



ARCO Permian
PO Box 1089
Eunice NM 88231
Telephone 505 394 1600

Southeast New Mexico Asset Area

111731610 PLC

5/16/01

April 24, 2001

APR 26 2001

New Mexico Oil Conservation Division
Attn: Mark Ashley
2040 S. Pacheco Street
Santa Fe, NM 87505

Re: Application to Surface Commingle
Crooked Canyon 35 Federal, Leggett Federal, Sweet Thing Federal Unit, B&C 25
Federal, Sweet Thing 36 State, Little Box State, Nasser Federal, Hilltop Federal
Indian Loafer Draw Upper Penn & Little Box Canyon Morrow Pools
Sections, 01, 06, 22, 25, 31, 35, 36, T-20, 20.5S, R21E, 22E, 22W
Eddy County, NM

Mr. Ashley:

ARCO Permian requests approval to surface commingle, by gathering gas from the above mentioned leases, transport to one lease, compress the gas in one compressor, and sell through one central sales point. The gas from each well will be metered separately prior to the movement off lease and the individual well volumes will be allocated back based on metered production. A schematic of the commingling plan is attached to support the gas movement.

All wells in this application are flowing gas wells. All fluid produced on the individual leases will be kept on the respective leases.

Production from these leases is produced from the Indian Loafer Draw Upper Penn and the Little Box Canyon Morrow Pools. Attached for your consideration are working interest ownership and royalty interest ownership documentation for each lease. All working and royalty interest owners have been notified of the commingling plans.

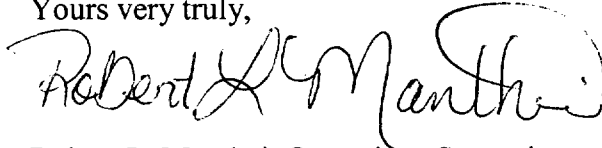
The economic justification for gathering the gas to one central compressor is based on the estimation that a 100 to 200% increase in the gas rate will exist by lowering the wellhead pressure from current 25 to 30 PSIA to 15 PSIA. Previous compression testing has proved up the expected increases. Also, by tying into and upgrading existing compression in the area, surplus capacity will be utilized and the cost of the compressor purchase will be spread out. By bringing all of the leases together to one central compressor will increase revenue to royalty and working interest owners and will increase ultimate recovery from the lease by lowering the reservoir pressure below current sales line limits.

Application for Surface Commingle
Page 2
April 24, 2001

A list of the last 30 days gas rate and a gas analysis for each well is attached.

Your cooperation regarding this request will be greatly appreciated. Should you have any questions, please do not hesitate to contact me at (505) 394-1602. Please send your approval to proceed to my attention at the address listed below.

Yours very truly,

A handwritten signature in black ink, appearing to read "Robert L. Manthel". The signature is fluid and cursive, with a large loop at the end of the last name.

Robert L. Manthel, Operations Supervisor
ARCO Permian
P.O. Box 1089, Eunice, NM 88231
manthrl@bp.com
Office (505) 394-1602
Fax (505) 394-1624

APPLICATION FOR SURFACE COMMINGLING

PAGE 3

April 24, 2001

EL PASO FIELD SERVICES MAIN GAS METER #68367
Located at SENE, Sec. 1, T21S, and R21E on Lease No. NM27451, Eddy County,
New Mexico

LEASE	MCFPD	METER #
Crooked Canyon 35 Federal #1 ✓	8	646456 ✓
Leggett Federal #1 ✓	.4	646191 ✓
Sweet Thing Federal Ut. #1 ✓	70	646209 ✓
Sweet Thing Federal Ut. #2 ✓	0	646266 ✓
B&C 25 Federal #1 ✓	334	646548 ✓
Sweet Thing 36 State #1 ✓	4	646290 ✓
Little Box State #2 Flash Gas ✓	3	646159 ---
Little Box State #3 Flash Gas ✓	0	646159 ---
Little Box State #3 ✓	2428	646167 ✓
Little Box State #4 ✓	1223	646175 ✓
Sweet Thing 36 State #2 ✓	304	646589 ---
Nasser Federal #1 ✓	0	646217 ---
Nasser Federal #1 ✓	501	646241 ---
Hilltop Federal #1 ✓	9	646365 ✓

ATLANTIC RICHFIELD COMPANY

Post Office Box 4587
Houston, Texas 77210-4587
(281) 366-3692

December 14, 2000

To: Working Interest Owners
Address List Attached

Re: See Properties Listed Below
Eddy County, New Mexico

Gentlemen:

This is notification that the surface commingling permit for the Little Box Canyon area is being amended to include the wells listed below. The wells are metered individually and then produced through one compressor for sales.

<u>Lease</u>	<u>Meter #</u>
<u>30-015-30559</u> Crooked Canyon 35 Fed # 1	646456
<u>25228</u> Leggett Federal # 1	646191
<u>28130</u> Sweet Thing Federal Unit # 1	646209
<u>30338</u> Sweet Thing Federal Unit # 2 Flash Gas	646266
<u>30842</u> B & C 25 Federal # 1	646548
<u>30004</u> Sweet Thing 36 State # 1 Flash Gas	646290
<u>30224/30434</u> Little Box State # 2 & 3 Flash Gas	646159
<u>30486</u> Little Box State # 4	646175
<u>30850</u> Sweet Thing 36 State # 2	646589
<u>27865</u> Nasser Federal # 1 (Upper Penn)	646217
Nasser Federal # 1 (Morrow)	646241
<u>25229</u> Hilltop Federal # 1	646365

Very truly yours,


Gary Smallwood
O/A Engineer

GS/kl
Enclosure

Nadel and Gussman Permian, L.L.C.
601 N. Marienfeld – Suite 508
Midland, Texas 79701

Sutherland Family, L.L.C.
287 Supple Street
Pembroke, Ontario
Canada K8A 3H3

Sid Cowan
1010 South Main Street
P.O. Box 1448
Del Rio, Texas 78841-1448

Westwood Lake Village, Inc.
4800 Lakewood – Suite 2A
Waco, Texas 76710

Dennis Corkran
2219 Westlake Drive – Suite 120
Austin, Texas 78746

D & D Partnership
830 East Big Briar Way
LaCanada, California 91011

Scott E. Muehlbrad
2511 Terrace
Midland, Texas 79705

Geronimo Holding Corporation
P.O. Box 804
Midland, Texas 79702-0804

Cannon Exploration Company
3608 SCR 1184
Midland, Texas 79706

George W. Knox
P.O. Box 7538
Midland, Texas 79708

Jerry A. Weant d/b/a BEVOIL
P.O. Box 7201
Midland, Texas 79708

Doug Tull
P.O. Box 11107
Midland, Texas 79702

Jack Britain
2519 Wooddale Circle
Waco, Texas 76710

David J. Andrews
2219 Westlake Drive, Suite 150
Austin, Texas 78746

Pogar Petroleum, Ltd.
P.O. Box 10095
Midland, Texas 79702

Reber-Garrett Associations
4629 State Road
Drexel Hill, Pennsylvania 19026

Doralex Energy, Inc.
3619 South Jackson
San Angelo, Texas 76904-5598

Bob Stevens d/b/a SOCO
P.O. Box 11106
Midland, Texas 79702

Wesley K. Noe
3323 Maxwell Drive
Midland, Texas 79707

C.C. Tull, Jr.
P.O. Box 11107
Midland, Texas 79702

Abo Petroleum Corporation
Attn: Ms. Janet Richardson
105 South 4th Street
Artesia, New Mexico 88210

Dingus Investments, Inc.
P.O. Box 11120
Midland, Texas 79702

Dr. Gus Alexander
3619 South Jackson
San Angelo, Texas 76904-5598

Mary Beth Barton
P.O. Box 4126
Midland, Texas 79704-4126

Great Western Drilling Company
Attn: Mr. Mike Heathington
P.O. Box 1659
Midland, Texas 79702-1659

J. A. McClatchy
P.O. Box 4126
Midland, Texas 79704-4126

Shirley Smith
105 Engram Lane
Anderson, South Carolina 29621

Yates Drilling Company
Attn: Ms. Janet Richardson
105 South 4th Street
Artesia, New Mexico 88210

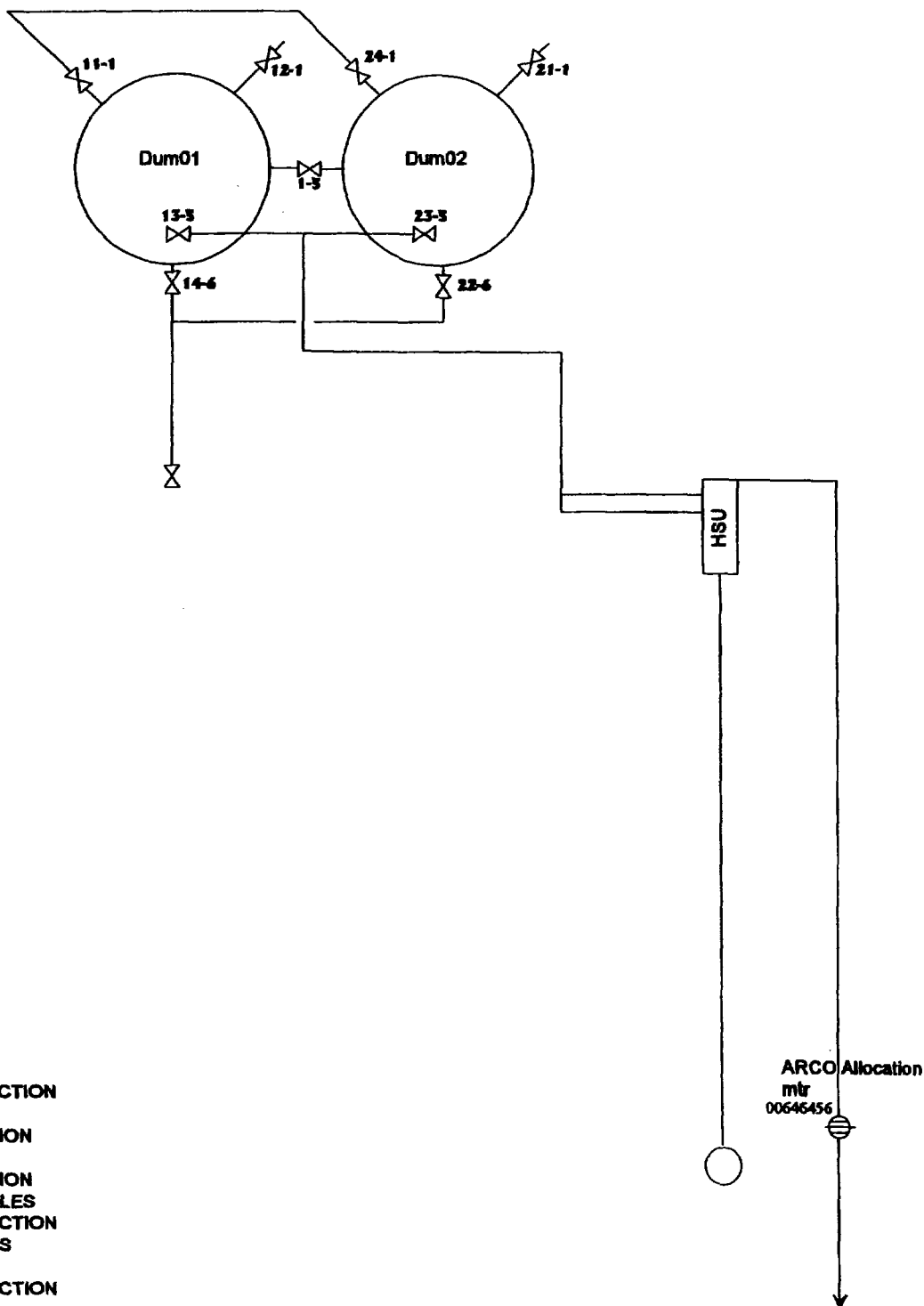
Myco Industries, Inc.
P.O. Box 840
Artesia, New Mexico 88210

The De Compiegne Property #20 Ltd.
P.O. Box 1071
Midland, Texas 79702

Yates Petroleum Corporation
Attn: Ms. Janet Richardson
105 South 4th Street
Artesia, New Mexico 88210



Crooked Canyon Federal #1



DISTRICT I
P.O. Box 1988, Hobbs, NM 88241-1988

DISTRICT II
P.O. Drawer 88, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. Box 2088, Santa Fe, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 80240	Pool Name Little Box Canyon Morrow
Property Code	Property Name CROOKED CANYON FEDERAL	Well Number 1
OGRID No. 021602	Operator Name STEVENS & TULL	Elevation 4425'

Surface Location

UL or Lot No. 1	Section 35	Township 20 S	Range 21 E	Lot Idn	Feet from the 1650	North/South line SOUTH	Feet from the 660	East/West line EAST	County EDDY
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Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Dedicated Acres 320	Joint or Infill I	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Michael G. Mooney Printed Name Consulting Engineer Title 11/21/98 Date
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. OCTOBER 26, 1998 Date Surveyed Signature of Seal Professional Surveyor Certified by MR. RONALD J. EDSON 3239 PROFESSIONAL SURVEYOR 12841

#646456

MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Gas Analysis

Company....	Arco Permian	Sample Press..	95.0
Producer...		Sample Temp...	0.0
Lease.....	CROOKED CANYON 35#1	Date Sampled..	07/27/1999
Station #..	EUNICE PRODUCTION	Sampled by....	LARRY RACKLEY
Cylinder #.		Field Gravity.	0.0000
Date Run...	07/28/1999	Analyzed by...	DANIEL
Lab Ref #..	99-JUL-G7541	Field H2S.....	0.0000
Remarks....	SAMPLE BY GUARDIAN		

Physical Constants per GPA 2145-93
Calculations per GPA 2172-86
@ 14.65 psia & 60.0 Deg. F.

	MOL %	GPM (Ideal)	BTU (Ideal Dry)
Nitrogen	2.498	0.273	0.0
Methane	80.484	13.570	810.3
CO2	9.606	1.612	0.0
Ethane	4.751	1.263	83.8
H2S	0.000	0.000	0.0
Propane	1.365	0.373	34.2
Iso-Butane	0.200	0.065	6.5
N-Butane	0.318	0.100	10.4
Iso-Pentane	0.127	0.046	5.1
N-Pentane	0.108	0.039	4.3
2,2-DMB	0.000	0.000	0.0
2-Me-C5	0.000	0.000	0.0
3-Me-C5	0.000	0.000	0.0
Hexanes +	0.543	0.230	25.8
TOTALS	100.000	17.571	980.3

GROSS HEATING VALUE @ 14.65 PSIA

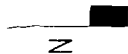
GASOLINE CONTENT (GPM/Real)

Dry	Wet
983	967 BTU/Real Cu.Ft.
0.7179	0.7165 Specific Gravity (Real)
980	964 BTU/Ideal Cu.Ft.
0.7162	0.7145 Specific Gravity (Ideal)

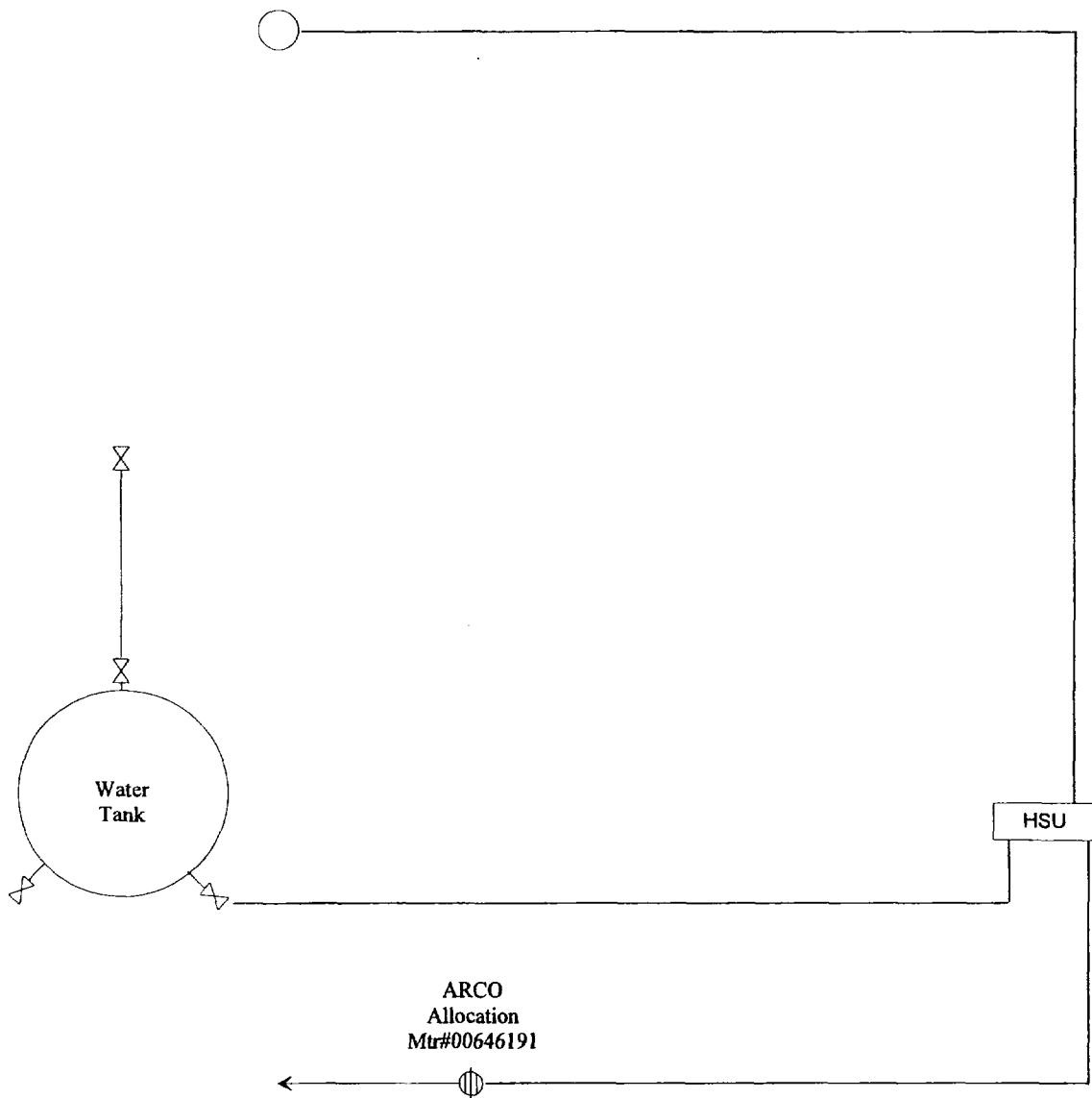
Ethane & Heavier	2.123
Propane & Heavier ...	0.856
Butane & Heavier	0.481
Pentane & Heavier ...	0.316

Z Factor : 0.9972

Arco Permian



Leggett Federal #1



THIS LEASE COMPLIES WITH
ARCO PERMIAN
SITE SECURITY PLAN
FILED AT:

ARCO PERMIAN
BOX 1089
EUNICE, N. M. 88231

DATE OF FACILITY DIAGRAM: 12/20/00

ARCO PERMIAN
LEGGETT FEDERAL #1
NM25336
1497' FSL, 551' FEL
Sec. 22-T20S-R21E
EDDY COUNTY, NEW MEXIC

B. MANTHEI

Federal Lse. No. _____ All places must be from the outer boundaries of the land.

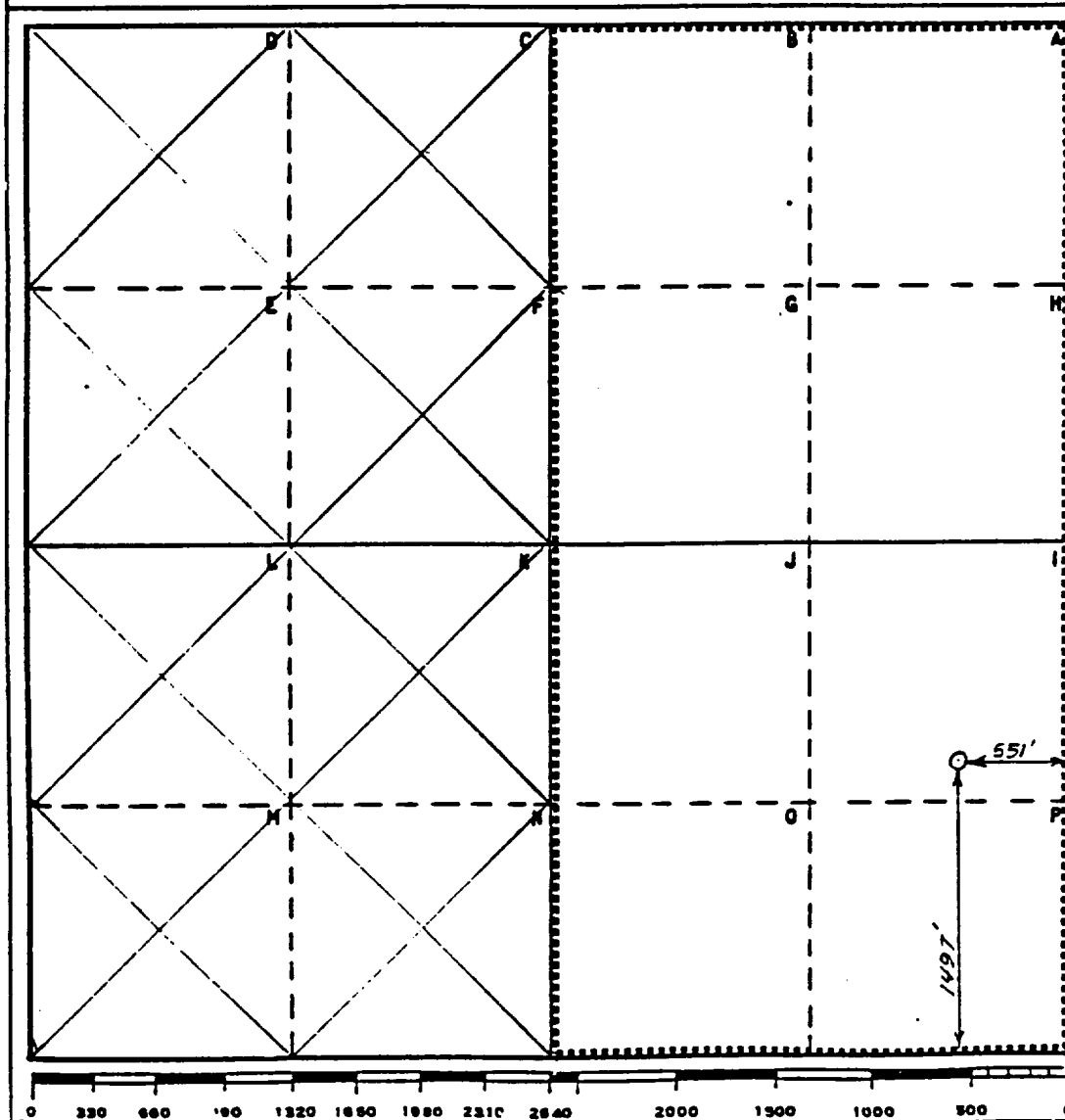
Operator Exxon Corporation		Lease LEGGETT FEDERAL		Well No. 1
Unit Letter I	Section 22	Township 20 S	Range 21 E	County EDDY
Actual Footage Location of Well: 551 feet from the EAST line and 1497 feet from the SOUTH line				
Ground Level Elev: 4480'	Producing Formation MORROW	Pool LITTLE BOX CANYON UNDESIG	Dedicated Acreage: 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name

Melba L. Kipling
Position

UNIT HEAD

Company **Exxon Corporation**
Box 1600 Midland, Texas

Date

2-25-85

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

Date Surveyed

2-11-85

Registered Professional Engineer
and/or Land Surveyor

George R. Pennell
Certificate No.

#9062

18 Miles S/SW of **HAPE**, New Mexico

C.E. Sec. File No. **W-1-8782**

#646191

Wildcat Measurement Service
PO Box 1836
Artesia, New Mexico 88211-1836
Office #505-746-3481
"Quality and Service is our First Concern"

DOS 2.0

Run No. 990104-01
Date Run 04/01/99
Date Sampled 03/31/99

Analysis for: ARCO PERMIAN
Well Name: LEGGETT FEDERAL #1
Field: LITTE BOX CANYON
Sta. Number:
Purpose:
Sampling Temp: DEG F
Volume/day:
Pressure on Cylinder: PSIG

GPANGL L60
Producer: ARCO PERMIAN
County: EDDY State: NM
Sampled By: ARCO PERMIAN
Atmos Temp: DEG F
Formation:
Line Pressure: PSIA

GAS COMPONENT ANALYSIS

		Mol %	GPM
Carbon Dioxide	CO2	0.112	
Nitrogen	N2	1.074	
Methane	C1	89.569	15.182
Ethane	C2	5.496	1.470
Propane	C3	1.951	0.538
Iso-Butane	IC4	0.360	0.118
Nor-Butane	NC4	0.533	0.168
Iso-Pentane	IC5	0.223	0.082
Nor-Pentane	NC5	0.168	0.061
Hexanes Plus	C6+	0.514	0.221
TOTAL		100.000	17.838

Pressure Base: 14.730
Real BTU Dry: 1124
Real BTU Wet: 1105
Real Calc. Specific Gravity: 0.640
Field Specific Gravity: 0.000
Standard Pressure: 14.696
BTU Dry: 1122
BTU Wet: 1102
Z Factor: 0.9974
N Value: 1.2944
Avg Mol Weight: 18.5056
Avg CuFt/Gal: 57.1585
26 Lb Product: 0.5699
Methane+ GPM: 17.838
Ethane+ GPM: 2.657
Propane+ GPM: 1.187
Butane+ GPM: 0.649
Pentane+ GPM: 0.363

REMARKS:

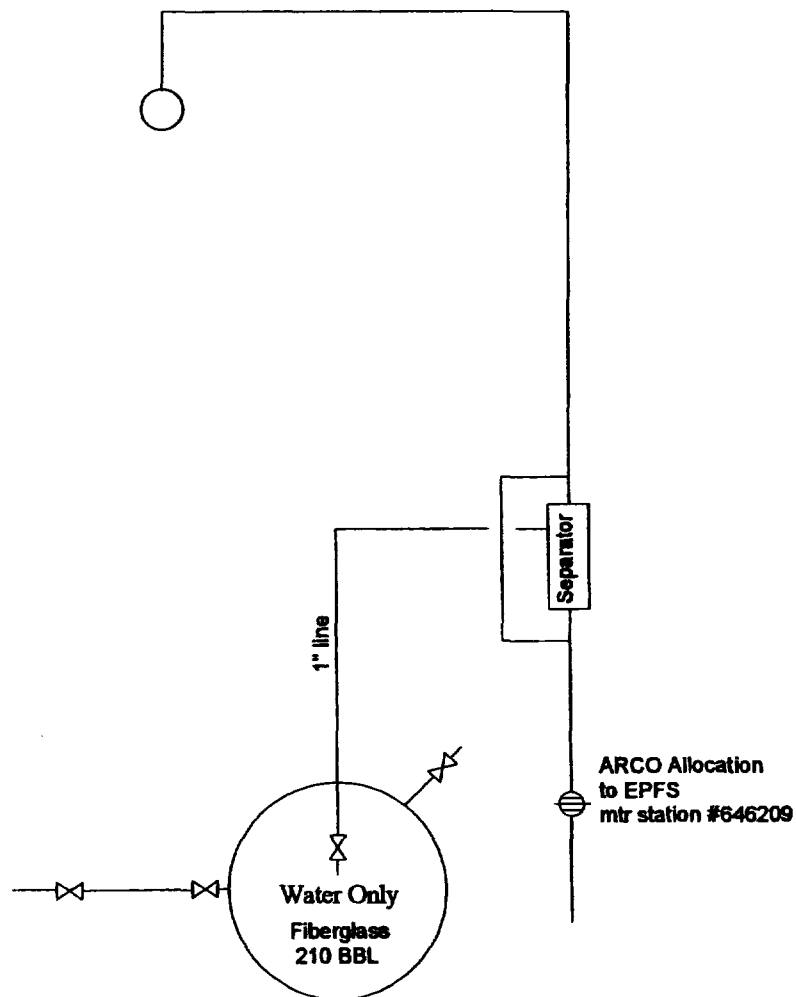
Approved by: KARL HAEVY

Thu Apr 01 09:39:11 1999

Sweet Thing Federal Unit #1



THIS LEASE COMPLIES WITH
ARCO PERMIAN
SITE SECURITY PLAN
FILED AT:
ARCO PERMIAN
BOX 1080
EUNICE, N. M. 88231
DATE OF FACILITY DIAGRAM: 8/12/99



ARCO PERMIAN
Sweet Thing Federal Unit #1
1980' FNL, 1320' FVL
Sec. 6, T-21S R-22-E
EDDY COUNTY, NEW MEXICO
8/30/99
J. KING

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name Wildcat
Property Code	Property Name SWEET THING FEDERAL UNIT	Well Number 1
GRID No.	Operator Name STEVENS & TULL, INC.	Elevation 4367.

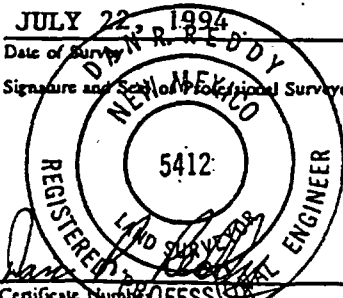
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	6	21 S	22 E		1980	NORTH	1320	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 320	¹³ Joint or Infill N	¹⁴ Consolidation Code U		¹⁵ Order No.					

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

¹⁶	20.28 Ac.					¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature Michael G. Mooney Printed Name Engineer Title 7/28/94 Date
	4		3	2	1	
	5					
	1320'					
						¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JULY 22, 1994 Date of Survey Signature and Seal of Professional Surveyor:  Certificate Number NM PE&PS NO. 5412
	20.21 Ac.					
	7					

646209

**Laboratory Services, Inc.**

4016 Fleeta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: ARCO Permian
Attention: Mr. Rolan Taylor
P. O. Box 1089
Eunice, New Mexico 88281

SAMPLE:
IDENTIFICATION: Sweet Thing Fed. #1
COMPANY: ARCO Permian
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 2/19/99 3:00 pm
ANALYSIS DATE: 2/28/99
PRESSURE - PSIG 500
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Rolan Taylor
ANALYSIS BY: Vickie Walker

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	1.123	
Carbon Dioxide (CO2)	0.833	
Methane (C1)	89.824	
Ethane (C2)	5.746	1.533
Propane (C3)	1.987	0.546
I-Butane (IC4)	0.910	0.101
N-Butane (NC4)	0.514	0.162
I-Pentane (IC5)	0.163	0.059
N-Pentane (NC5)	0.149	0.054
Hexane Plus (C6+)	0.851	0.144
	100.000	2.599

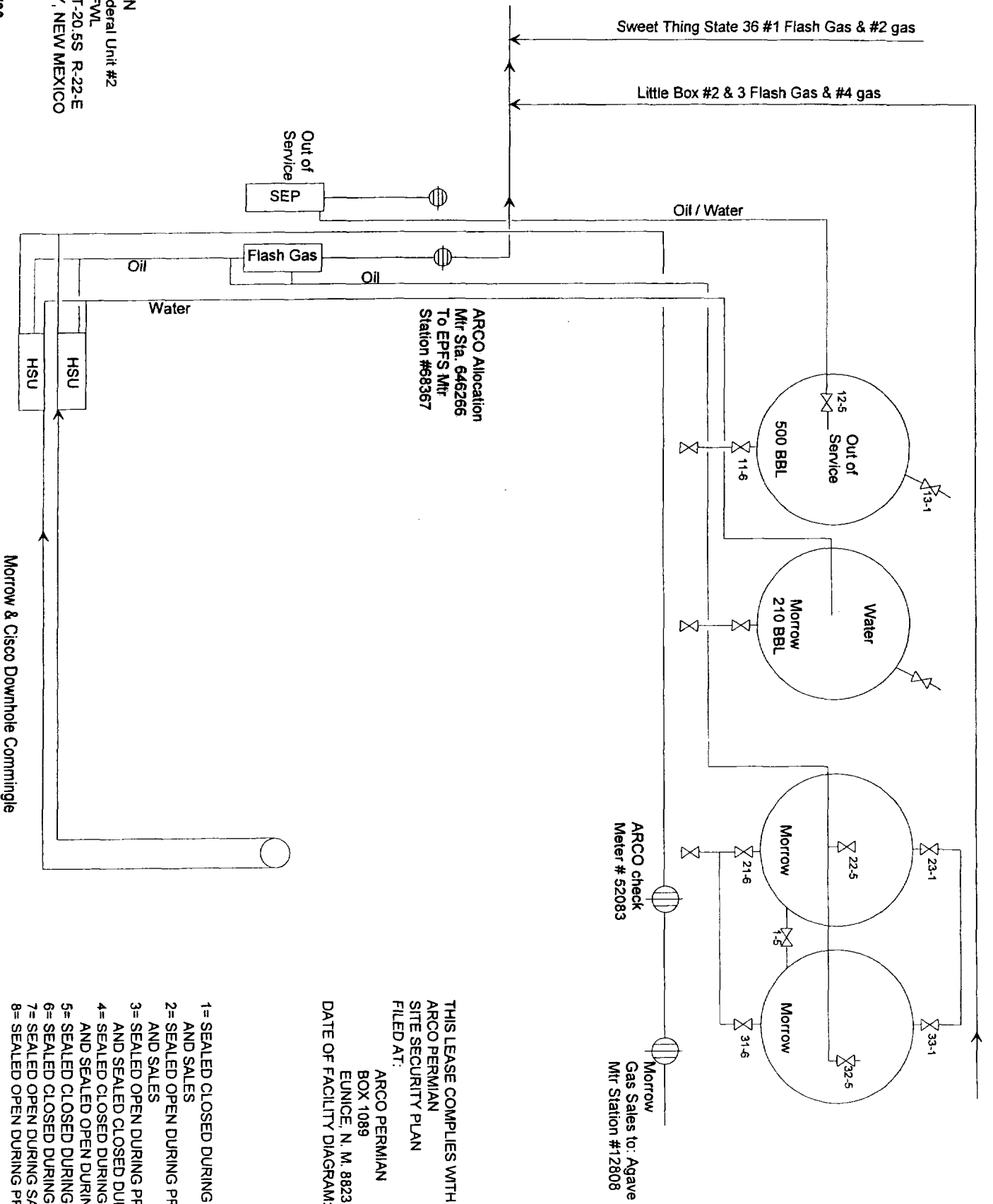
BTU/CU.FT. - DRY 1110
AT 14.650 DRY 1106
AT 14.650 WET 1087
AT 14.73 DRY 1112
AT 14.73 WET 1093

MOLECULAR WT. 18.8993

SPECIFIC GRAVITY -
CALCULATED 0.685
MEASURED

Sweet Thing Federal Unit #2

N



ARCO PERMIAN
Sweet Thing Federal Unit #2
660' FNL, 660' FWL
UL-D, Sec. 31, T-20.5S R-22-E
EDDY COUNTY, NEW MEXICO
8/30/99
C. KING
Revised: 12/20/00

- 1= SEALED CLOSED DURING PRODUCT AND SALES
- 2= SEALED OPEN DURING PRODUCTION AND SALES
- 3= SEALED OPEN DURING PRODUCTION AND SEALED CLOSED DURING SALE
- 4= SEALED CLOSED DURING PRODUCT AND SEALED OPEN DURING SALES
- 5= SEALED CLOSED DURING SALES
- 6= SEALED CLOSED DURING PRODUCT
- 7= SEALED OPEN DURING SALES
- 8= SEALED OPEN DURING PRODUCTION

THIS LEASE COMPLIES WITH
ARCO PERMIAN
SITE SECURITY PLAN
FILED AT:
ARCO PERMIAN
BOX 1089
EUNICE, N. M. 88231
DATE OF FACILITY DIAGRAM: 8/12/99

DISTRICT II

P.O. Drawer 20, Artesia, NM 88211-0710

DISTRICT III

1000 Rio Bruece Rd., Artesia, NM 87410

DISTRICT IV

P.O. Box 2088, Santa Fe, NM 87504-2088

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	80240	Little Box Canyon Morrow
Property Code	Property Name	Well Number
15750	SWEETTHING FEDERAL UNIT	2
OCED No.	Operator Name	Elevation
021602	STEVENS & TULL, Inc.	4443

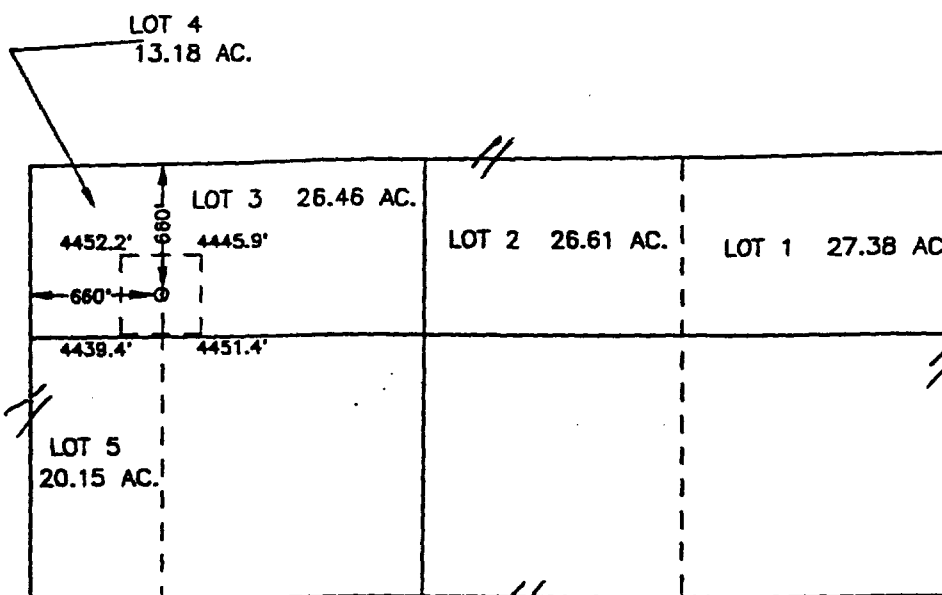
Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	31	20 1/2 S	22 E		660	NORTH	660	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	31	20 1/2 S	22 E		660	North	660	West	Eddy
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
233.79	I								

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Michael G. Mooney

Printed Name

Consulting Engineer

Title

6/8/98

Date

SURVEYOR CERTIFICATION

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

MAY

28, 1998

Date Surveyed

Signature

Professional Surveyor

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

98-0837

W.O. Num

3239

5-29-98

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W.O. Num

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JUN-28-00 WED 13:52 Precision Measurement

307 237 9327

P. 04

PRECISION MEASUREMENT, INC.

P.O. Box 3059

745 North Circle Drive

Casper, WY. 82802

6/28/00 1:41 PM

Phone: 307-237-9327

800-824-7260

Fax: 307-577-4109

E Mail: pml@trib.com

Arco meter
#00646266

GAS ANALYSIS REPORT

Analysis For: ARCO PERMIAN
Field Name: LITTLE BOX
Well Name: SWEETTHING FED #2 FLASH GAS
Station Number:
Purpose:
Sample Deg. F:
Volume/Day:
Formation:
Line PSIG:
Line PSIA:

Run No: 4798-3
Date Run: 6/28/00
Date Sampled: 6/21/00
Producer:
County: EDDY
State: NEW MEXICO
Sampled By: R.T.
Atmos Deg. F:

GAS COMPONENTS			
		MOL%	GPM
Oxygen	O2:	0.000	
Carbon Dioxide	CO2:	0.914	
Nitrogen	N2:	1.780	
Hydrogen Sulfide H2S:		0.0000	
Methane	C1:	74.232	
Ethane	C2:	13.849	3.693
Propane	C3:	5.474	1.504
Iso-Butane	IC4:	0.833	0.272
Nor-Butane	NC4:	1.354	0.426
Iso-Pentane	IC5:	0.453	0.166
Nor-Pentanes	NC5:	0.376	0.136
Hexanes	C6:	0.480	0.197
Heptanes	C7:	0.208	0.096
Octanes	C8:	0.046	0.023
Nonanes	C9:	0.000	0.000
Decanes	C10:	0.000	0.000
Totals		100.000	6.512

Pressure Base: 14.730
Real BTU Dry: 1282.092
Real BTU Wet: 1259.655

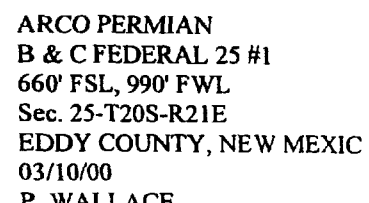
Calc. Ideal Gravity: 0.735	0.735
Calc. Real Gravity: 0.737	0.737
Field Gravity:	
Standard Pressure: 14.696	
BTU Dry: 1279.150	
BTU Wet: 1256.892	
Z Factor: 0.996	
Average Mol Weight: 21.932	
Average CuFV/Gal: 38.610	
Ethane+ GPM: 6.512	
Propane+ GPM: 2.819	
Butane+ GPM: 1.315	
Pentane+ GPM: 0.617	
Hexanes + GPM: 0.316	
Heptanes + GPM: 0.119	
Octanes + GPM: 0.023	
Nonanes + GPM: 0.000	

BTEx Components, 100 % of Total Volume:

N-Hexane: 0.1245
Benzene: 0.0124
Toluene: 0.0106
Ethylbenzene: None Detected
Xylenes: None Detected

Remarks:

Analysis By: C.G.Martin



DISTRICT I

P.O. Box 1000, Santa Fe, NM 87501-1000

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-108

Revised February 12, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT II

P.O. Box 1000, Santa Fe, NM 87501-1000

DISTRICT III

1000 W. Alameda St., Santa Fe, NM 87501

DISTRICT IV

P.O. Box 1000, Santa Fe, NM 87501-1000

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Well Code	Well Name
		WILCOAT (CISCO AND MORROW)
Property Code	Operator Name	Well Number
	B & C FEDERAL 25	1
OBOS No.	Operator Code	Elevation
000990	ARCO PERMIAN	4388

Surface Location

UL or Lat. No.	Section	Township	Range	Lat. No.	East from 1st	North/South Line	East from 2nd	East from 3rd	County
M	25	20 S	21 E		660	SOUTH	990	WEST	EDDY

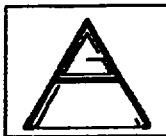
Bottom Hole Location if Different From Surface

UL or Lat. No.	Section	Township	Range	Lat. No.	East from 1st	North/South Line	East from 2nd	East from 3rd	County

Deduction across	Foot or Feet	Computation date	Order No.
320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
ON A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION I hereby certify the information contained herein is true and complete to the best of my knowledge and belief. Signature: <i>Laurie Cherey</i> Printed Name: LAURIE CHEREY Title: CEO/COMP ASS Date: 11/15/99
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from first order of actual survey made by me or under my supervision and that the same is true and correct to the best of my belief. SEPTEMBER 10, 1999 Date: _____ Signature: <i>Donald E. Harrison</i> Printed Name: DONALD E. HARRISON Title: REGISTERED SURVEYOR No. 71399 Commission Expires 12/31/2001

**ARMSTRONG GAS LABS, INC.**

P.O. Box 968
Monahans, Texas 79756
(915) 943-8844 (FAX) 943-8855

B&C Federal #1
Measurement File
646548

GAS ANALYSIS REPORT

Analysis No.: 000124.bpr
Customer: Well Testing

<u>Component</u>	<u>Mol. %</u>	<u>BTU</u>	<u>SG</u>	<u>GPM</u>	
Nitrogen	0.2815	0.000	0.003		
Methane	90.8388	919.594	0.503		
CO2	0.4903	0.000	0.007		
Ethane	5.6026	99.373	0.058	1.498	
H2S	0.0000	0.000	0.000		
Propane	1.5933	40.182	0.024	0.439	
Iso-Butane	0.2362	7.699	0.005	0.077	
Butane	0.3895	12.736	0.008	0.123	
Iso-Pentane	0.1528	6.128	0.004	0.056	
Pentane	0.1349	5.421	0.003	0.049	
Hexanes C6+	0.2801	14.400	0.009	0.122	
Hydrogen	N/A				
Helium	N/A				
Oxygen	N/A				
CO	N/A				
Ideal Totals	100.0000	1105.532	0.624	2.364	
					Producer: Arco
					Well / Sta. Name: B&C Federal 25 #1
					Sta. No.:
					Formation: Morrow
					Field:
					County:
					Spot / Accum.: Spot
					Date / Time On:
					Date / Time Off: 01/19/00 02:30 PM
					Date to Lab: 01/21/00
					Date Analyzed: 01/21/00
					Effective Date:
					Sample Press. (PSIG): 270
					Line Press. (PSIG): 270
					Sample Temp. (F): 60
					Fl. Gas Temp. (F): 60
					Amb. Temp. (F):
					Del. To:
					Sampled By: Well Testing
					Cylinder No.:

Field H2S (PPM): 0.0
Field H2S (Grains): 0.0

Pressure Base: 14.73
Temp. Base: 60

Z Factor (Dry): 0.99742

Dry BTU (Real): 1108.40
Sat. BTU (Real): 1090.36
H2O (# / mmcf): N/L
As Del. BTU (Real):

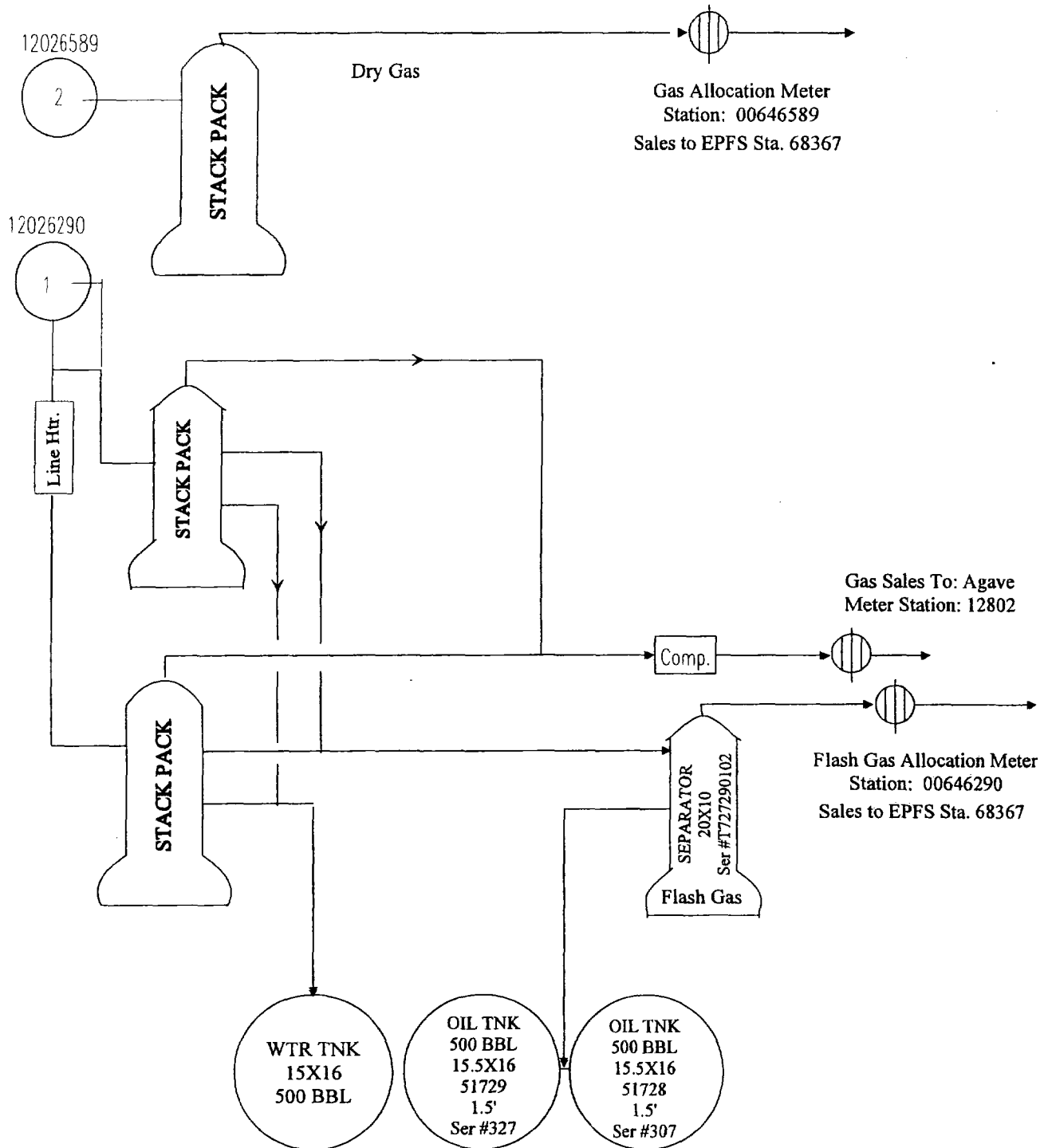
Sp. Gravity (Real): 0.6259
Field Gravity:
Lab Gravitometer: 0.626

GPM (Ethane+): 2.364
GPM (Propane+): 0.866

GPA 2145 / 2172

Remarks:

copy to Valine
DB



Lease Equipment using fuel:

1. Line Heater 3.5x14 #000048028 Ser #9607
2. Stack Pack 30x10 Ser #32.063
3. Stack Pack 16x7.6 Ser #53607
4. Rental Compressor 000049455

ARCO Permian PARS Flow Schematic	
Lease: Sweet Thing State 36 #1 & #2	
Property Code: 641291207	
Location: Sec. 36-T20.5S-R31E	
Field: Sweet Thing	
County: Eddy State: N.M.	
By: Chris King Date: 3/15/99	
Facility: 12644272 Update: 11/22/00	

DISTRICT II
P.O. Brewer RD, Artesia, NM 88211-0710

DISTRICT III
1000 Elc Brazos Rd., Astec, NM 87410

DISTRICT IV
P.O. Box 2088, Santa Fe, NM 87504-2088

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 80240	Pool Name Little Box Canyon Morrow Gas
Property Code	Property Name SWEET THING STATE 36	Well Number 1
OCED No.	Operator Name STEVENS & TULL	Elevation 4458

Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	36	20- $\frac{1}{2}$ -S	21 E		850	NORTH	300	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres * 265.80	Joint or Infill I	Consolidation Code			Order No. * Unorthodox location approval case # NSL-3901(NSP)				

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

LOT 4 26.55 AC.	LOT 3 26.48 AC.	LOT 2 26.42 AC.	LOT 1 26.35 AC.
850' 19' 300' 			

OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Michael G. Mooney
Signature

Michael G. Mooney
Printed Name

Consulting Engineer
Title

12/10/97
Date

SURVEYOR CERTIFICATION

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

DECEMBER 6, 1997
Date Surveyed

Ronald J. Eidson
Signature of Professional Surveyor

RONALD J. EIDSON
NEW MEXICO
Professional Surveyor
No. 97-112590

Certificate No. RONALD J. EIDSON, 3239

12841

12185

12841

12185

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name WILDCAT (CISCO)	Well Number 2
Property Code	Property Name SWEET THING STATE 36		Elevation 4443
OGED No. 000990	Operator Name ARCO PERMIAN		

Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 1	36	20 1/2 S	21 E		750	NORTH	710	EAST	EDDY

Bottom Hole Location If Different From Surface									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 265.8	Joint or Infill	Consolidation Code	Order No.
---------------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

T-20-S			
LOT 4 28.55 ACRES	LOT 3 28.48 ACRES	LOT 2 28.42 ACRES	LOT 1 28.35 ACRES
36		T-20 1/2 - S	36
1		T-21-S	1

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Laurie Cherry
Signature
LAURIE CHERRY
Printed Name
REG. Comp. Asst.
Title
11/29/99
Date

SURVEYOR CERTIFICATION

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

NOVEMBER 22, 1999

Date Surveyed
Signature **R. J. EDSON**
Professional Surveyor
RONALD J. EDSON
NEW MEXICO
3239
12841
12185
199-11-0976
Certified by No. **RONALD J. EDSON**
Professional Surveyor

JUN-28-00 WED 13:51 Precision Measurement

307 237 9327

P.02

PRECISION MEASUREMENT, INC.
P.O.Box 3059
746 North Circle Drive
Casper, WY. 82602

6/28/00 1:41 PM
Phone: 307-237-9327
800-824-7260
Fax: 307-677-6139
E Mail: pml@trib.com

GAS ANALYSIS REPORT

Analysis For: ARCO PERMIAN
Field Name: LITTLE BOX
Well Name: SWEET THING 36 #1 FLASH GAS
Station Number: WCA #12
Purpose:
Sample Deg. F:
Volume/Day:
Formation:
Line PSIG:
Line PSIA:

Run No: 4796-1
Date Run: 6/28/00
Date Sampled: 6/21/00
Producer:
County: EDDY
State: NEW MEXICO
Sampled By: R.T.
Atmos Deg. F:

GAS COMPONENTS			
		MOL%	GPM
Oxygen	O2:	0.000	
Carbon Dioxide	CO2:	0.857	
Nitrogen	N2:	5.665	
Hydrogen Sulfide	H2S:	0.0000	
Methane	C1:	72.325	
Ethane	C2:	12.778	3.408
Propane	C3:	5.234	1.438
iso-Butane	IC4:	0.790	0.258
Nor-Butane	NC4:	1.241	0.390
iso-Pentane	IC5:	0.381	0.139
Nor-Pentanes	NC5:	0.301	0.109
Hexanes	C6:	0.329	0.135
Heptanes	C7:	0.100	0.046
Octanes	C8:	0.000	0.000
Nonanes	C9:	0.000	0.000
Decanes	C10:	0.000	0.000
Totals		100.000	5.922

Pressure Base: 14.730
Real BTU Dry: 1209.891
Real BTU Wet: 1188.718

Calc. Ideal Gravity: 0.739
Calc. Real Gravity: 0.741
Field Gravity:
Standard Pressure: 14.696
BTU Dry: 1207.115
BTU Wet: 1186.111
Z Factor: 0.997
Average Mol Weight: 21.773
Average CuFt/Gal: 40.755
Ethane+ GPM: 5.922
Propane+ GPM: 2.514
Butane+ GPM: 1.077
Pentane+ GPM: 0.429
Hexanes + GPM: 0.181
Heptanes + GPM: 0.046
Octanes + GPM: 0.000
Nonanes + GPM: 0.000

BTEX Components, 100 % of Total Volume
N-Hexane: 0.0834
Benzene: 0.0080
Toluene: 0.0025
Ethylbenzene: None Detected
Xylenes: None Detected

Remarks:

Analysis By: C.G.Martin

646589

Wildcat Measurement Service
 PO Box 1836
 Artesia, New Mexico 88211-1836
 Office #505-746-3481
 "Quality and Service is our First Concern"

DOS 2.0

Run No. 20430-04
 Date Run 04/30/2000
 Date Sampled 04/26/2000

Analysis for: ARCO PERMIAN
 Well Name: SWEET THING "36" STATE #2
 Field: LITTLE BOX CANYON
 Sta. Number: WCA #14
 Purpose: SPOT
 Sampling Temp: 113 DEG F
 Volume/day:
 Pressure on Cylinder: 126 PSIG

GPANGL L60

Producer: ARCO PERMIAN
 County: EDDY State: NM
 Sampled By: KARL HAEVY
 Atmos Temp: DEG F
 Formation:
 Line Pressure: 139.1 PSIA

GAS COMPONENT ANALYSIS

Pressure Base: 14.730

		Mol %	GPM
Carbon Dioxide	CO2	0.186	
Nitrogen	N2	0.930	
Methane	C1	89.955	15.247
Ethane	C2	5.323	1.424
Propane	C3	1.797	0.495
Iso-Butane	IC4	0.310	0.101
Nor-Butane	NC4	0.566	0.178
Iso-Pentane	IC5	0.185	0.068
Nor-Pentane	NC5	0.179	0.065
Hexanes Plus	C6+	0.569	0.245
TOTAL		100.000	17.823

Real BTU Dry: 1122
 Real BTU Wet: 1103
 Real Calc. Specific Gravity: 0.639
 Field Specific Gravity: 0.000

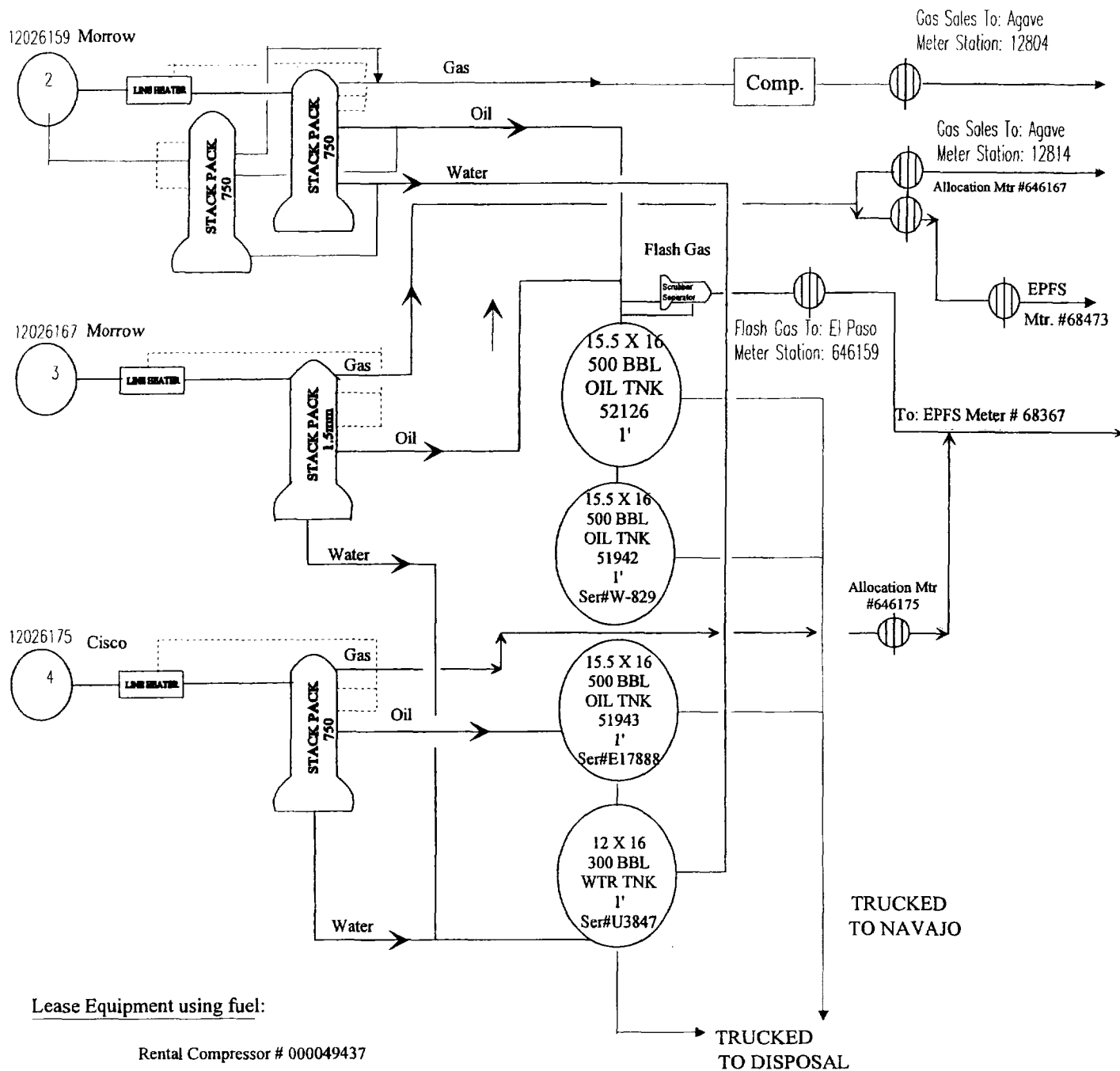
Standard Pressure: 14.696
 BTU Dry: 1120
 BTU Wet: 1100

Z Factor: 0.9974
 N Value: 1.2947
 Avg Mol Weight: 18.4610
 Avg CuFt/Gal: 57.1784
 26 Lb Product: 0.5989
 Methane+ GPM: 17.823
 Ethane+ GPM: 2.576
 Propane+ GPM: 1.152
 Butane+ GPM: 0.657
 Pentane+ GPM: 0.377

REMARKS:

Approved by: DON NORMAN

Wed May 03 09:10:43 2000



ARCO Permian
PARS Flow Schematic

Lease: Little Box State
Property Code: 641291208
Location: UL F Sec. 36-20S-21E
Field: Sweet Thing
County: Eddy State: N.M.
By: Chris King Date: 3/15/99
Facility: 12644213 Update: 11/29/00

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
Property Code	Property Name LITTLE BOX STATE		Well Number 2
OGRID No.	Operator Name STEVENS & TULL		Elevation 4432

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	36	20 S	21 E		660	SOUTH	2310	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature _____ Printed Name _____ Title _____ Date _____	
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. APRIL 7, 1998 Date Surveyed _____ DMCC Signature of State Professional Surveyor _____ Professional Surveyor No. _____ APRIL 7, 1998 APRIL 7, 1998 APRIL 7, 1998	
	APRIL 7, 1998 APRIL 7, 1998 APRIL 7, 1998	
	APRIL 7, 1998 APRIL 7, 1998 APRIL 7, 1998	

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brans Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

* API Number		* Pool Code		* Pool Name	
* Property Code		* Property Name Little Box State			* Well Number 3
* OGRID No.		* Operator Name Stevens & Tull			* Elevation 4408

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
F	36	20s	21e		1980	North	1980	West	Eddy

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i> Signature _____ Printed Name _____ Title _____ Date _____
	¹⁸ SURVEYOR CERTIFICATION <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i> September 28, 1998 Date of Survey Signature and Seal of Professional Surveyor P. R. Patton Certificate Number _____

DISTRICT I

P.O. Box 2000, Santa Fe, NM 87501-2000

DISTRICT II

P.O. Box 2000, Santa Fe, NM 87501-2000

DISTRICT III

1000 Rio Grande Rd., Santa Fe, NM 87501

DISTRICT IV

P.O. Box 2000, Santa Fe, NM 87501-2000

State of New Mexico

Geology, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 2 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Well Name	Well Name
23216	WILDCAT Lumber Canyon	MISSISSIPPIAN
OCRD No. 021602	Property Name LITTLE BOX STATE	Well Number 4
	Operator Name STEVENS & TULL	Elevation 4449'

Surface Location

UL or Lot No.	Section	Township	Range	Lot 14n	Feet from the	North/South line	Feet from the	East/West line	County
N	36	20 S	21 E		990	SOUTH	1980	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot 14n	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320	Joint or Infill J	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature: <i>Michael G. Mooney</i> Printed Name: Michael G. Mooney Title: Consulting Engineer Date: 11/4/98
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date: OCTOBER 26, 1998 Signature: <i>J. Eidson</i> Printed Name: J. Eidson Title: Professional Surveyor Date: 11-27-98 Certificate No.: 3239 Expiration Date: 12/31/99

JUN-28-00 WED 13:52 Precision Measurement

307 231 9327

P.03

PRECISION MEASUREMENT, INC.

P.O.Box 3059

745 North Circle Drive

Casper, WY. 82602

6/28/00 1:41 PM

Phone: 307-237-9327

800-624-7280

Fax: 307-577-4139

E Mail: pmi@trib.com

Arcometer #
00646159

GAS ANALYSIS REPORT

Analysis For: ARCO PERMIAN
 Field Name: LITTLE BOX
 Well Name: LITTLE BOX #2 & #3 FLASH GAS
 Station Number: WCA #11
 Purpose:
 Sample Deg. F:
 Volume/Day:
 Formation:
 Line PSIG:
 Line PSIA:

Run No: 4786-2
 Date Run: 6/28/00
 Date Sampled: 6/21/00
 Producer:
 County: EDDY
 State: NEW MEXICO
 Sampled By: R.T.
 Atmos Deg. F:

		GAS COMPONENTS	
		MOL%	GPM
Oxygen	O2:	0.000	
Carbon Dioxide	CO2:	0.915	
Nitrogen	N2:	0.194	
Hydrogen Sulfide	H2S:	0.0000	
Methane	C1:	74.787	
Ethane	C2:	13.962	3.723
Propane	C3:	5.847	1.606
Iso-Butane	IC4:	0.891	0.291
Nor-Butane	NC4:	1.414	0.445
Iso-Pentane	IC5:	0.449	0.164
Nor-Pentanes	NC5:	0.363	0.131
Hexanes	C6:	0.537	0.220
Heptanes	C7:	0.530	0.244
Octanes	C8:	0.111	0.057
Nonanes	C9:	0.000	0.000
Decanes	C10:	0.000	0.000
Totals		100.000	6.881

Pressure Base: 14.730
 Real BTU Dry: 1327.450
 Real BTU Wet: 1304.220

Calc. Ideal Gravity: 0.732
 Calc. Real Gravity: 0.734
 Field Gravity:
 Standard Pressure: 14.696
 BTU Dry: 1324.404
 BTU Wet: 1301.359
 Z Factor: 0.996
 Average Mol Weight: 22.278
 Average CuFV/Gal: 37.677
 Ethane+ GPM: 6.881
 Propane+ GPM: 3.158
 Butane+ GPM: 1.552
 Pentane+ GPM: 0.816
 Hexanes + GPM: 0.521
 Heptanes + GPM: 0.301
 Octanes + GPM: 0.057
 Nonanes + GPM: 0.000

BTX Components, 100 % of Total Volume:

N-Hexane: 0.1387
 Benzene: 0.0182
 Toluene: 0.0289
 Ethylbenzene: None Detected
 Xylenes: None Detected

Remarks:

Analysis By: C.G.Martin

#646167

Laboratory Services, Inc.4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR:

ARCO Permian
Attention: Mr. Rolan Taylor
P. O. Box 1089
Eunice, New Mexico 88281SAMPLE: Station #12814
IDENTIFICATION: Little Box St. #3
COMPANY: ARCO Permian
LEASE:
PLANT:SAMPLE DATA: DATE SAMPLED: 2/19/99 2:00 pm
ANALYSIS DATE: 2/23/99
PRESSURE - PSIG 947
SAMPLE TEMP. °F
ATMOS. TEMP. °FGAS (XX) LIQUID ()
SAMPLED BY: Rolan Taylor
ANALYSIS BY: Vickie Walker

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	0.285	
Carbon Dioxide (CO2)	0.679	
Methane (C1)	90.217	
Ethane (C2)	5.721	1.526
Propane (C3)	1.662	0.457
I-Butane (IC4)	0.248	0.081
N-Butane (NC4)	0.391	0.123
I-Pentane (IC5)	0.150	0.055
N-Pentane (NC5)	0.149	0.054
Hexane Plus (C6+)	0.498	0.204
	100.000	2.500

BTU/CU.FT. - DRY 1111
AT 14.650 DRY 1107
AT 14.650 WET 1088
AT 14.73 DRY 1113
AT 14.73 WET 1094

MOLECULAR WT. 18.3190

SPECIFIC GRAVITY -
CALCULATED 0.683
MEASURED✓
Lab

**Laboratory Services, Inc.**

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

#64481291
#646175

FOR:

ARCO Permian
Attention: Mr. Rolan Taylor
P. O. Box 1089
Eunice, New Mexico 88231

SAMPLE: Station #12806
IDENTIFICATION: Little Box St. #4
COMPANY: ARCO Permian
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 2/19/99 2:00 pm
ANALYSIS DATE: 2/23/99
PRESSURE - PSIG 950
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Rolan Taylor
ANALYSIS BY: Vickie Walker

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	0.965	
Carbon Dioxide (CO2)	0.138	
Methane (C1)	89.400	
Ethane (C2)	5.268	1.406
Propane (C3)	1.808	0.497
I-Butane (IC4)	0.383	0.125
N-Butane (NC4)	0.633	0.199
I-Pentane (IC5)	0.235	0.086
N-Pentane (NC5)	0.246	0.089
Hexane Plus (C6+)	0.924	0.879
	100.000	2.781

BTU/CU.FT. - DRY 1138
AT 14.650 DRY 1134
AT 14.650 WET 1115
AT 14.73 DRY 1141
AT 14.73 WET 1121

MOLECULAR WT. 18.7860

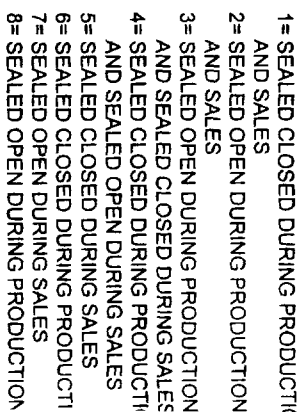
SPECIFIC GRAVITY -
CALCULATED 0.649
MEASURED

✓
Lab

Gas from Legget Fed, Hilltop Fed, Crooked Canyon Fed, & B&C Fed

THIS LEASE COMPLIES WITH
ARCO PERMIAN
SITE SECURITY PLAN
FILED AT:

ARCO PERMIAN
BOX 1089
EUNICE, N. M. 88231
DATE OF FACILITY DIAGRAM: 8/12/99
FEDERAL LEASE #: NNMNM27451



OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Stevens and Tull, Inc.			Lease Nasser Federal 1		Well No. 1
Unit Letter H	Section 1	Township 21 South	Range 21 East	County NMPM	Eddy

Actual Footage Location of Well:

1980 feet from the North line and	660 feet from the East line
Ground level Elev. 4420	Producing Formation Morrow
Pool Wildcat	Dedicated Acreage: 319.86 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.

2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

☐ Yes

☐ No

If answer is "yes" type of consolidation

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name

Michael G. Mooney

Position

Engineer

Company

Stevens & Tull, Inc.

Date

12/13/93

SURVEYOR CERTIFICATION

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

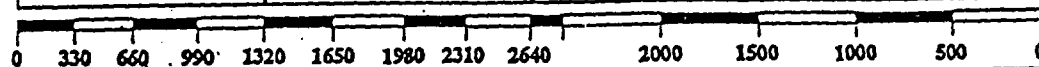
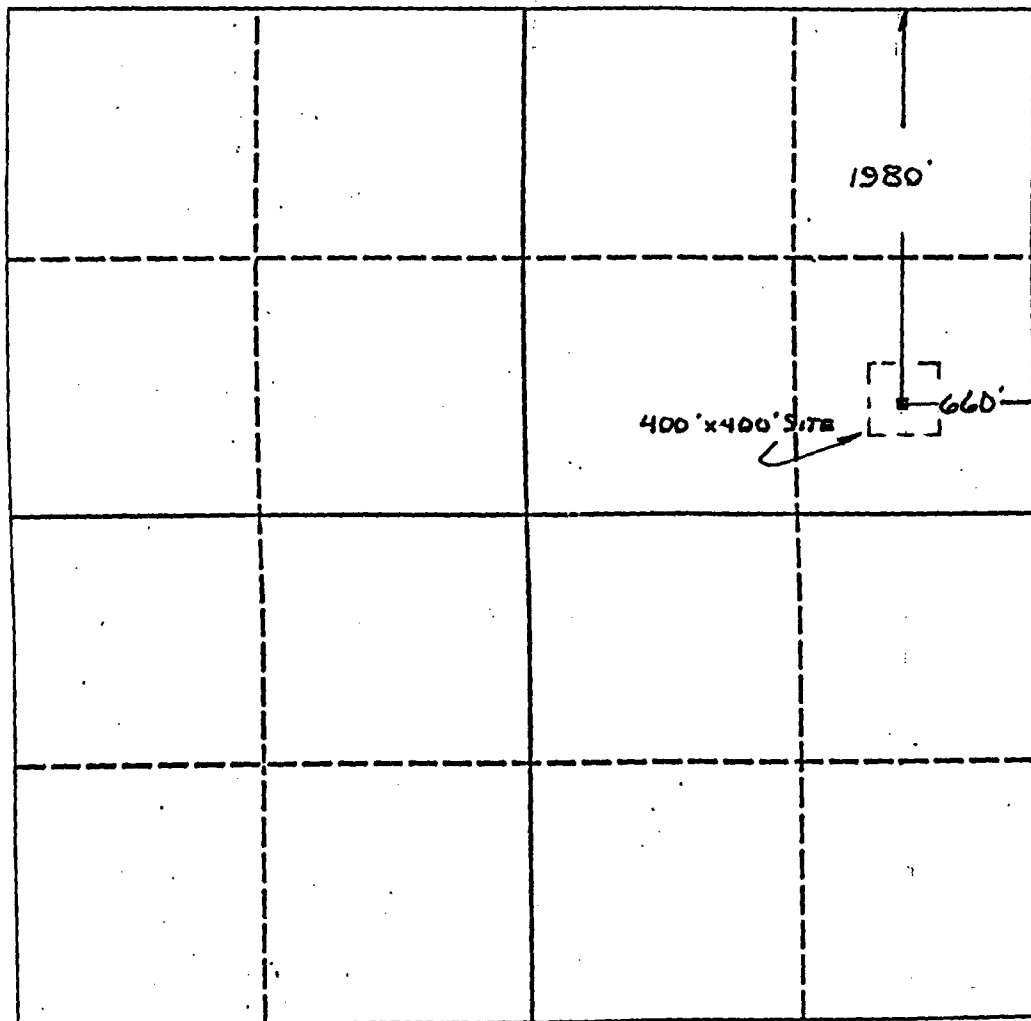
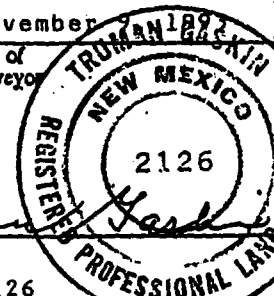
Date Surveyed

November

Signature & Seal of Professional Surveyor

Certificate No.

2126



646.241

Wildcat Measurement Service
PO Box 1836
Artesia, New Mexico 88211-1836
Office #505-746-3481
"Quality and Service is our First Concern"

DOS 2.0

Run No. 20207-04
Date Run 02/07/2000
Date Sampled 02/04/2000

Analysis for: ARCO PERMIAN

GPANGL.L60

Well Name: NASSER FEDERAL #1 (UPPER PENN)

Field: LITTLE BOX CANYON

Sta. Number:

Purpose: SPOT

Sampling Temp: 60

DEG F

Volume/day:

Pressure on Cylinder: 67

PSIG

Producer: ARCO PERMIAN

County: EDDY

State: NM

Sampled By: KARL HAEY

Atmos Temp: 47 DEG F

Formation: UPPER PENN

Line Pressure: 80.2 PSIA

GAS COMPONENT ANALYSIS

Pressure Base: 14.730

		Mol %	GPM
Carbon Dioxide	CO2	0.147	
Nitrogen	N2	0.883	
Methane	C1	90.058	
Ethane	C2	5.239	1.401
Propane	C3	1.800	0.496
Iso-Butane	IC4	0.300	0.098
Nor-Butane	NC4	0.511	0.161
Iso-Pentane	IC5	0.221	0.081
Nor-Pentane	NC5	0.211	0.076
Hexanes Plus	C6+	0.630	0.271
TOTAL		100.000	2.585

Real BTU Dry: 1126
Real BTU Wet: 1106
Real Calc. Specific Gravity: 0.640
Field Specific Gravity: 0.000

Standard Pressure: 14.696
BTU Dry: 1123
BTU Wet: 1104

Z Factor: 0.9974
N Value: 1.2946
Avg Mol Weight: 18.4905
Avg CuFt/Gal: 57.1555
26 Lb Product: 0.6771
Methane+ GPM: 17.849
Ethane+ GPM: 2.585
Propane+ GPM: 1.183
Butane+ GPM: 0.687
Pentane+ GPM: 0.428

REMARKS:

Approved by: DON NORMAN

Tue Feb 08 11:45:26 2000

646217

Wildcat Measurement Service
PO Box 1836
Artesia, New Mexico 88211-1836
Office #505-746-3481
"Quality and Service is our First Concern"

DOS 2.0

Run No. 20107-03
Date Run 01/07/2000
Date Sampled 01/06/2000

Analysis for: ARCO PERMIAN
Well Name: NASSER FEDERAL #1 MORROW
Field: LITTLE BOX CANYON
Sta. Number:
Purpose: SPOT
Sampling Temp: 60 DEG F
Volume/day:
Pressure on Cylinder: 200 PSIG

GPANGL.L60
Producer: ARCO PERMIAN
County: EDDY State: NM
Sampled By: KARL HAENY
Atmos Temp: 41 DEG F
Formation: MORROW
Line Pressure: 213.2 PSIA

GAS COMPONENT ANALYSIS

Pressure Base: 14.730

		Mol %	GPM
Carbon Dioxide	CO2	0.367	
Nitrogen	N2	0.376	
Methane	C1	93.841	
Ethane	C2	3.678	0.984
Propane	C3	0.869	0.239
Iso-Butane	IC4	0.149	0.049
Nor-Butane	NC4	0.178	0.056
Iso-Pentane	IC5	0.075	0.027
Nor-Pentane	NC5	0.042	0.015
Hexanes Plus	C6+	0.425	0.183
TOTAL		100.000	1.553

Real BTU Dry: 1074
Real BTU Wet: 1055
Real Calc. Specific Gravity: 0.605
Field Specific Gravity: 0.000

Standard Pressure: 14.696
BTU Dry: 1072
BTU Wet: 1053

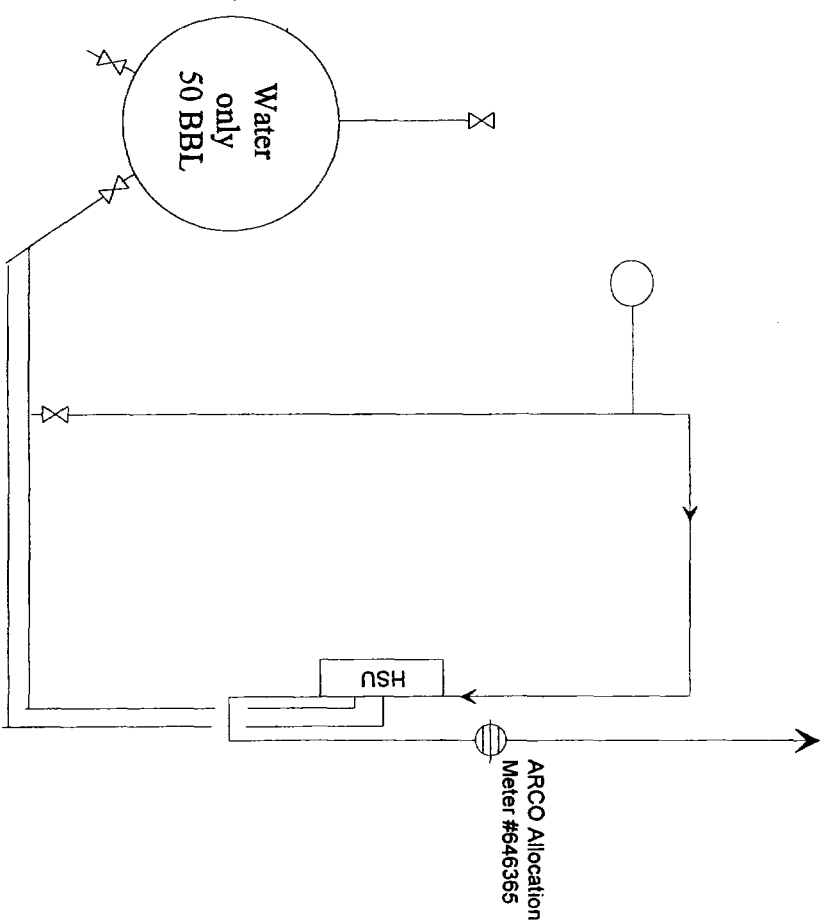
Z Factor: 0.9977
N Value: 1.2998
Avg Mol Weight: 17.4755
Avg CuPt/Gal: 57.8465
26 Lb Product: 0.3710
Methane+ GPM: 17.459
Ethane+ GPM: 1.553
Propane+ GPM: 0.570
Butane+ GPM: 0.330
Pentane+ GPM: 0.225

REMARKS:

Approved by: DON NORMAN

Fri Jan 07 14:06:28 2000

Hilltop Federal #1



ARCO PERMIAN
 HILLTOP FEDERAL #1
 1880' FNL 1980' FWL
 SEC. 1 T-22S R-21-E
 EDDY COUNTY, NEW MEXICO
 8/23/99
 C. KING

THIS LEASE COMPLIES WITH
 ARCO PERMIAN
 SITE SECURITY PLAN
 FILED AT:
 ARCO PERMIAN
 BOX 1089
 EUNICE, N. M. 88231
 DATE OF FACILITY DIAGRAM: 8/12/99

Exxon Lse. No. _____

NEW MEXICO OIL CONSERVATION COMMISSION

State Lse. No. NM-27451

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

Federal Lse. No. _____

All distances must be from the outer boundaries of the Section.

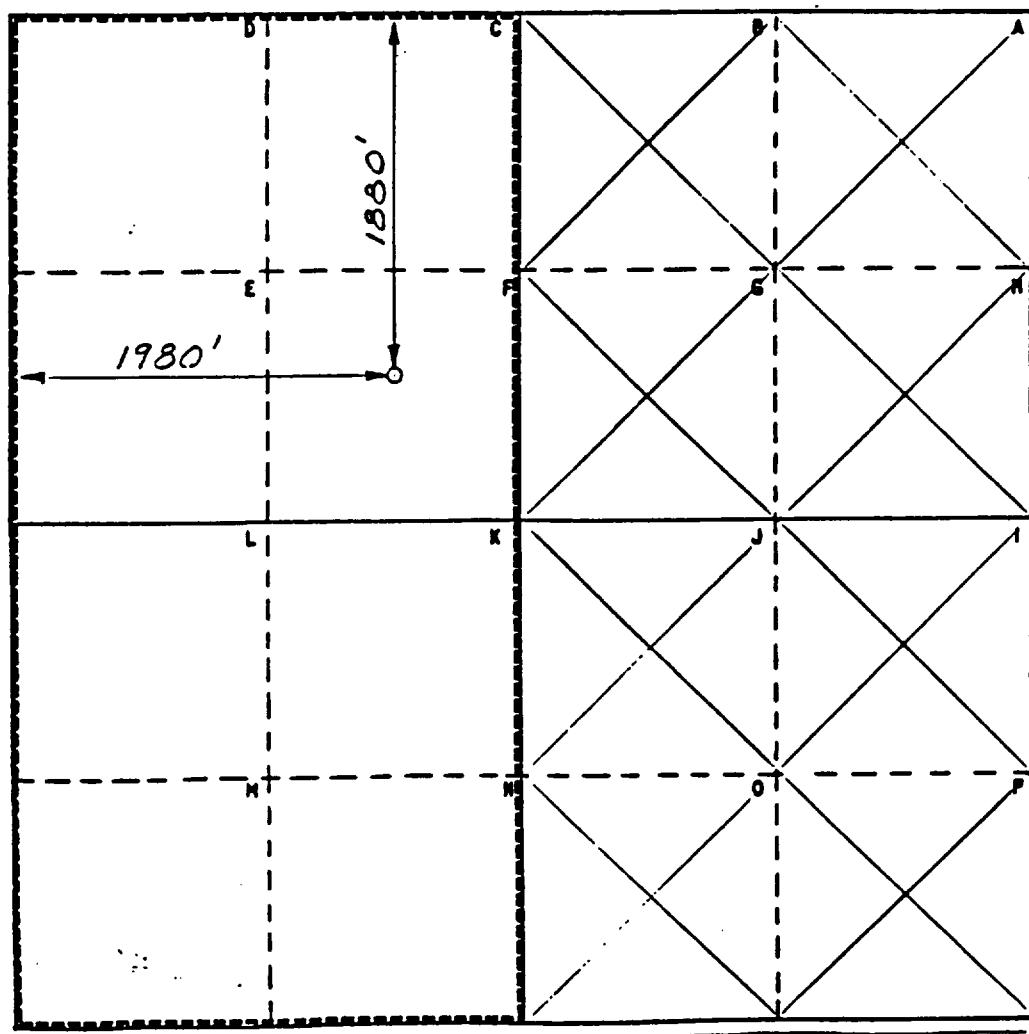
Operator Exxon Corporation		Lease NASSER FEDERAL		Well No. 1	
Unit Letter	Section 1	Township 21 S	Range 21 E	County EDDY	
Actual Footage Location of Well: 1880 feet from the NORTH line and 1980 feet from the WEST line					
Ground Level Elev. 4512'	Producing Formation Upper Permian		Pool LITTLE BOX CANYON		Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation: _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name

Melba Kuipling

Position

UNIT HEAD

Company Exxon Corporation

Box 1600 Midland, Texas

Date

3-5-85

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

Date Surveyed

1-31-85

Registered Professional Engineer
and/or Land Surveyor*Bruce R. Pennell*

Certificate No.

9062

H 646365

**Laboratory Services, Inc.**

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: ARCO Permian
Attention: Mr. Rolan Taylor
P. O. Box 1089
Eunice, New Mexico 88231

SAMPLE:
IDENTIFICATION: Hilltop Fed. #1
COMPANY: ARCO Permian
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 2/19/99 2:30 pm
ANALYSIS DATE: 2/23/99
PRESSURE - PSIG 500
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Rolan Taylor
ANALYSIS BY: Vickie Walker

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	1.309	
Carbon Dioxide (CO2)	0.264	
Methane (C1)	85.575	
Ethane (C2)	5.786	1.544
Propane (C3)	2.291	0.630
I-Butane (IC4)	0.524	0.171
N-Butane (NC4)	0.852	0.268
I-Pentane (IC5)	0.553	0.202
N-Pentane (NC5)	0.510	0.184
Hexane Plus (C6+)	2.836	0.958
	100.000	3.957

BTU/CU.FT. - DRY 1223
AT 14.650 DRY 1219
AT 14.650 WET 1198
AT 14.73 DRY 1226
AT 14.73 WET 1204

MOLECULAR WT. 20.5391

SPECIFIC GRAVITY -
CALCULATED 0.709
MEASURED