OIL CONSERVATION DIVISION

'92 AUG 19 16

Amoco Production Company
501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

August 3, 1992

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87501

Attention: Ben Stone

File: KWB-LF

Gentlemen:

Application for Surface Commingling
South Mattix Unit Federal Lease
Fowler Fusselman, Upper Yeso, Paddock, Tubb,
Ellenburger and Drinkard Pools
Lea County, New Mexico

Reference a telephone conversation of August 3, 1992, between Ben Stone of the NMOCD and Howard Black of Amoco regarding above subject. Amoco will amend their application to include the use of meters to measure crude from each pool prior to commingling. It is our understanding that metering is necessary due to the varied royalty and overriding royalty interest owners in each pool. This can be accomplished by the addition of separators at various points on the lease and the installation of meters for each pool.

We hereby request an exception to the metering requirement for the production from the Paddock/Tubb. There is only one well producing from these pools. There is no liquid production from the Paddock and the Tubb makes 1 barrel of oil and 1 barrel of water per day. If we are out the expense of installing a meter for this production, the well would be uneconomical and have to be shut-in. As an alternative, we propose to test this well monthly and send the crude to a dry tank, which can be run when sufficient liquids are accumulated. (This well currently makes 1 BOPD x 1 BWPD x 150 MCFD).

We would appreciate your favorable consideration regarding our request. If additional information is required, please contact Howard Black at (713) 584-7213.

Yours very truly,

K. W. Brand HB

K.W. Brand
Administrative Services Manager

HIB/bmm

Attachments

AMOCO PRODUCTION COMPANY

ENGINEERING CHART

SHEET NO. 1

SUBJECT South Matrix Unit Federal

Satellite Battery Plot Plant Flow Schematic

DATE ~~4/29/92~~ 8/14/92

BY LAL

Not to Scale

South Mattix Unit Federal
Centralized Battery Plot Plan

~~4/29/92~~ 8/4/92

LAL
Not to Scale

Liquid from SMUF #16 (T14)
(Gas sold at well site)

URU gas sales

Sour gas sales

SMUF wells
2, 6, 7, 9, 10, 20,
22, 26, 27, 35Y,
39, 40 (Yeso),
Liquid from Satellite,
(Yeso + Fusselman)

(Sour) 6'x10' 3Ø Test Sep

(Sour) 6'x10' 3Ø Prod Sep

(Sour) 6'x15' Vertical Treater

(Sweet) 4'x20' Vertical Emulsion Treater

Sour Recirc. Pump

Sour LACT

URU

Sweet LACT

Sweet Recirc. Pump

WIS Pumps

WIS Pump Suct 500 bbl FG

WIS Equal 500 bbl FG

Sour/WIS overflow 500 bbl Weldtank

Sweet overflow 500 bbl Weldtank

Sour Reject 500 bbl Weldtank

Sour Run 500 bbl Weldtank

Sweet Reject 500 bbl Weldtank

Sweet Run 500 bbl Weldtank

Ellenburger gas sales

Drinkard gas sales

(Sweet) 2Ø Vertical Separator (Drinkard)

(Sweet) 6'x15' 3Ø Test Sep

(Sweet) 10'x28' 3Ø Prod Sep (Ellenburger)

Sweet Test/Prod Header

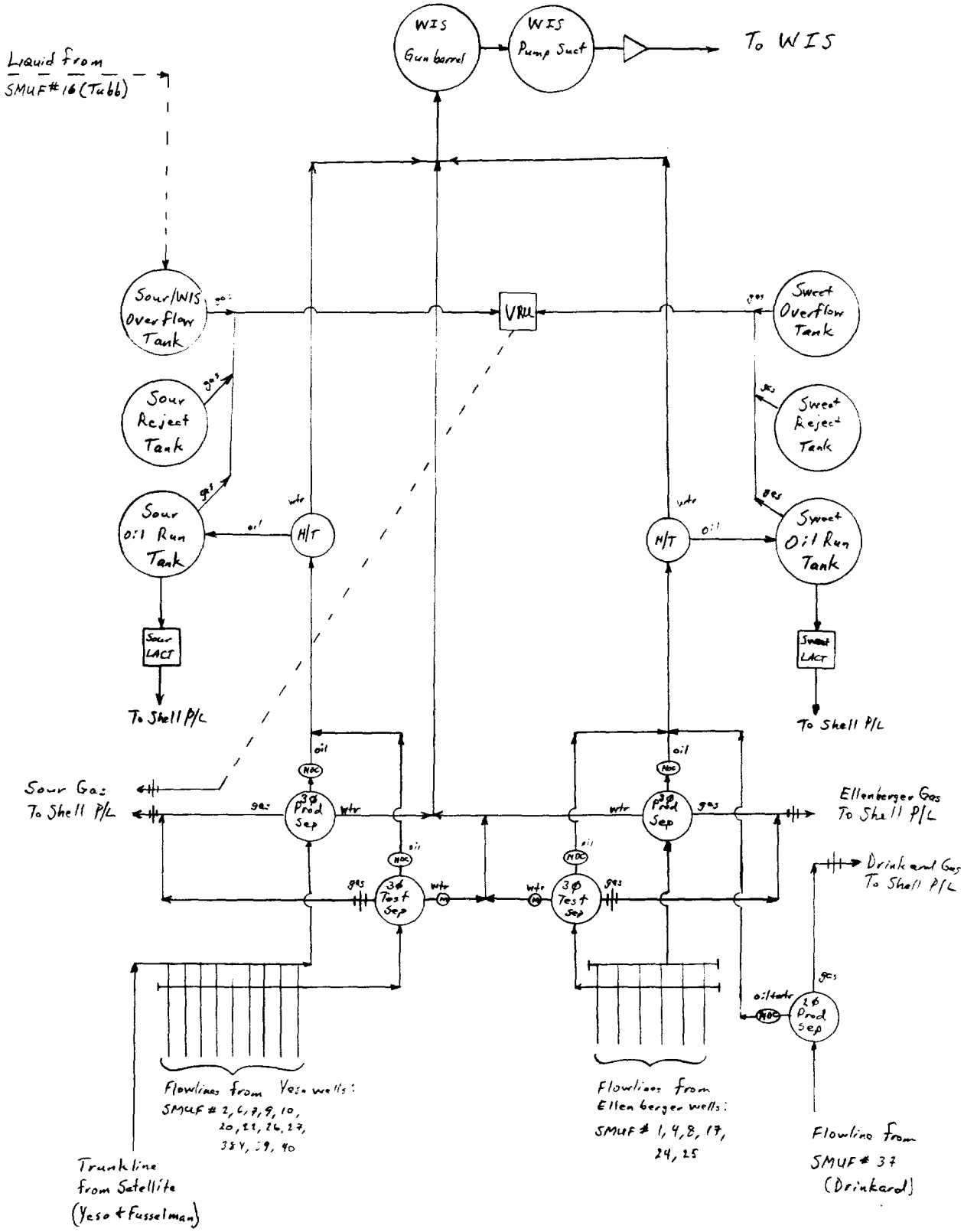
SMUF wells
1, 9, 8, 17, 29, 15
(Ellenburger)

Prop Tank 500 bbl Weldtank

South Mattix Unit Federal | 8/5/92 | 3/3

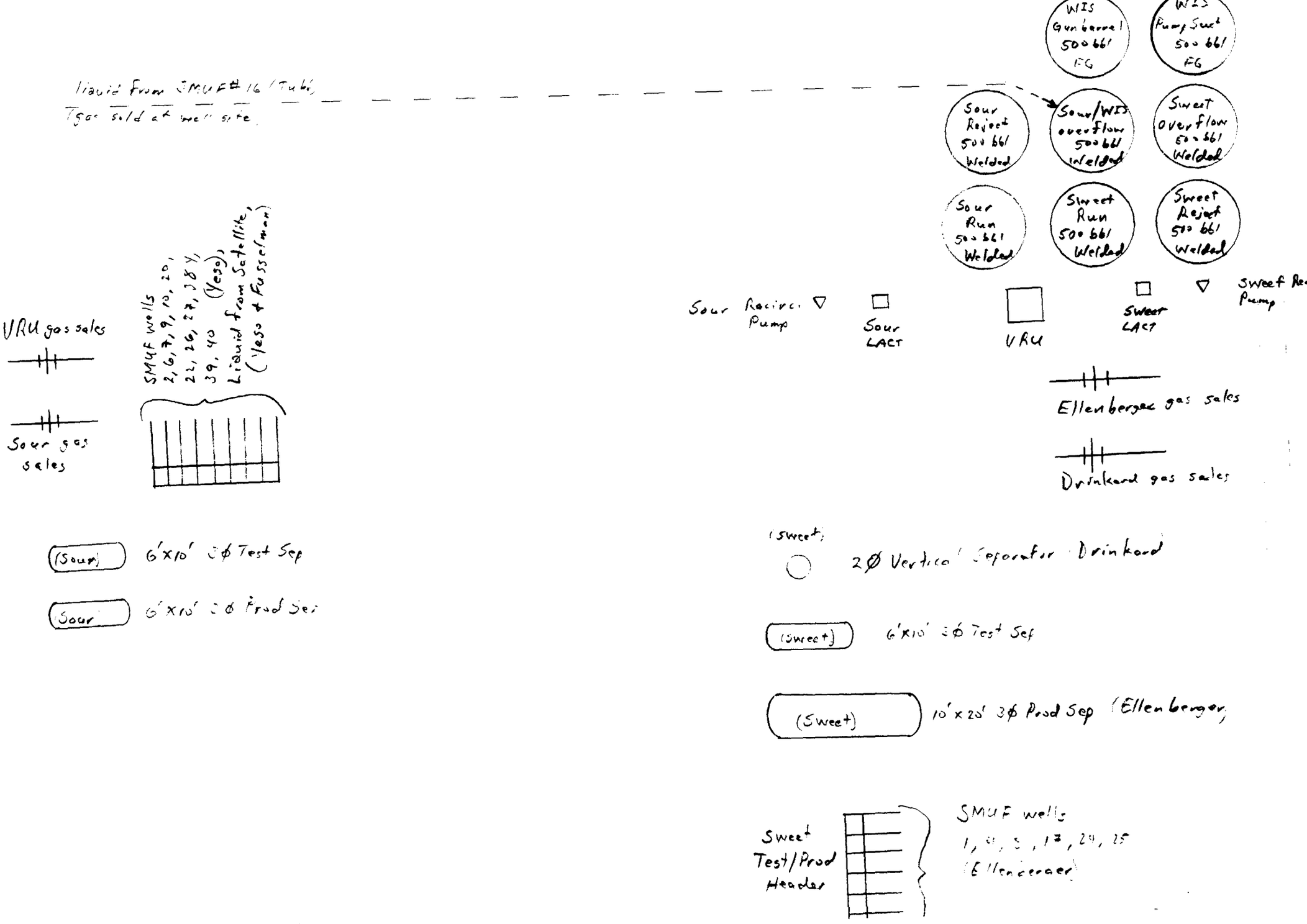
CTB Flow Schematic | LAL

No Scale



#2492 8/4/92
LAL
Not to Scale

South Mathix Unit Federal
Centralized Battery Plot Plan



th Mattix Unit Federal

8/5/92

B Flow Schematic

LAL

No Scale

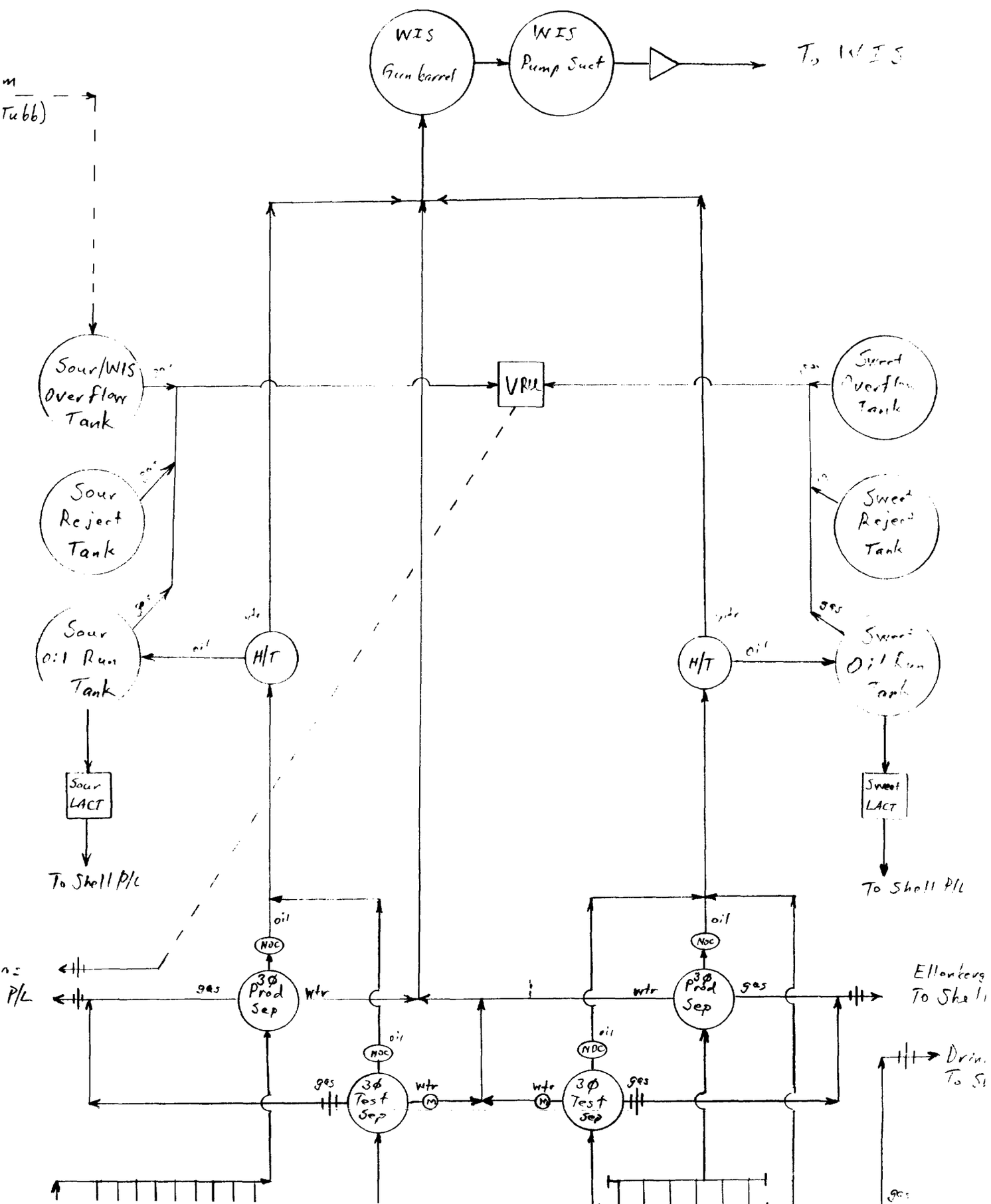
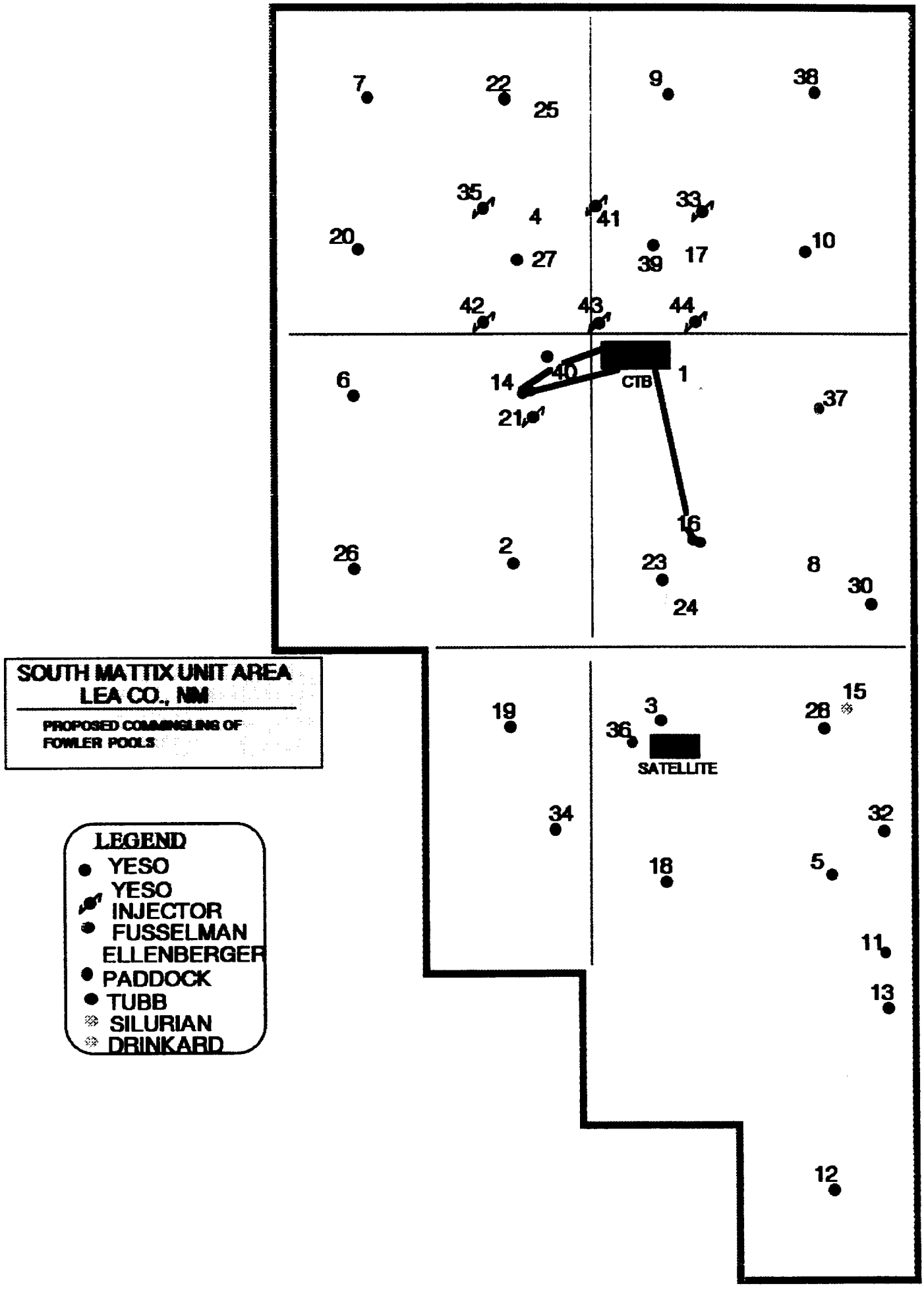
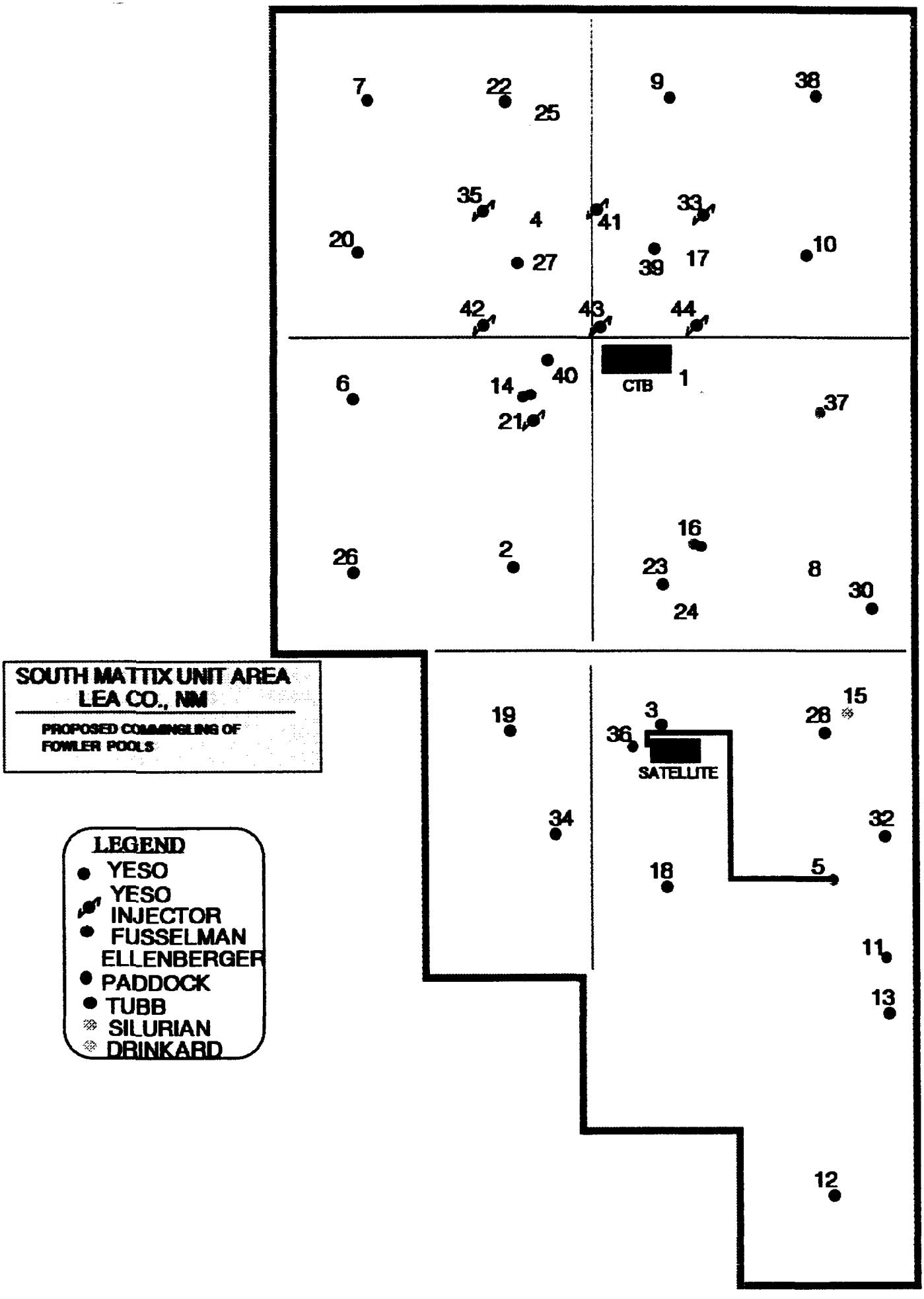


Exhibit A

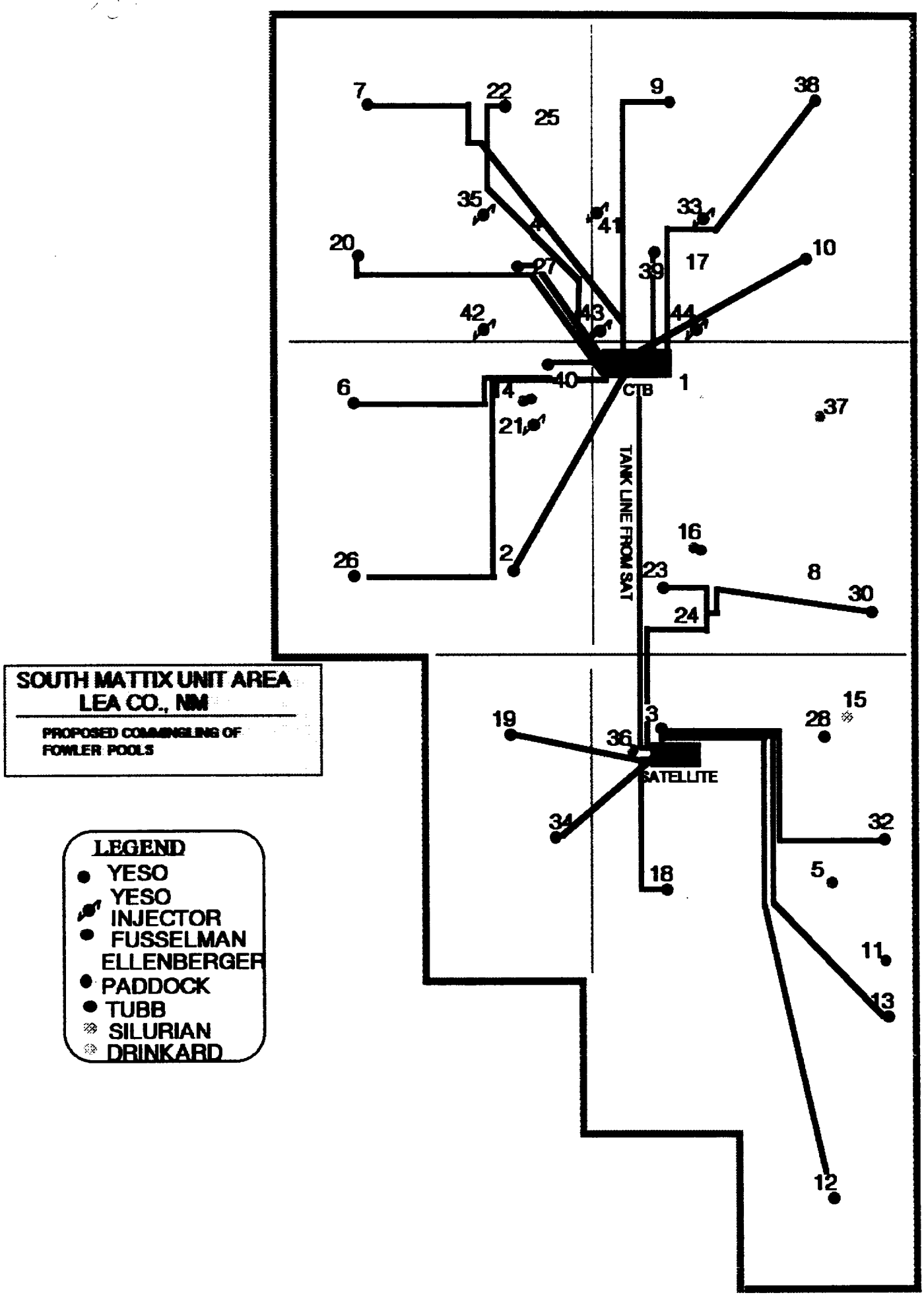
PADDOCK/TUBB COMMINGLED LINES:



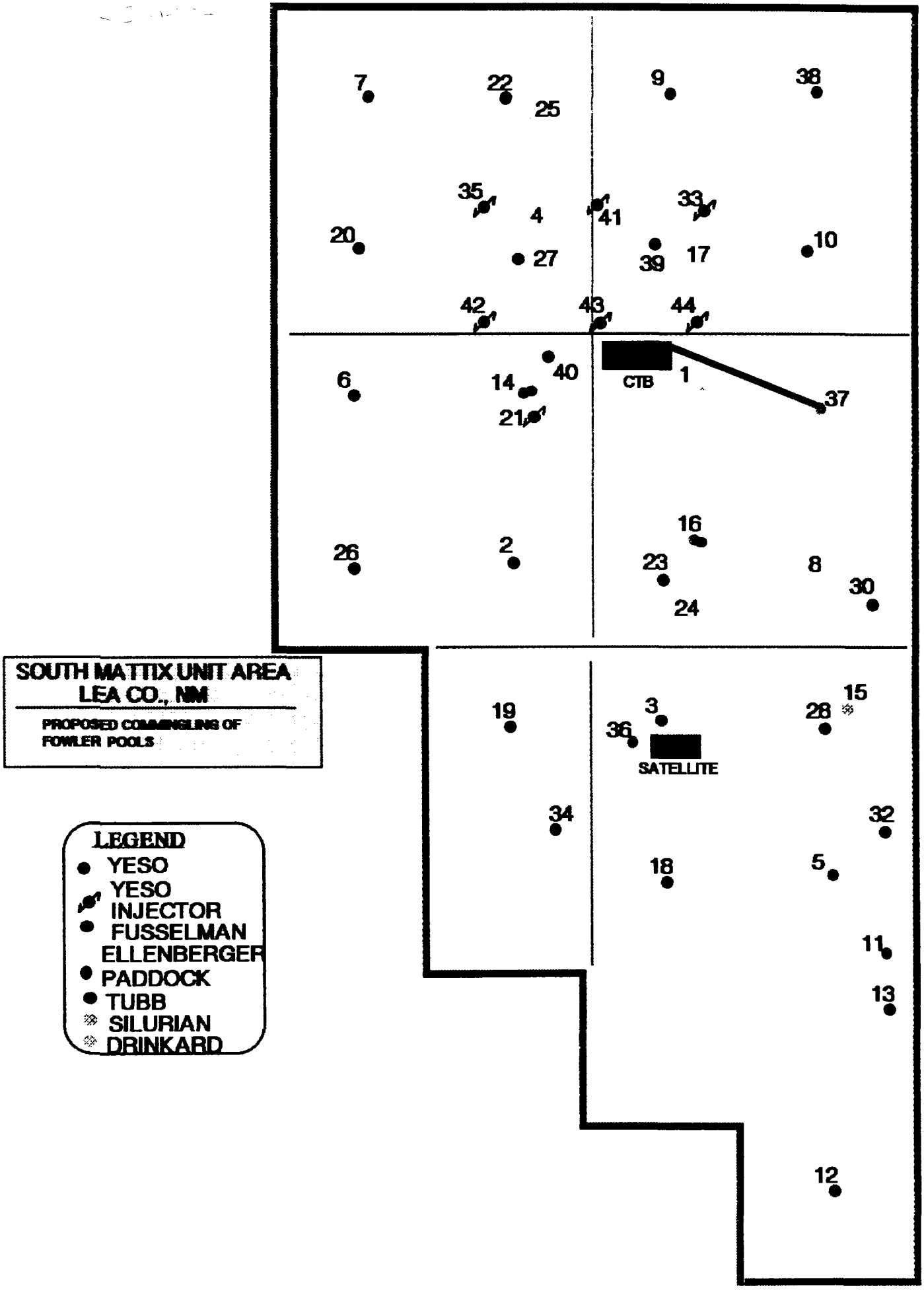
FUSSELMAN FLOWLINE:



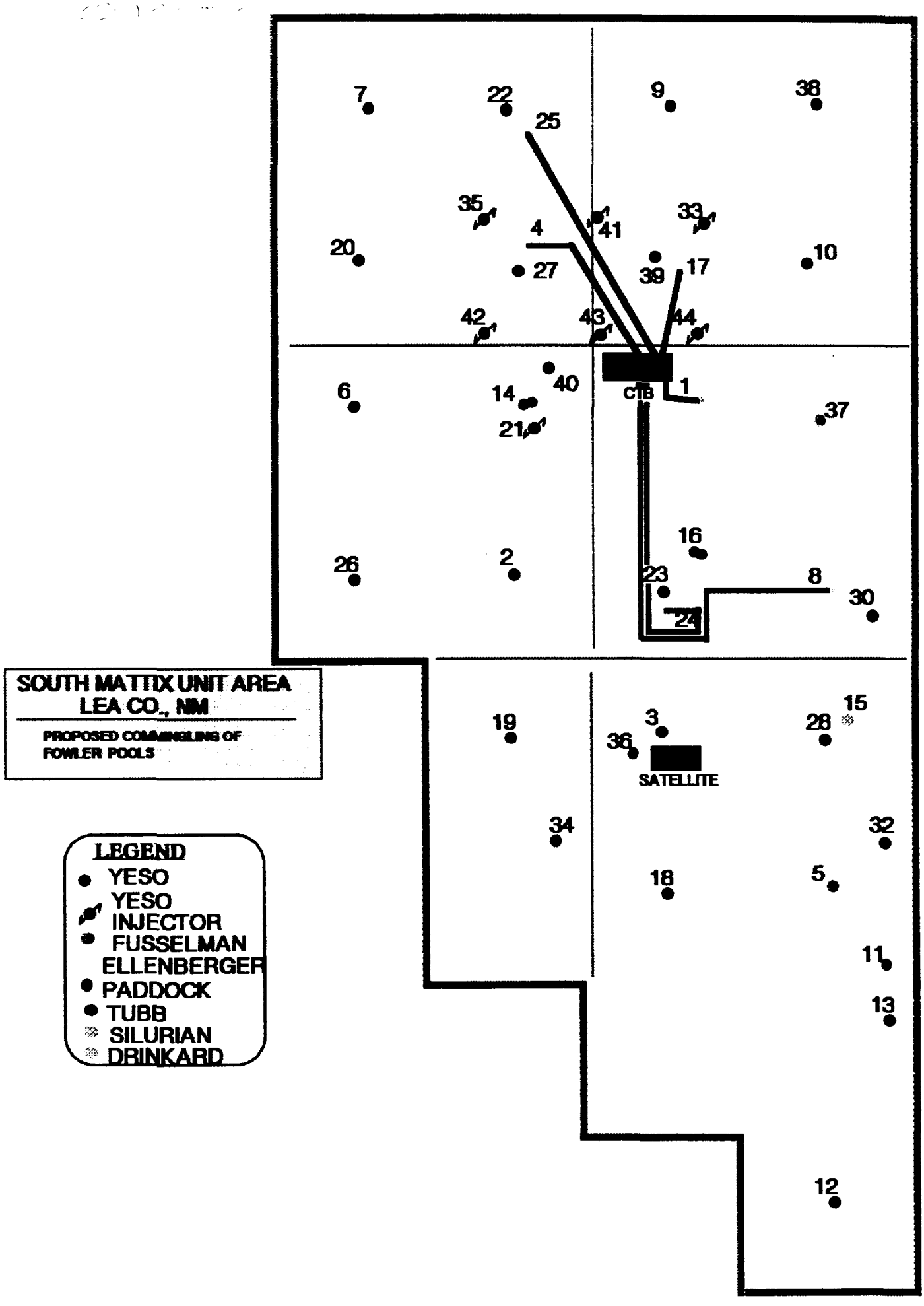
YESO FLOWLINES:



DRINKARD FLOWLINE:



ELLENBERGER FLOWLINES:



INJECTION LINES:

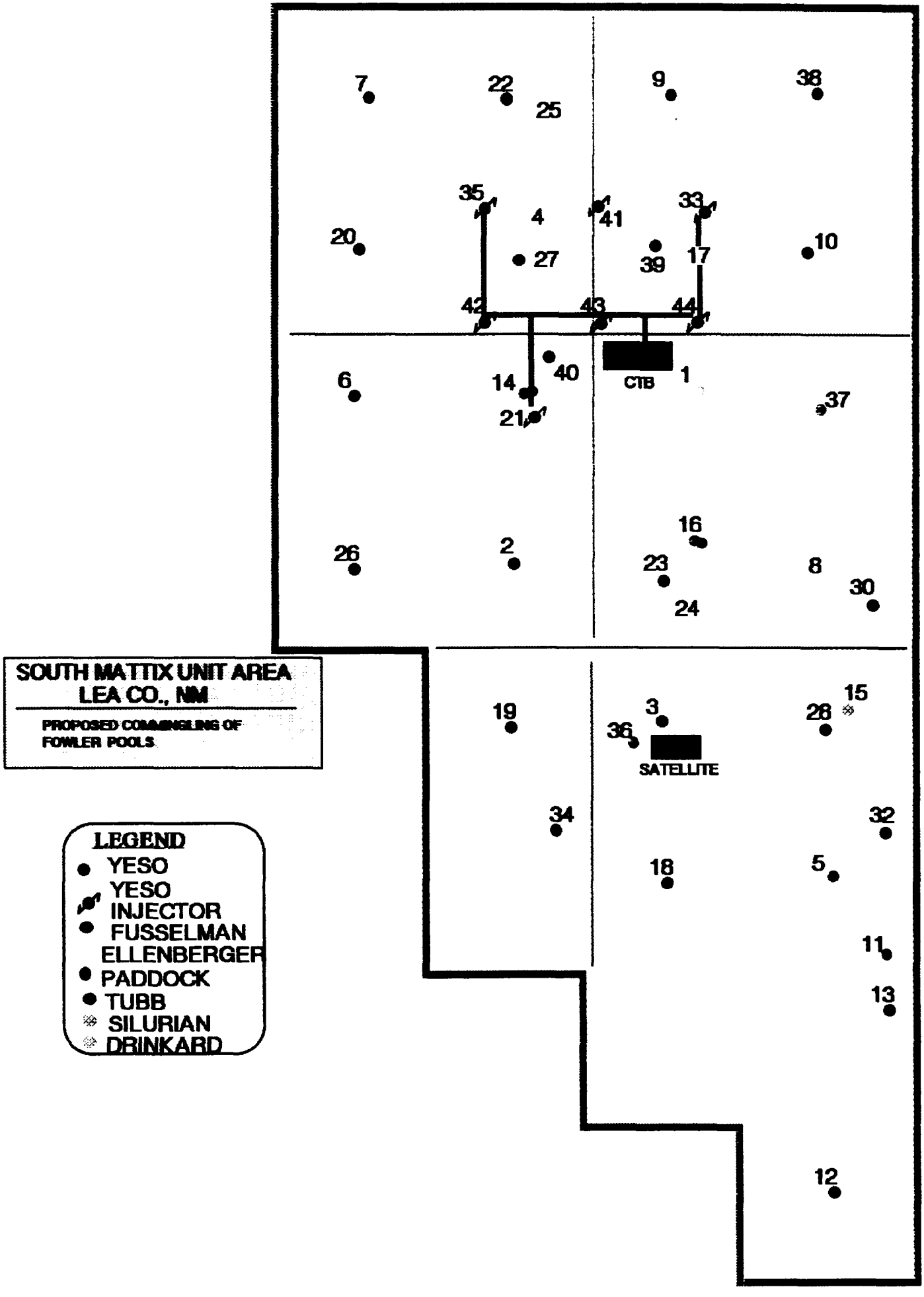


Exhibit B

Amoco Production Company

ENGINEERING CHART

SHEET NO. 1 OF 3

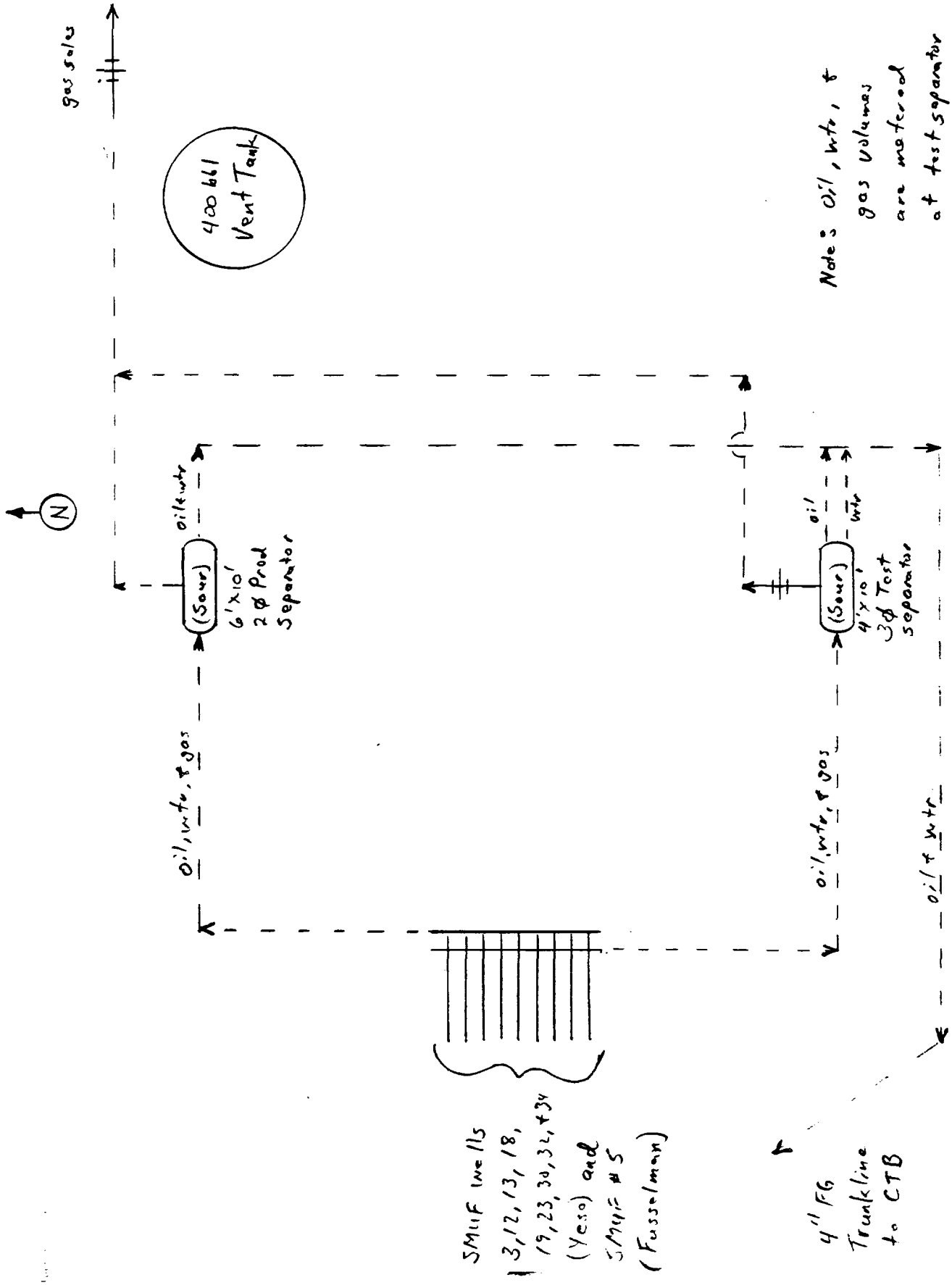
SUBJECT South Matrix Unit Federal

Satellite Battery Plot Plant Flow Schematic

DATE 9/29/92

BY CAL

Not to Scale

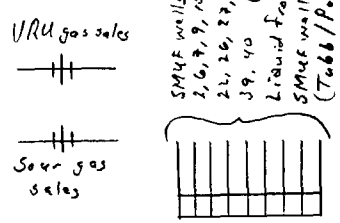


4/29/92

LAL

Not to Scale

South Mathix Unit Federal
Centralized Battery Plot Plan

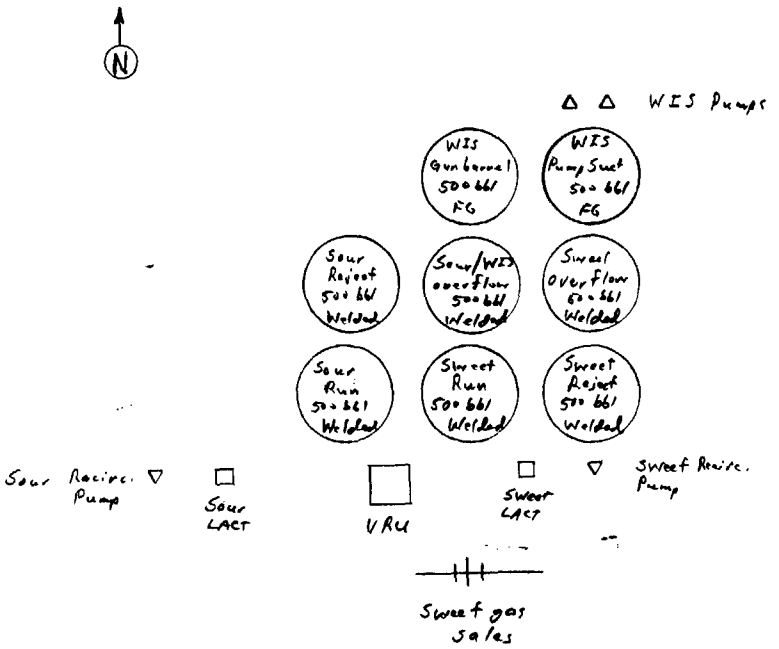


(Sour) 6'x10' 3φ Test Sep

(Sour) 6'x10' 3φ Prod Sep

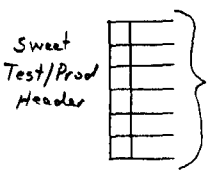
(Sour) 6'x20' Vertical Emulsion Treater

(Sweet) 4'x20' Vertical Emulsion Treater



(Sweet) 6'x10' 3φ Test Sep

(Sweet) 10'x20' 3φ Prod Sep



Pop Tank 500 bbl Bolted

South Mathix Unit Federal

CTB Flow Schematic

4/30/92

LAL

No Scale

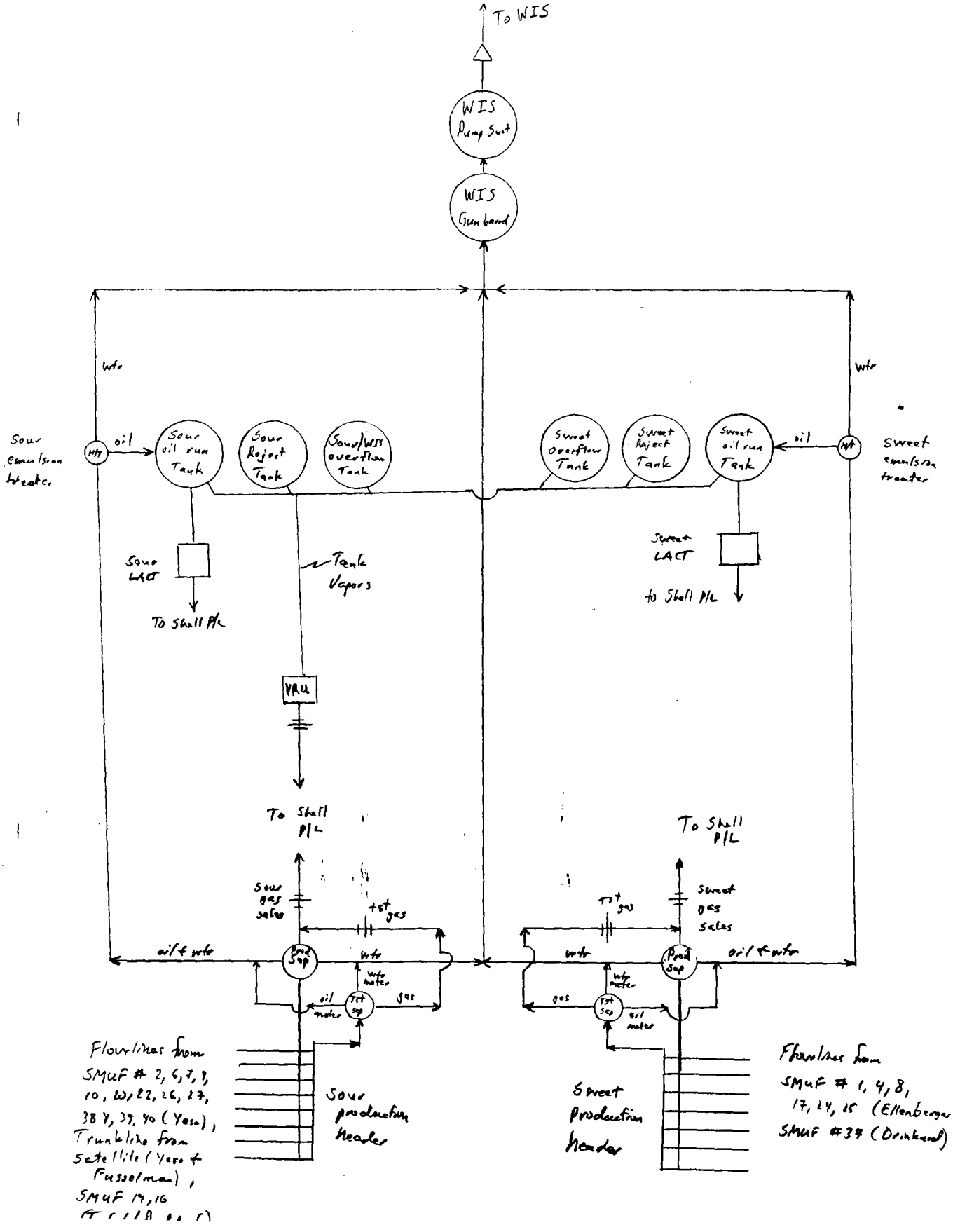


Exhibit C

WELLS	LOCATION	OxGxW	Sweet/Sour	Horizon	P/I	CTB/Sat
[redacted]	[redacted] 15-24-37	14x154x21	SWEET FOWLER	[redacted]	P	CTB
[redacted]	[redacted], 15-24-37	5x122x0	SOUR FOWLER Upper	[redacted]	P	CTB
SMUF #3	660FNLx1980FEL, 22-24-37	4x107x1	SOUR	Yeso	P	SAT
SMUF #4	1980FNLx1980FWL, 15-24-37	Shut in	SWEET	Ellenberger	P	CTB
[redacted]	[redacted], 22-24-37	200x123x0	SOUR FOWLER	[redacted]	P	SAT**
SMUF #6	1980FSLx660FWL, 15-24-37	5x60x100	SOUR	Yeso	P	CTB
SMUF #7	660FNLx660FWL, 15-24-37	8x93x22	SOUR	Yeso	P	CTB
SMUF #8	660FSLx660FEL, 15-24-37	21x11x128	SWEET	Ellenberger	P	CTB
SMUF #9	660FNLx1980FEL, 15-24-37	3x45x1	SOUR	Yeso	P	CTB
SMUF #10	1980FNLx810FEL, 15-24-37	6x111x1	SOUR	Yeso	P	CTB
[redacted]	2310FNLx330FE[redacted]	0x220x20(SI)	GAS	[redacted]	P	OWN TANK
SMUF #12	766FSLx554FEL, 22-34-37	4x74x4	SOUR	Yeso	P	SAT
SMUF #13	2310FSLx330FEL, 22-24-37	4x220x3	SOUR	Yeso	P	SAT
[redacted]	[redacted]	0x3x0	SOUR FOWLER	[redacted]	P	CTB
SMUF #15	660FNLx660FEL, 22-24-37	0x265x0	GAS-sold at wellhead	Silurian	P	OWN TANK
SMUF #16	990 FSLx1648FEL, 15-24-37	1x148x1	SOUR	Paddock/Tubb	P	CTB
SMUF #17	1980 FNLx1980FEL, 15-24-37	44x185x439	SWEET	Ellenberger	P	CTB
SMUF #18	1980FNLx1830FEL, 22-24-37	1x21x6	SOUR	Yeso	P	SAT
SMUF #19	660FNLx1980FWL, 22-24-37	3x8x116	SOUR	Yeso	P	SAT
SMUF #20	1980FNLx660FWL, 15-24-37	13x138x1	SOUR	Yeso	P	CTB
SMUF #21	1873FSLx2087FWL, 15-24-37	Injector	SOUR	Yeso	I	CTB
SMUF #22	710FNLx1930FWL, 15-24-37	2x141x3	SOUR	Yeso	P	CTB
SMUF #23	660FSLx1830FEL, 15-24-37	1x260x9	SOUR	Yeso	P	SAT
SMUF #24	510FSLx1830FEL, 15-24-37	17x110x304	SWEET	Ellenberger	P	CTB
SMUF #25	910FNLx1980FWL, 15-24-37	35x82x560	SWEET	Ellenberger	P	CTB
SMUF #26	660FSLx660FWL, 15-24-37	12x54x314	SOUR	Yeso	P	CTB
SMUF #27	2030FNLx1880FWL, 15-24-37	15x119x2	SOUR	Yeso	P	CTB
SMUF #28	680FNLx810FEL, 22-24-37	shut in	SOUR	Yeso	P	NO FLOWLINE
SMUF #30	330FSLx330FEL, 15-24-37	4x177x2	SOUR	Yeso	P	SAT
SMUF #32	1535FNLx330FEL, 22-24-37	2x306x58	SOUR	Yeso	P	SAT
SMUF #33	1650FNLx1650FEL, 15-24-37	injector	SOUR	Yeso	I	CTB
SMUF #34	1650FNLx2310FWL, 22-24-37	6x3x186	SOUR	Yeso	P	SAT
SMUF #35	1650FNLx1650FWL, 15-24-37	injector	SOUR	Yeso	I	CTB

Fowler - Tubb
Fowler - Upper Paddock Gas

SMUF #36	990FNLx2310FEL, 22-24-37	txa	SOUR	Paddock	P	NO FLOWLINE
[redacted]	[redacted]	17x120x8	SWEET FOWLER	[redacted]	P	CTB
SMUF #38	750FNLx700FEL, 15-24-37	4x28x200	SOUR	Yeso	P	CTB
SMUF #39	1890FNLx2070FEL, 15-24-37	3x112x2	SOUR	Yeso	P	CTB
SMUF #40	2373FSLx2200FWL, 15-24-37	1x64x1	SOUR	Yeso	P	CTB
SMUF #41	1650FNLx2524FEL, 15-24-37	injector	SOUR	Yeso	I	CTB
SMUF #42	2450FNLx1600FWL, 15-24-37	injector	SOUR	Yeso	I	CTB
SMUF #43	2500FNLx2524FEL, 15-24-37	injector	SOUR	Yeso	I	CTB
SMUF #44	2500FNLx1650FEL, 15-24-37	injector	SOUR	Yeso	I	CTB
		Total Production by Horizon		Total Production: Sour Streams		
				307x2537x1033		
		Ellenberger	131x542x1452			
		Yeso	106x2263x1032	Total Production: Sweet Streams		
		Fusselman	200x123x0	148x662x1460		
		Paddock/Tubb	1x151x1			
		Drinkard	17x120x8			
		% Total Sour Stream:				
		Fusselman	65%x5%x0%			
		Yeso	35%x89%x100%			
		Paddock	0%x6%x0%			
		% Total Sweet Stream:				
		Ellenberger	89%x82%x99%			
		Drinkard	11%x18%x1%			

ECONOMIC JUSTIFICATION
SOUTH MATTIX UNIT FEDERAL SURFACE COMMINGLING

We propose to commingle South Mattix Unit production into a two system battery. Currently all 7 horizons in the South Mattix Unit (Fusselman, Yeso, Tubb, Paddock, Ellenberger, Drinkard, and Silurian) are being produced separately. Our proposal is to surface commingle the sour streams and to separately surface commingle the sweet streams. This would mean commingling the sour (Fusselman, Yeso, Tubb, Paddock) zones and the sweet (Ellenberger, Drinkard) zones. In addition, the Silurian gas being produced in South Mattix #15 will continue to be produced separately.

The collection system that currently exists includes a central tank battery (CTB) and a satellite battery. In addition, South Mattix Unit #5, a newly completed Fusselman well has 2 temporary storage tanks set up for its production. If commingling is not feasible, we will be forced to build permanent facilities for the Fusselman production.

By commingling production of the South Mattix Unit, Amoco will more economically produce all horizons. The cost to build facilities for the Fusselman is estimated at $100,000. This includes costs for 3 tanks, a separator, an additional vapor recovery unit at the satellite and labor/installation charges. By commingling, we will be able to use the flow line from South Mattix #5 to the exisitng satellite tanks and avoid this installation. We are concerned with the length of the payout of this project depending on the continued production of one well. In addition, by commingling surface production, we will be able to remove 4 tanks from the existing system and use them elsewhere. We will also be able to consolidate the facilities at the CTB and the satellite.

Environmentally, this commingling will have benefits as well. When we remove 4 tanks from the CTB and avoid adding 3 more tanks for Fusselman production, we will be cutting potential VOC emissions by approximately 40%. We will also have fewer risks of overflowing, leaking or flamable tanks.

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Gunbarrel Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	1.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	1.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas – EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	365.25 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y – Vapor Space Vol.	(CAP2)	503.86 Bbls
Calculated Number of Turnovers	(N)	0.72 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP – TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 313.89
Breathing Loss (Tons/Yr) -----> 0.16

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 74.22
Working Loss (Tons/Yr) ------> 0.04

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 388.12
Total Loss (Tons/Yr) --------> 0.19

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 388.12
Total Loss (Tons/Yr) --------> 0.19

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 2.946

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.008

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Injection Pump Suction Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	8.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	1.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	365.25 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	268.72 Bbls
Calculated Number of Turnovers	(N)	1.36 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 906.48
Breathing Loss (Tons/Yr) -----> 0.45

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 74.22
Working Loss (Tons/Yr) ------> 0.04

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 980.70
Total Loss (Tons/Yr) --------> 0.49

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 980.70
Total Loss (Tons/Yr) --------> 0.49

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 7.443

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.020

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Tubb Stock Tanks

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	2	
Molecular Weight of Tank Vapor *	(MW)	50.00	Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80	Psia
Tank Capacity	(CAP)	500.00	Bbl.
Tank Diameter *	(D)	15.50	Feet
Tank Height *	(TH)	16.00	Feet
Vapor Space Height	(VSH)	8.00	Feet
Delta Day-Night Temp. Difference	(DT)	30.00	Deg F.
Paint Factor *	(Pf)	1.33	
Small Tank Adjustment Factor *	(C)	0.77	
Crude Oil Adjustment Factor BL *	(Kc1)	0.65	
Crude Oil Adjustment Factor WL *	(Kc2)	0.84	
Daily Throughput	(DTP)	1.00	Bbl/Day
Turnover Factor *	(KN)	1.00	
Elevation of Site	(E)	3000.00	Feet
Tank Operation	(OP)	365.25	Days/Yr
Control Efficiency	(Eff)	0.00	%

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55	Psia
Calc. Tank Throughput	(CTT)	365.25	Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45	Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	268.72	Bbls
Calculated Number of Turnovers	(N)	1.36	Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1812.95
Breathing Loss (Tons/Yr) ----> 0.91

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 148.45
Working Loss (Tons/Yr) ------> 0.07

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1961.40
Total Loss (Tons/Yr) --------> 0.98

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1961.40
Total Loss (Tons/Yr) --------> 0.98

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 14.887

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.041

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Drinkard Stock Tanks

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	2	
Molecular Weight of Tank Vapor *	(MW)	50.00	Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80	Psia
Tank Capacity	(CAP)	500.00	Bbl.
Tank Diameter *	(D)	15.50	Feet
Tank Height *	(TH)	16.00	Feet
Vapor Space Height	(VSH)	8.00	Feet
Delta Day-Night Temp. Difference	(DT)	30.00	Deg F.
Paint Factor *	(Pf)	1.33	
Small Tank Adjustment Factor *	(C)	0.77	
Crude Oil Adjustment Factor BL *	(Kc1)	0.65	
Crude Oil Adjustment Factor WL *	(Kc2)	0.84	
Daily Throughput	(DTP)	8.00	Bbl/Day
Turnover Factor *	(KN)	1.00	
Elevation of Site	(E)	3000.00	Feet
Tank Operation	(OP)	365.25	Days/Yr
Control Efficiency	(Eff)	0.00	%

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55	Psia
Calc. Tank Throughput	(CTT)	2,922.00	Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45	Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	268.72	Bbls
Calculated Number of Turnovers	(N)	10.87	Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1812.95
Breathing Loss (Tons/Yr) ----> 0.91

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 1,187.58
Working Loss (Tons/Yr) ------> 0.59

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 3000.53
Total Loss (Tons/Yr) --------> 1.50

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 3000.53
Total Loss (Tons/Yr) --------> 1.50

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 22.773

Daily Volume Lost (MCFD) ---------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ---------------> 0.062

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Yeso Run Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1	
Molecular Weight of Tank Vapor *	(MW)	50.00	Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80	Psia
Tank Capacity	(CAP)	500.00	Bbl.
Tank Diameter *	(D)	15.50	Feet
Tank Height *	(TH)	16.00	Feet
Vapor Space Height	(VSH)	8.00	Feet
Delta Day-Night Temp. Difference	(DT)	30.00	Deg F.
Paint Factor *	(Pf)	1.33	
Small Tank Adjustment Factor *	(C)	0.77	
Crude Oil Adjustment Factor BL *	(Kc1)	0.65	
Crude Oil Adjustment Factor WL *	(Kc2)	0.84	
Daily Throughput	(DTP)	100.00	Bbl/Day
Turnover Factor *	(KN)	0.40	
Elevation of Site	(E)	3000.00	Feet
Tank Operation	(OP)	365.25	Days/Yr
Control Efficiency	(Eff)	0.00	%

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55	Psia
Calc. Tank Throughput	(CTT)	36,525.00	Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45	Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	268.72	Bbls
Calculated Number of Turnovers	(N)	135.92	Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 906.48
Breathing Loss (Tons/Yr) -----> 0.45

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 2,968.94
Working Loss (Tons/Yr) ------> 1.48

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 3875.42
Total Loss (Tons/Yr) --------> 1.94

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 3875.42
Total Loss (Tons/Yr) --------> 1.94

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 29.414

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.081

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Yeso Reject Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:

(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) ----> 0.62

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 0.00
Working Loss (Tons/Yr) -----> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR) ----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ----------> 9.480

Daily Volume Lost (MCFD) ----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ----------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Yeso Overflow Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1	
Molecular Weight of Tank Vapor *	(MW)	50.00	Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80	Psia
Tank Capacity	(CAP)	500.00	Bbl.
Tank Diameter *	(D)	15.50	Feet
Tank Height *	(TH)	16.00	Feet
Vapor Space Height	(VSH)	15.00	Feet
Delta Day-Night Temp. Difference	(DT)	30.00	Deg F.
Paint Factor *	(Pf)	1.33	
Small Tank Adjustment Factor *	(C)	0.77	
Crude Oil Adjustment Factor BL *	(Kc1)	0.65	
Crude Oil Adjustment Factor WL *	(Kc2)	0.84	
Daily Throughput	(DTP)	0.00	Bbl/Day
Turnover Factor *	(KN)	1.00	
Elevation of Site	(E)	3000.00	Feet
Tank Operation	(OP)	365.25	Days/Yr
Control Efficiency	(Eff)	0.00	%

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55	Psia
Calc. Tank Throughput	(CTT)	0.00	Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45	Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59	Bbls
Calculated Number of Turnovers	(N)	0.00	Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) -----> 0.62

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 9.480

Daily Volume Lost (MCFD) ---------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ---------------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Ellenberger Run Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	8.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	125.00 Bbl/Day
Turnover Factor *	(KN)	0.35
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:

(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	45,656.25 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	268.72 Bbls
Calculated Number of Turnovers	(N)	169.90 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 906.48
Breathing Loss (Tons/Yr) -----> 0.45

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 3,247.28
Working Loss (Tons/Yr) ------> 1.62

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 4153.75
Total Loss (Tons/Yr) --------> 2.08

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 4153.75
Total Loss (Tons/Yr) --------> 2.08

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 31.526

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.086

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Ellenberger Reject Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1	
Molecular Weight of Tank Vapor *	(MW)	50.00	Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80	Psia
Tank Capacity	(CAP)	500.00	Bbl.
Tank Diameter *	(D)	15.50	Feet
Tank Height *	(TH)	16.00	Feet
Vapor Space Height	(VSH)	15.00	Feet
Delta Day-Night Temp. Difference	(DT)	30.00	Deg F.
Paint Factor *	(Pf)	1.33	
Small Tank Adjustment Factor *	(C)	0.77	
Crude Oil Adjustment Factor BL *	(Kc1)	0.65	
Crude Oil Adjustment Factor WL *	(Kc2)	0.84	
Daily Throughput	(DTP)	0.00	Bbl/Day
Turnover Factor *	(KN)	1.00	
Elevation of Site	(E)	3000.00	Feet
Tank Operation	(OP)	365.25	Days/Yr
Control Efficiency	(Eff)	0.00	%

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55	Psia
Calc. Tank Throughput	(CTT)	0.00	Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45	Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59	Bbls
Calculated Number of Turnovers	(N)	0.00	Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) ----> 0.62

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 9.480

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Ellenberger Overflow Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) -----> 0.62

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR)----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR)----------> 9.480

Daily Volume Lost (MCFD)-----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD)-----------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Fusselman Run Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	2
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	8.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	100.00 Bbl/Day
Turnover Factor *	(KN)	0.40
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	36,525.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	268.72 Bbls
Calculated Number of Turnovers	(N)	135.92 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1812.95
Breathing Loss (Tons/Yr) ----> 0.91

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 5,937.88
Working Loss (Tons/Yr) -----> 2.97

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 7750.83
Total Loss (Tons/Yr) --------> 3.88

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 7750.83
Total Loss (Tons/Yr) --------> 3.88

Annual Volume Lost (MCF/YR) ----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ----------> 58.827

Daily Volume Lost (MCFD) ----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ----------> 0.161

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Fusselman Overflow Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) ----> 0.62

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 0.00
Working Loss (Tons/Yr) -----> 0.00

With Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 1249.07
Total Loss (Tons/Yr) -------> 0.62

No Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 1249.07
Total Loss (Tons/Yr) -------> 0.62

Annual Volume Lost (MCF/YR)----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR)----------> 9.480

Daily Volume Lost (MCFD)----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD)----------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: CTB Vent Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb–Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day–Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:

(From fixed roof tank emission formulas – EPA Publication, AP–42, Pages 4.3–3 throught 4.3–12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y – Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP – TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) -----> 0.62

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR)------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb–Mole)/MW/1000
Annual Volume Lost (MCF/YR)------------> 9.480

Daily Volume Lost (MCFD)---------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD)---------------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Satellite Vent Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	400.00 Bbl.
Tank Diameter *	(D)	12.00 Feet
Tank Height *	(TH)	20.00 Feet
Vapor Space Height	(VSH)	19.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas – EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	402.67 Bbls
Calc. Max. Tank Cap'y – Vapor Space Vol.	(CAP2)	20.13 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) -----> NT X 0.0226 X MW X (TVP / (CP – TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) -----> 905.01
Breathing Loss (Tons/Yr) -----> 0.45

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 0.00
Working Loss (Tons/Yr) -----> 0.00

With Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 905.01
Total Loss (Tons/Yr) -------> 0.45

No Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 905.01
Total Loss (Tons/Yr) -------> 0.45

Annual Volume Lost (MCF/YR) ----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ----------> 6.869

Daily Volume Lost (MCFD) -----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) -----------> 0.019

Picklist For Tanks

Organic Liquid:	MW	True Vapor Pressure in Psia at: 40F	50F	60F	70F	80F	90F	100F
Gasoline RVP 13	62	4.7	5.7	6.9	8.3	9.9	11.7	13.8
Gasoline RVP 10	66	3.4	4.2	5.2	6.2	7.4	8.8	10.5
Gasoline RVP 7	68	2.3	2.9	3.5	4.3	5.2	6.2	7.4
Crude Oil RVP 5	**50**	**1.8**	**2.3**	**2.8**	**3.4**	**4.0**	**4.8**	**5.7**
Jet Naphtha (JP-4)	80	1.8	1.0	1.3	1.6	1.9	2.4	2.7

Tank Dimension Picklist:

Cap. (Bbl)	Dia (Ft)	Ht(Ft)	Vapor Space VSH
500	15.5	16.0	6.0
750	15.5	24.0	14.0
1000	21.6	16.0	6.0
1500	21.6	24.0	14.0
5000	38.7	24.0	14.0

Paint Factor Picklist:

Tank Color		Paint Condition	
Roof	Shell	Good	Poor
White	White	1.00	1.15
Al-spec.	White	1.04	1.18
White	Al-spec.	1.16	1.24
Al-spec.	Al-spec.	1.20	1.29
White	Al-diff.	1.30	1.38
Al-diff.	Al-diff.	1.39	1.46
White	Gray	1.30	1.38
L. Gray	L. Gray	1.33	1.44
M. Gray	M. Gray	1.40	1.58

Small Tank Adjustment Factor Picklist:

Tank Dia Feet	C
15.5	0.77
21.6	0.92
>30	1.00

Crude Oil Adjustment Factor for Breathing Loss:

Product	Kc1
Crude Oil	0.65
Other	1.00

Crude Oil Adjustment Factor for Working Loss:

Product	Kc2
Crude Oil	0.84
Other	1.00

Turnover Factor, Kn

Turnovers Per Yr.	Kn
<36	1.00
100	0.45
200	0.30
300	0.25
400	0.23

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Gunbarrel Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	1.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	1.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	365.25 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	503.86 Bbls
Calculated Number of Turnovers	(N)	0.72 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 313.89
Breathing Loss (Tons/Yr) -----> 0.16

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 74.22
Working Loss (Tons/Yr) ------> 0.04

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 388.12
Total Loss (Tons/Yr) --------> 0.19

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 388.12
Total Loss (Tons/Yr) --------> 0.19

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 2.946

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.008

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Injection Pump Suction Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	8.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	1.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas – EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	365.25 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y – Vapor Space Vol.	(CAP2)	268.72 Bbls
Calculated Number of Turnovers	(N)	1.36 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP – TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 906.48
Breathing Loss (Tons/Yr) ----> 0.45

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 74.22
Working Loss (Tons/Yr) ------> 0.04

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 980.70
Total Loss (Tons/Yr) --------> 0.49

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 980.70
Total Loss (Tons/Yr) --------> 0.49

Annual Volume Lost (MCF/YR)----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR)----------> 7.443

Daily Volume Lost (MCFD)-------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD)-------------> 0.020

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Sour Oil Run Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1	
Molecular Weight of Tank Vapor *	(MW)	50.00	Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80	Psia
Tank Capacity	(CAP)	500.00	Bbl.
Tank Diameter *	(D)	15.50	Feet
Tank Height *	(TH)	16.00	Feet
Vapor Space Height	(VSH)	8.00	Feet
Delta Day-Night Temp. Difference	(DT)	30.00	Deg F.
Paint Factor *	(Pf)	1.33	
Small Tank Adjustment Factor *	(C)	0.77	
Crude Oil Adjustment Factor BL *	(Kc1)	0.65	
Crude Oil Adjustment Factor WL *	(Kc2)	0.84	
Daily Throughput	(DTP)	300.00	Bbl/Day
Turnover Factor *	(KN)	0.23	
Elevation of Site	(E)	3000.00	Feet
Tank Operation	(OP)	365.25	Days/Yr
Control Efficiency	(Eff)	0.00	%

Calculated Data:

(From fixed roof tank emission formulas – EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	109,575.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y – Vapor Space Vol.	(CAP2)	268.72 Bbls
Calculated Number of Turnovers	(N)	407.76 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP – TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 906.48
Breathing Loss (Tons/Yr) ----> 0.45

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 5,121.42
Working Loss (Tons/Yr) -----> 2.56

With Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 6027.90
Total Loss (Tons/Yr) -------> 3.01

No Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 6027.90
Total Loss (Tons/Yr) -------> 3.01

Annual Volume Lost (MCF/YR) ----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ----------> 45.751

Daily Volume Lost (MCFD) ----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ----------> 0.125

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Sour Oil Reject Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:

(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) -----> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) -----> 1249.07
Breathing Loss (Tons/Yr) -----> 0.62

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR)----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR)----------> 9.480

Daily Volume Lost (MCFD)-----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD)-----------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Sour System Overflow Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) ----> 0.62

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 0.00
Working Loss (Tons/Yr) -----> 0.00

With Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 1249.07
Total Loss (Tons/Yr) -------> 0.62

No Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 1249.07
Total Loss (Tons/Yr) -------> 0.62

Annual Volume Lost (MCF/YR) ----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ----------> 9.480

Daily Volume Lost (MCFD) ----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ----------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Sweet Oil Run Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	8.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	140.00 Bbl/Day
Turnover Factor *	(KN)	0.32
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	51,135.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	268.72 Bbls
Calculated Number of Turnovers	(N)	190.29 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 906.48
Breathing Loss (Tons/Yr) ----> 0.45

Working Loss (Lbs/Yr) ------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ------> 3,325.21
Working Loss (Tons/Yr) -----> 1.66

With Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 4231.69
Total Loss (Tons/Yr) -------> 2.12

No Controls:
Total Loss (Lbs/Yr) --------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) --------> 4231.69
Total Loss (Tons/Yr) -------> 2.12

Annual Volume Lost (MCF/YR) ----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ----------> 32.118

Daily Volume Lost (MCFD) ----------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ----------> 0.088

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Sweet Oil Reject Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb–Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day–Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas – EPA Publication, AP–42, Pages 4.3–3 throught 4.3–12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y – Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP – TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) ----> 0.62

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb–Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 9.480

Daily Volume Lost (MCFD) --------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) --------------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Sweet System Overflow Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1	
Molecular Weight of Tank Vapor *	(MW)	50.00	Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80	Psia
Tank Capacity	(CAP)	500.00	Bbl.
Tank Diameter *	(D)	15.50	Feet
Tank Height *	(TH)	16.00	Feet
Vapor Space Height	(VSH)	15.00	Feet
Delta Day-Night Temp. Difference	(DT)	30.00	Deg F.
Paint Factor *	(Pf)	1.33	
Small Tank Adjustment Factor *	(C)	0.77	
Crude Oil Adjustment Factor BL *	(Kc1)	0.65	
Crude Oil Adjustment Factor WL *	(Kc2)	0.84	
Daily Throughput	(DTP)	0.00	Bbl/Day
Turnover Factor *	(KN)	1.00	
Elevation of Site	(E)	3000.00	Feet
Tank Operation	(OP)	365.25	Days/Yr
Control Efficiency	(Eff)	0.00	%

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55	Psia
Calc. Tank Throughput	(CTT)	0.00	Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45	Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59	Bbls
Calculated Number of Turnovers	(N)	0.00	Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 1249.07
Breathing Loss (Tons/Yr) ----> 0.62

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 1249.07
Total Loss (Tons/Yr) --------> 0.62

Annual Volume Lost (MCF/YR) ------------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ------------> 9.480

Daily Volume Lost (MCFD) ---------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ---------------> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: CTB Vent Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	500.00 Bbl.
Tank Diameter *	(D)	15.50 Feet
Tank Height *	(TH)	16.00 Feet
Vapor Space Height	(VSH)	15.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	537.45 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	33.59 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ~~~~~> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ~~~~~> 1249.07
Breathing Loss (Tons/Yr) ~~~~> 0.62

Working Loss (Lbs/Yr) ~~~~~~> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) ~~~~~~> 0.00
Working Loss (Tons/Yr) ~~~~~> 0.00

With Controls:
Total Loss (Lbs/Yr) ~~~~~~~~> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ~~~~~~~~> 1249.07
Total Loss (Tons/Yr) ~~~~~~~> 0.62

No Controls:
Total Loss (Lbs/Yr) ~~~~~~~~> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ~~~~~~~~> 1249.07
Total Loss (Tons/Yr) ~~~~~~~> 0.62

Annual Volume Lost (MCF/YR) ~~~~~~~~~~~~> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR) ~~~~~~~~~~~~> 9.480

Daily Volume Lost (MCFD) ~~~~~~~~~~~~~~> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD) ~~~~~~~~~~~~~~> 0.026

Date: 04/28/92

Tank Location: South Mattix Unit Federal, Lea County, NM
Tank Service: Satellite Vent Tank

TANK BREATHING AND WORKING LOSSES:

Input Data:

Number of Tanks in this Service	(NT)	1
Molecular Weight of Tank Vapor *	(MW)	50.00 Lb/Lb-Mole
True Vapor Pressure *	(TVP)	4.80 Psia
Tank Capacity	(CAP)	400.00 Bbl.
Tank Diameter *	(D)	12.00 Feet
Tank Height *	(TH)	20.00 Feet
Vapor Space Height	(VSH)	19.00 Feet
Delta Day-Night Temp. Difference	(DT)	30.00 Deg F.
Paint Factor *	(Pf)	1.33
Small Tank Adjustment Factor *	(C)	0.77
Crude Oil Adjustment Factor BL *	(Kc1)	0.65
Crude Oil Adjustment Factor WL *	(Kc2)	0.84
Daily Throughput	(DTP)	0.00 Bbl/Day
Turnover Factor *	(KN)	1.00
Elevation of Site	(E)	3000.00 Feet
Tank Operation	(OP)	365.25 Days/Yr
Control Efficiency	(Eff)	0.00 %

Calculated Data:
(From fixed roof tank emission formulas - EPA Publication, AP-42, Pages 4.3-3 throught 4.3-12)

Calc. Atmospheric Pressure for Tank Elev.	(CP)	13.55 Psia
Calc. Tank Throughput	(CTT)	0.00 Bbl/Yr
Calc. Max. Tank Capacity	(CAP1)	402.67 Bbls
Calc. Max. Tank Cap'y - Vapor Space Vol.	(CAP2)	20.13 Bbls
Calculated Number of Turnovers	(N)	0.00 Per Year

Breathing Loss (Lbs/Yr) ------> NT X 0.0226 X MW X (TVP / (CP - TVP)) ^ 0.68 X D ^ 1.73 X H ^ .51 X DT ^ 0.5 X Pf X C X Kc1
Breathing Loss (Lbs/Yr) ------> 905.01
Breathing Loss (Tons/Yr) -----> 0.45

Working Loss (Lbs/Yr) -------> NT X 0.000024 X MW X TVP X CAP2 X 42 gal/bbl X N X KN X KC2
Working Loss (Lbs/Yr) -------> 0.00
Working Loss (Tons/Yr) ------> 0.00

With Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 905.01
Total Loss (Tons/Yr) --------> 0.45

No Controls:
Total Loss (Lbs/Yr) ---------> Breathing Loss + Working Loss
Total Loss (Lbs/Yr) ---------> 905.01
Total Loss (Tons/Yr) --------> 0.45

Annual Volume Lost (MCF/YR)----------> Total Loss (Lbs/Yr) X 379.49 (Lb/Lb-Mole)/MW/1000
Annual Volume Lost (MCF/YR)----------> 6.869

Daily Volume Lost (MCFD)-------------> Annual Volume Lost (MCF/YR)/365.25
Daily Volume Lost (MCFD)-------------> 0.019

Picklist For Tanks

Organic Liquid:	MW	True Vapor Pressure in Psia at: 40F	50F	60F	70F	80F	90F	100F
Gasoline RVP 13	62	4.7	5.7	6.9	8.3	9.9	11.7	13.8
Gasoline RVP 10	66	3.4	4.2	5.2	6.2	7.4	8.8	10.5
Gasoline RVP 7	68	2.3	2.9	3.5	4.3	5.2	6.2	7.4
Crude Oil RVP 5	**50**	**1.8**	**2.3**	**2.8**	**3.4**	**4.0**	**4.8**	**5.7**
Jet Naphtha (JP-4)	80	1.8	1.0	1.3	1.6	1.9	2.4	2.7

Tank Dimension Picklist:

Cap. (Bbl)	Dia (Ft)	Ht(Ft)	Vapor Space VSH
500	15.5	16.0	6.0
750	15.5	24.0	14.0
1000	21.6	16.0	6.0
1500	21.6	24.0	14.0
5000	38.7	24.0	14.0

Paint Factor Picklist:

Tank Color		Paint Condition	
Roof	Shell	Good	Poor
White	White	1.00	1.15
Al-spec.	White	1.04	1.18
White	Al-spec.	1.16	1.24
Al-spec.	Al-spec.	1.20	1.29
White	Al-diff.	1.30	1.38
Al-diff.	Al-diff.	1.39	1.46
White	Gray	1.30	1.38
L. Gray	L. Gray	1.33	1.44
M. Gray	M. Gray	1.40	1.58

Small Tank Adjustment Factor Picklist:

Tank Dia Feet	C
15.5	0.77
21.6	0.92
>30	1.00

Crude Oil Adjustment Factor for Breathing Loss:

Product	Kc1
Crude Oil	0.65
Other	1.00

Crude Oil Adjustment Factor for Working Loss:

Product	Kc2
Crude Oil	0.84
Other	1.00

Turnover Factor, Kn

Turnovers Per Yr.	Kn
<36	1.00
100	0.45
200	0.30
300	0.25
400	0.23

Amoco Production Company
501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

May 5, 1992

Bureau of Land Management
P.O. Box 1778
Carlsbad, New Mexico 88220

File: KWB-LF

Gentlemen:

Application for Surface Commingling
South Mattix Unit Federal Lease
Fowler Fusselman, Upper Yeso, Paddock, Tubb,
Ellenburger and Drinkard Pools (NM-0321613 and LC-032450 a & b)
Lea County, New Mexico

Attached is Amoco Production Company's application to surface commingle several of the pools on our South Mattix Unit Federal Lease. We plan on combining the hydrocarbons from the Fowler Upper Yeso, Fusselman, Padock, and Tubb which command a sour crude price. The crude will be metered through a LACT unit. Also the hydrocarbons form the Fowler Ellenburger and Drinkard which command an intermediate crude price will be combined and also metered through a LACT unit.

To substantiate our request, we have attached the following documentation for your review:

1) Map showing the lease and location of all wells that will contribute production to the commingling. (Exhibit A)

2) A schematic diagram which identifies all equipment that will be utilized. (Exhibit B)

3) Estimated amounts and types of production. (Exhibit C)

4) Details of the proposed method for allocating production to contributing sources. Production will be allocated based on current well tests. Each well is tested one or two times each month.

5) All interest owners have been notified by certified mail. (List Attached)

6) Federal royalties will not be reduced through approval of this application. The pools that command a sour crude price will be combined and pools that bring an intermediate crude price combined.

7) Economic justification. A benefit of commingling would be the recovery of additional hydrocarbons from the Tubb. Currently the Tubb makes enough production to justify one truck run every 20 days. There is a loss of hydrocarbons due to the condensate staying in the tank for a period of time. Sending production directly through the LACT will help eliminate the problem. (Exhibit D)

8) Data on tanks prior to commingling. (Exhibit E)

9) Data on tanks after commingling. (Exhibit F)

Your favorable consideration on this matter would be appreciated. Please contact Howard Black at 713-584-7213 if you have any questions or require additional information.

Yours very truly,

K.W. Brand
HB

K.W. Brand
Administrative Services Manager

Attachments

cc: State of New Mexico Oil Conservation Division
P.O. Box 1980
Hobbs, NM 88240

Allen Lain - 18.110
Terry Caldwell - 18.194
B.W. Abbott - Hobbs OC

CRUDE PURCHASER

Shell Pipeline Corporation
Box 2648
Houston, TX 77252

GAS PURCHASER

Sid Richardson
Box 1311
Jal, NM 88252

WORKING INTEREST

Chevron U.S.A., Inc.
P.O. Box 70255
Chicago, Il 60673

Atlantic Richfield Company
P.O. Box 910355
Dallas, TX 75391-0355

Marjorie D. Bloch
911 Humphrey Street
Jennings, LA 70546-4625

John Quinn
305 Los Arboles
Santa Fe, NM 87501-1242

Catholic Church
Extension Society
35 E. Wacker Dr.
Chicago, IL 60601-2102

Loraine D. Simpson
312 45th Street
Gulfport, MS 39507-4307

Charles A. Daws
P.O. Box 3424
Virginia Beach, VA 23454-9480

Braille Institute of America, Inc.
P.O. Box 842029
Dallas, TX 75284-2029

Hughes Family Trust
543 N. Kenter Avenue
Los Angeles, CA 90049-1934

Mack Easley
10909 Country Club Drive
Albuquerque, NM 87111-6548

Clifford B. Hughes
10898 Fourth Avenue
Hesperia, CA 92345-2344

Frederick D. Harbour
P.O. Box 51
Dekalb, MS 39328-0051

Warren B. Hughes
543 North Kenter Avenue
Los Angeles, CA 90049-1934

Howard Bradley Jack
1311 NW 107th Terr.
Gainsville, FL 32606-5446

Loma Linda University
Foundation Accounting Office
Loma Linda, CA 92350

Mississippi Baptist Foundation
P.O. Box 530
Jackson, MS 39205-0530

Margaret McKenzie Trust
18500 Von Karman Ave #600
Irvine, CA 92715-0520

Edwin Abel Meserve
307 La Rambla
San Clements, CA 92672-5425

John Robert Meserve
18500 Von Karman Ave #600
Irvine, CA 92715-0520

Hewlins Mumper Trust
P.O. Box 4382 Terminal Annex
Los Angeles, CA 90051-2382

Cortland Myers
217 Marigold Avenue
Corona Del Mar, CA 92625-3048

Baldwin Robertson
6815 Selkirk Dr.
Bethesda, MD 20817-4921

Caroline Robertson Fitts
17242 Avenida De La Herradura
Pacific Palisades,CA 90272-2003

Mineral Management Service
P.O. Box 5810 TA
Denver, CO 80217-5810

Joseph L. Daws
645 Rochelle Drive
Nashville, TN 37220-1954

OFFICIAL FILE COPY

ADam 6/10/92
TPO 6-11-92

3162 (067)
NM-0321613 &
LC-032450 A & B

JUN 1 1 1992

Amoco Production Company
Attn.: K. W. Brand
501 Westlake Park Blvd.
P. O. Box 3092
Houston, TX 77253

RE: NM-0321613, LC-032450 A & LC-032450 B
Surface Commingling of Oil Production

Gentlemen:

Your request to surface commingle hydrocarbons from the Fowler Upper Yeso, Fusselman, Paddock, and Tubb formations and to surface commingle hydrocarbons from the Fowler Ellenburger and Drinkard formations from Federal leases NM-0321613, LC-032450 A, and LC-032450 B, in the South Mattix Unit is hereby approved.

It is our understanding that Proper allocation back to all contributing sources will be based on monthly well tests.

We understand that the working interest owners have been notified and the Federal royalty interests are identical. Further, your request is made in the interest of conservation and will not result in reduced royalty or improper measurement of production.

Please contact Adam M. Salameh (505) 887-6544 or at the letterhead address if further information is required.

Sincerely,

Orig Signed by Richard L. Manus

Richard L. Manus
Area Manager

B. LOPEZ - NM065
CC: K. HASTON - NM067A
A. SALAMEH - NM067
D. CATANACH. OCC
067:ASalameh:nm:06/09/92:A:\COMNGLE