron	0.70
Zn - Zinc	100.00
Fe - Iron	3.50
Cu - Copper	3.00
Mn - Manganese	12.00
S - Sulfate Sulfur	82.00
Cl - Chloride	17.90

NUTRIENT BALANCE CHART



The above PPM values can be converted to lbs/Acre 6" by multiplying times 2.

HARVEY LABORATORIES
P.O. BOX 686 • 205 D STREET • PATTERSON, CA. 95363 • (209) 892-9801 • FAX (209) 892-2503

BASE SATURATION

ELEMENT	OPTIMUM	YOUR RESULT
Calcium	65-80 %	85.93 %
Magnesium	10-20 %	6.46 %
Potassium	2-5 %	5.03 %
Sodium	1-5 %	6.58 %

SATURATION EXTRACT ANALYSIS

Ca + Mg:	28	meq/L
Na:	21	meq/L
Ca + Mg %:	57.1	
Na %:	42.9	

Estimated Cation Exchange Capacity: 42.59 meq/100 gm.

COMMENTS

The above ratings are based not only on individual crop critical levels. All known interactions and variables are included in making a rating.

REVIEWED AND APPROVED BY J. Anderson

GeoAnalytical Laboratories, Inc.

1031 Kansas Avenue
Modesto, CA 95351

Phone (209) 572-0630
FAX (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # F222-04

Harvey Laboratories
PO Box 686
Patterson CA 95363

Date: 08/16/94
Date Received: 08/10/94
Date Started: 08/10/94
Date Completed: 08/16/94

Project Name: Henry & Linda Tosta

Project #

Sample ID	Lab ID	Detection Limit	Method	Analyte	Results mg/L
New Well	F34270	0.01	7060	Arsenic	0.01
New Well	F34270	1.0	300	Nitrate	8
New Well	F34270	1	300	Sulfate	170
New Well	F34270	0.5	351.3	Total Kjeldahl Nitrogen	0.8

Ramiro Salgado
Chemist

Certification # E757

Donna Allsup
Laboratory Director

GeoAnalytical Laboratories, Inc.

1031 Kansas Avenue
Modesto, CA 95351

CERTIFICATE OF ANALYSIS

Report # F222-04
Harvey Laboratories
PO Box 686
Patterson CA 95363

Date: 08/15/94
Date Received: 08/10/94
Date Started: 08/10/94
Date Completed: 08/12/94

Project #

Project Name: Henry & Linda Tosta
Sallas Dairy

Sample ID: New Well

Lab ID: F34270

Method	Detection Limit	Analyte	Results
9221B		Total Coliform	Absent

Craig Soares
Bacteriological Dept. Head

Certification # E757

Donna Allsup
Laboratory Director

GeoAnalytical Laboratories, Inc.

1031 Kansas Avenue
Modesto, CA 95351

CERTIFICATE OF ANALYSIS

Report # F222-04

Harvey Laboratories
PO Box 686
Patterson CA 95363

Date: 08/16/94
Date Received: 08/10/94
Date Started: 08/10/94
Date Completed: 08/16/94

Project Name: Henry & Linda Tosta

Project #

Sample ID	Lab ID	Detection Limit	Method	Analyte	Results mg/L
Lagoon	F34271	0.01	7060	Arsenic	ND
Lagoon	F34271	1.0	300	Nitrate	14
Lagoon	F34271	1	300	Sulfate	1400
Lagoon	F34271	0.5	351.3	Total Kjeldahl Nitrogen	0.7

Ramiro Salgado
Chemist

Certification # E757

Donna Allsup
Laboratory Director

GeoAnalytical Laboratories, Inc.

1031 Kansas Avenue
Modesto, CA 95351
Phone (209) 572-0900
FAX (209) 572-0915

CERTIFICATE OF ANALYSIS

Report # F221-12
Harvey Laboratories
PO Box 686
Patterson CA 95363

Date: 08/16/94
Date Received: 08/09/94
Date Started: 08/09/94
Date Completed: 08/11/94

Project Name: Henry & Linda Tosta

Project #

Sample ID	Lab ID	Detection Limit	Method	Analyte	Results mg/Kg
#1-6-12"	F21773	0.5	7060	Arsenic	11.3
#2-6-12"	F21774	0.5	7060	Arsenic	11.5
#3-6-12"	F21775	0.5	7060	Arsenic	8.3
#4-6-12"	F21776	0.5	7060	Arsenic	12.3
#5-12-24"	F21777	0.5	7060	Arsenic	9.8
#6-12-24"	F21778	0.5	7060	Arsenic	12.5

Ramiro Salgado
Chemist

Certification # E757

Donna Allsup
Laboratory Director

HARVEY LABORATORIES

P.O. BOX 686 • 205 D STREET • PATTERSON, CA 95363 • (209) 892-8600 • FAX (209) 892-2503

Lab Number S57936 HENRY & LINDA TOSTA

Crop: OPEN
Date Rcvd: 08/09/94
Date Rptd: 08/09/94
Sample ID: #2 6-12"

Qty:
Acres:
Yield: 1.0 TONS

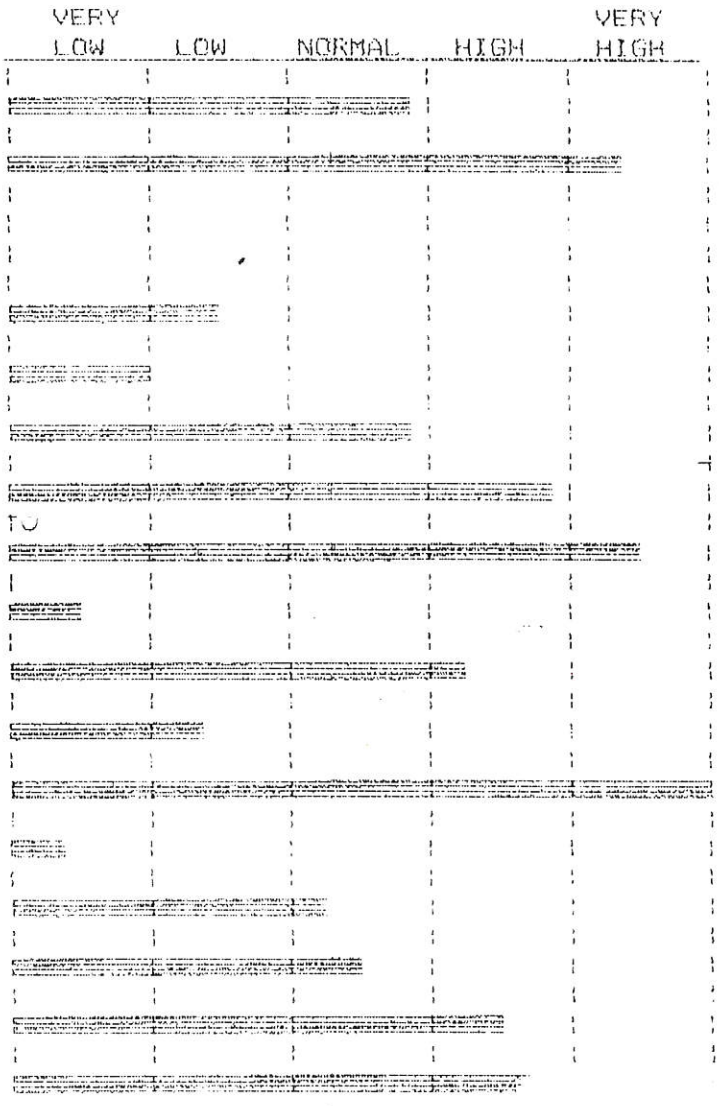
Received from:
SHARON ANDERSON
HARVEY LABORATORIES
PATTERSON

Excess Carbonates	Soluble Salts	Percolation
High	4224 ppm	Moderate

ANALYSIS RESULTS

RESULT FOR	UNIT
pH	7.50
E.C.e. (mmhos)	6.60
ELEMENT	**PPM**
NO3- Nitrate Nitrogen	8.00
NH4- Ammonium Nitrogen	13.00
P - Phosphorus	22.20
K - Potassium	445.00
Ca - Calcium	16580.00
Mg - Magnesium	359.00
Na - Sodium	205.00
B - Boron	0.30
Zn - Zinc	55.00
Fe - Iron	3.00
Cu - Copper	2.40
Mn - Manganese	13.00
S - Sulfate Sulfur	76.00
Cl - Chloride	164.00

NUTRIENT BALANCE CHART



The above PPM values can be converted to lbs/Acre 6" by multiplying times 2.

HARVEY LABORATORIES

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Lab Number [illegible] Page 2 of 2

BASE SATURATION

ELEMENT	OPTIMUM	YOUR RESULT
Calcium	65-80 %	94.47 %
Magnesium	10-20 %	2.68 %
Potassium	2-5 %	1.32 %
Sodium	1-5 %	7.67 %

SATURATION EXTRACT ANALYSIS

Ca + Mg:	40	meq/L
Na:	29	meq/L
Ca + Mg %:	58.0	
Na %:	42.0	

Estimated Cation Exchange Capacity: 86.69 meq/100 gm.

FERTILIZER RECOMMENDATIONS

Fertilizer	Amount	Unit	Fertilizer	Amount	Unit
Nitrogen (N)	25	lbs/A	Manganese (Mn)	2	lbs/A
Phosphate (P_2O_5)	55	lbs/A	Copper (Cu)	1.4	lbs/A
Potash (K_2O)	---	lbs/A	Sulfur (S)	3000	lbs/A
Boron (B)	1.5	lbs/A	Gypsum	---	tons/A
Zinc (Zn)	---	lbs/A	Dolomite/Lime	---	tons/A

COMMENTS

The above ratings are based not only on individual crop critical levels. All known interactions and variables are included in making a rating.

The micronutrients recommended are in lbs/acre on a broadcast elemental basis. If micronutrients are banded, then divide the recommended value by 3. If chelated fertilizers are used, then divide the recommendation by 4.

Research has shown that optimum yields are obtained with Nitrogen split into 2 to 4 applications. Recommended Nitrogen is based on a 90% efficiency of application. More may be needed if inefficient methods are used. The highest losses of Nitrogen occur with winter applications. Early spring and late summer is the optimum time to apply Nitrogen if split application is necessary.

Fertilizer recommendations are made to include a soil build-up as well as account for your OPEN crop's immediate requirements.

REVIEWED AND APPROVED BY A. Anderson