STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE Sept 24

RE: Proposed MC _____
Proposed DHC ✓
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated Sept. 6, 1985

for the Jerome Oil Co. Florance #19 H-3-30N-9W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours truly,

Frank D. Chavez

Tenneco Oil
Exploration and Production
A Tenneco Company

6162 South Willow Drive
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Western Rocky Mountain Division

August 1, 1985

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Gilbert Quintana

RE: Florance 19
1650' FNL, 790' FEL
Sec. 3, T30N, R9W
San Juan County, New Mexico

Gentlemen:

We have enclosed all necessary data for administrative approval to commingle production in the referenced well.

Questions concerning this request can be directed to Mr. Frank Weiss (303) 740-4836.

Very truly yours,

TENNECO OIL COMPANY

Paul Doyle
Division Production Engineer

SMc:st

Enclosures

cc: Mr. Jerry Hertzler
Mr. Frank Weiss

mv

Tenneco Oil
Exploration and Production
A Tenneco Company

Western Rocky Mountain Division

6162 South Willow Drive
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

August 1, 1985

El Paso Natural Gas
Post Office Box 4990
Farmington, NM 87499

Attention: Don Reed

RE: Florance 19
1650' FNL, 790' FEL
Sec. 3, T30N, R9W
San Juan County, New Mexico

Gentlemen:

Tenneco has applied for administrative approval to commingle production from the Mesaverde and Dakota zones in the above referenced well. If you as an offset operator have no objection to the proposed commingling, please sign the waiver at the bottom of this page and forward to:

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501
Attention: Gilbert Quintana

We would appreciate your returning one copy to the undersigned.

Very truly yours,

TENNECO OIL COMPANY

Paul Doyle
Division Production Engineer

SMc:st

WAIVER

We hereby waive any objections to Tenneco Oil Company's application to commingle production as set forth above.

Name: _____ Title: _____

Date: _____

Tenneco Oil
Exploration and Production
A Tenneco Company

Western Rocky Mountain Division

6162 South Willow Drive
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

August 1, 1985

Amoco Production Company
1670 Broadway
Denver, CO 80202

Attention: R. C. Burke, Jr.

RE: Florance 19
1650' FNL, 790' FEL
Sec. 3, T30N, R9W
San Juan County, New Mexico

Gentlemen:

Tenneco has applied for administrative approval to commingle production from the Mesaverde and Dakota zones in the above referenced well. If you as an offset operator have no objection to the proposed commingling, please sign the waiver at the bottom of this page and forward to:

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501
Attention: Gilbert Quintana

We would appreciate your returning one copy to the undersigned.

Very truly yours,

TENNECO OIL COMPANY

Paul Doyle
Division Production Engineer

SMc:st

WAIVER

We hereby waive any objections to Tenneco Oil Company's application to commingle production as set forth above.

Name: _____ Title: _____

Date: _____

Tenneco Oil
Exploration and Production
A Tenneco Company

Western Rocky Mountain Division

6162 South Willow Drive
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

August 1, 1985

Union Texas Petroleum
Post Office Box 1290
Farmington, NM 87499

Attention: Ruddy Motto

RE: Florance 19
1650' FNL, 790' FEL
Sec. 3, T30N, R9W
San Juan County, New Mexico

Gentlemen:

Tenneco has applied for administrative approval to commingle production from the Mesaverde and Dakota zones in the above referenced well. If you as an offset operator have no objection to the proposed commingling, please sign the waiver at the bottom of this page and forward to:

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501
Attention: Gilbert Quintana

We would appreciate your returning one copy to the undersigned.

Very truly yours,

TENNECO OIL COMPANY

P A Doyle

Paul Doyle
Division Production Engineer

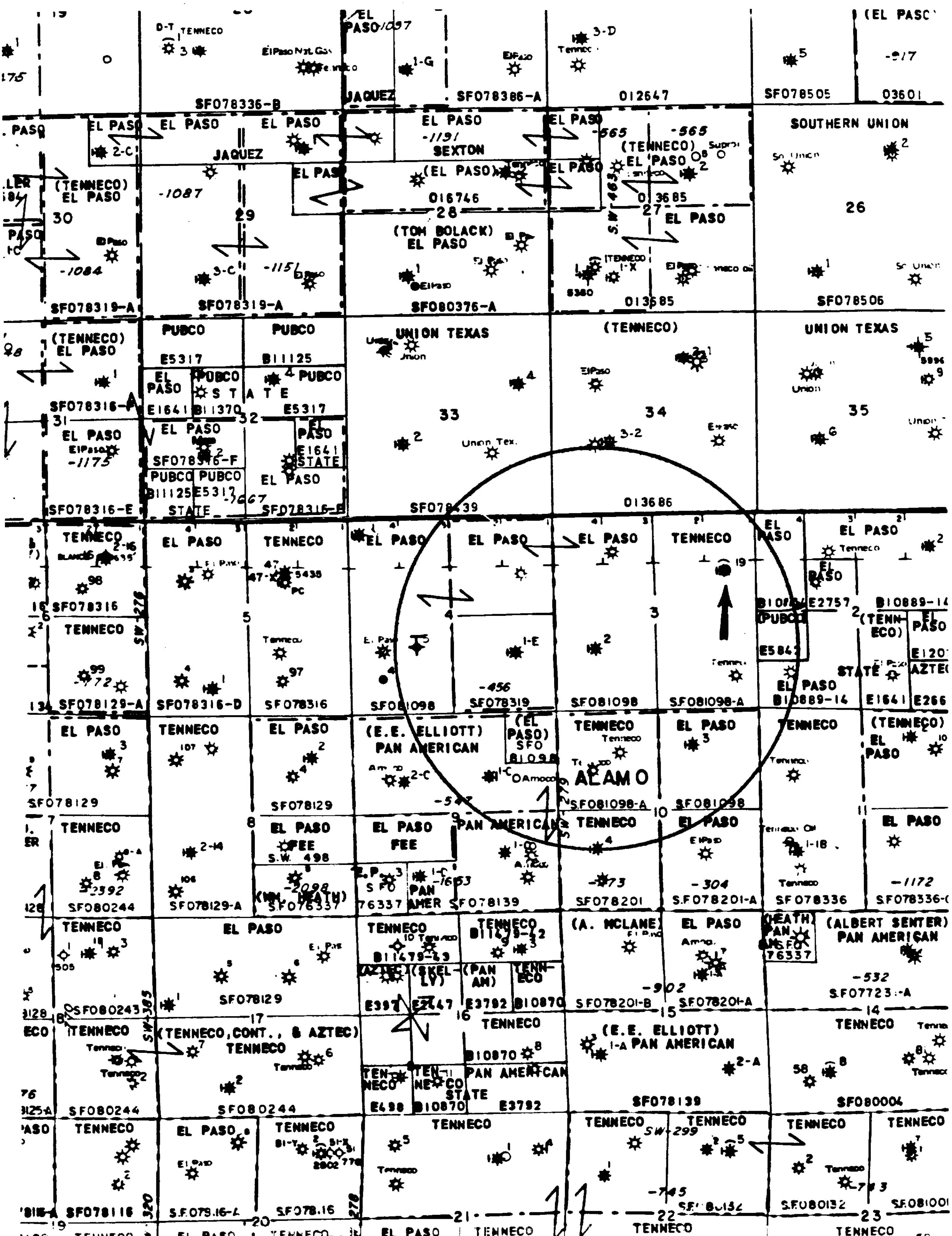
SMc:st

WAIVER

We hereby waive any objections to Tenneco Oil Company's application to commingle production as set forth above.

Name: _____ Title: _____

Date: _____


SF078336-B
JAQUEZ
SF078386-A
012647
SF078505
03601
EL PASO
SEXTON
SOUTHERN UNION
(TENNECO)
016746
013685
(TOM BOLACK)
SF078319-A
SF080376-A
SF078506
PUBCO
E5317
B11125
UNION TEXAS
STATE
SF078316-F
SF078316-E
SF078439
013686
TENNECO
SF078316
SF078316-D
SF078129-A
SF081098
SF078319
SF081098-A
E2757
B10889-14
E1641
(E.E. ELLIOTT)
PAN AMERICAN
ALAMO
SF078129
SF078139
SF078201
SF078201-A
SF078336
FEE
(A. MCLANE)
(ALBERT SENTER)
SF080244
SF078129-A
SF076337
B11479-42
B11479-43
SF078201-B
SF077231-A
(TENNECO, CONT., & AZTEC)
SF080243
B10870
E3792
SF078139
SF080004
SF078116
SF080132
SF081001

Tenneco Oil
Exploration and Production
A Tenneco Company

6162 South Willow Drive
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Western Rocky Mountain Division

The Florance 19 was completed as a Mesaverde-Dakota dual in November of 1962 with 4-1/2" casing and one string of 2-3/8" tubing. The Dakota produces up the tubing and the Mesaverde flows up the casing-tubing annulus. Because of the large flow area in the annulus, the Mesaverde is experiencing liquid loading problems which are restricting the production from that zone.

Enclosed are decline curves from both the Mesaverde and Dakota zones.

The bottom-hole pressure of the Dakota was measured with a pressure bomb and found to be 872 PSIG at 7300' after 8 days of shut in. This Dakota pressure corrected to a datum of 5000' was 834 PSIG. A pressure bomb could not be run for the Mesaverde since this zone produces up the annulus.

A dead weight surface pressure of 387 PSIG was recorded for the Mesaverde after 8 days of shut in. A fluid level could not be established. The bottom-hole pressure for the Mesaverde was then calculated to be 439 PSIG at a datum of 5000'. The requirement that the lower pressured zone have a pressure that is greater than 50% of the pressure of the higher pressured zone corrected to a common datum is, therefore, satisfied.

Compatibility tests were conducted using Dakota water from the Florance 19 and Mesaverde water from an offset the Florance 19A. The testing indicates that no scale or precipitate problems should result from the commingling of these two zones. In addition, the salinities of the two zones are similar enough that no formation damage should occur in either zone.

The intent of commingling these two zones is to increase the total production from the well. This will be accomplished by increasing the flow velocity by flowing both zones up the tubing. The cross-sectional area of the tubing is 3.13 square inches, as opposed to 11.27 square inches for the tubing and annulus. Even if no production increase were realized, a 3.6 fold increase in average flow velocity would result from this commingling. This velocity increase will enable the well to unload produced fluids and will result in increased gas production from each zone. This greater production rate will increase the velocity in the tubing, yeilding even more liquid lifting capacity.

Based upon the decline curves and reserve estimates for these zones, I recommend that the production be allocated on a strict percentage basis with 88% assigned to the Mesaverde and 12% assigned to the Dakota.

If you need any additional information, feel free to call me at (303) 740-4836.

Frank G. Weiss III JMH
Frank G. Weiss
Senior Production Engineer - WRMD

FGW/dw:0352

MESAVERDE

FLORANCE 19 MV/DK
MESAVERDE DAKOTA COMMINGLING
2-3/8X4-1/2 ANNULUS

DATE: 7/10/85
FILE: FILE102
PROJ: 0

G A S W E L L P R E S S U R E S

MEASURED DEPTH, FEET	5000.	FLOW STREAM ID, INCHES	2.375
TRUE VERTICAL DEPTH, FEET	5000.	FLOW STREAM OD, INCHES	6.456
GAS GRAVITY	0.675	CRITICAL TEMPERATURE	382.
BOTTOM HOLE TEMPERATURE	150.	CRITICAL PRESSURE	667.
NITROGEN, MOL %	0.	CONDENSATE GRAVITY, DEG API	50.0
CARBON DIOXIDE, MOL %	0.	WATER GRAVITY	1.047
HYDROGEN SULFIDE, MOL %	0.	PIPE ROUGHNESS, INCHES	0.00060

GAS RATE M/D———	WH TEMP DEG F—	WELLHEAD PSIG———	BOTTOMHOLE P/Z PSIG———PSIG ——	CONDENSATE STB/MMCF—	WATER BW/MMCF —
0.	60.	387.	439 AT 5000 FEET	(MEAS)	FLUID LEVEL
			439 AT 5000 FEET	(MEAS)	(WTR)

0350

B & R SERVICE, INC.

P. O. Box 1048
Farmington, New Mexico 87401
(505) 325-2393

Company TENNECO OIL COMPANY Lease FLORANCE Well 19

County SAN JUAN State NEW MEXICO Date 5-15-85

Shut-In _____ Zero Point G.L. Tbg. Pressure 750

Casing Pressure PACKER Tbg. Depth _____ Casing Perf. _____

Max. Temp. _____ Fluid Level _____

DEPTH	PSIG	GRADIENT
0	750	----
1000	768	.018
2000	787	.019
3000	804	.017
4000	819	.015
5000	834	.015
6000	851	.017
7000	867	.016
7200	870	.015
7300	872	.020

MESAVERDE

8 DAY SHUT IN PRESSURE TEST

DEAD WEIGHT SURFACE PRESSURE TEST - 387 PSIG

SOUTHERN UNION GATHERING COMPANY
REPORT OF BTU TEST RESULTS

TO: TENNECO OIL CO (846)

REF: FLORANCE 19
4069
NORTHWEST NEW MEXICO (70)

DATE OF THIS TEST: 6/28/83
DATE OF LAST TEST: 3/10/82
TEST FREQUENCY: 12

RESULTS: SPECIFIC GRAVITY: 0.6749
BTU/CF @ 14.73/60F/DRY: 1171.4

	MOL %	G.P.M.
CARBON DIOXIDE	1.114	0.0000
NITROGEN	0.179	0.0000
METHANE	86.130	0.0000
ETHANE	7.240	1.9370
PROPANE	2.937	0.8080
ISOBUTANE	0.518	0.1690
N-BUTANE	0.779	0.2450
ISOPENTANE	0.278	0.1010
N-PENTANE	0.202	0.0730
HEXANE +	0.639	0.2810
TOTAL	100.016	3.6140

SMITH ENERGY SERVICES
Divison of Smith International, Inc.

2198 East Bloomfield Highway
Farmington, New Mexico 87401
Phone (505) 327-7281

June 5, 1985

Tenneco Oil Co.
Western Rocky Mtn. Div.
P.O. Box 3249
Englewood, Co. 80155
ATTN: Frank Weiss

Dear Mr. Weiss:

Water analysis and compatibility studies were conducted using the following formation water samples:

1.	Dawson A#1	Mesa Verde formation water
	Dawson A#1	Dakota formation water
	(Mesa Verde sample may show scaling tendency, but no incompatibility was seen between the two samples.)	
2.	Florance #19A	Mesa Verde formation water
	Florance #19	Dakota formation water
3.	Riddle A #1	Mesa Verde formation water
	Riddle A #1	Dakota formation water
4.	Moore #1A	Mesa Verde formation water
	Moore #6E	Dakota formation water
5.	State Com #1A	Mesa Verde formation water
	State Com #1	Dakota formation water
6.	Florance #31	Mesa Verde formation water
	Florance #31	Dakota formation water
7.	Florance #7A	Mesa Verde formation water
	Florance #6	Dakota formation water
8.	Florance #36	Mesa Verde formation water
	Florance #36	Dakota formation water

A small amount of reddish orange precipitate formed but this is to be expected when oxygen is admitted to a water sample containing even a trace of iron.

Tenneco, water analysis con't June 5, 1985

This precipitate should pose no problems in a closed system. No solid precipitates of any other types were noted and these samples should be considered to be compatible for mixing as per the listing above.

Sincerely,
SMITH ENERGY SERVICES

Loren L. Diede
District Engineer

LLD/kr

- TENNECO WELL HISTORY -

2504

Well Name Florance 19 Unit H Sec 3 T 30 R 9
TD 7615 PBTD 7564 County San Juan State New Mex WI 50.0 RI
Drlg Cost Comp Cost Comp Date 8-12-52 Tm On Date 9-18-52
MV-8/13/52 IP --- BOPD 5690 MCFD --- BWPD 6 Hours 1050 SIWHP
DAK-1/63 IP --- BOPD 2739 MCFD --- BWPD 3 Hours 2103 SIWHP
MV -12/62 --- 2943 --- 24 761

- TUBULAR RECORD -

Size	Weight	Grade	Depth	Cement	Top Cement	Hole Size	Remarks
10-3/4	32.75	H-40	232	200	Surface	15	
7	23,20	J-55	4604	200/200	4220/1375	9-7/8	DV @ 2673
4-1/2	10.5	J-55	7600	290		6-1/4	
2-3/8	4.7	J-55	7315	---			

Packer? Yes X No ___ Type Baker DA Depth 7315 & 7320
Anchor? Yes ___ No X Type _____ Depth _____
Pump Type _____

- COMPLETION & WORKOVER RECORD -

Zone #1 - Formation MV Date 8-5-52 Perfs w/JSPF _____
Open hole 5421-4604.

Press Tstd _____ PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type _____, Sand: _____ # _____ Mesh
Frac Rate _____ BPM Frac Pressure _____ PSI ISIP _____ PSI
Comments Shot 4690-5415 w/1590 qts nitro. Ran 2" tbg to 4810'.

Zone # 2 - Formation Dakota Date 9/62 Perfs w/JSPF _____
Hydro Notch @ 7605'.
Press Tstd _____ PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 15M gal wtr, Sand: 8M # 20/40 Mesh
Frac Rate _____ BPM Frac Pressure _____ PSI ISIP _____ PSI
Comments Screened out. Tested zones 2 & 3 @ tst M. Abandoned w/CIBP.

Zone # 3 - Formation Dakota Date 9/62 Perfs w/JSPF _____
Notch @ 7613-1/2
Press Tstd _____ PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 13M gal wtr, Sand: 3 M # 20/40 Mesh
rac Rate _____ BPM Frac Pressure _____ PSI ISIP _____ PSI
Comments Screened out. Tested Zones 2 & 3 @ TSTM. Abandoned w/CIBP.

- CASING REPAIR RECORD -

Depth of Leak _____, # of squeezes required ___, # of sx used _____
Cathodic Protection? Yes ___ No ___ Date Installed _____

Comments 1. 5-14-62 Sqzd openhole w/200 sxs.
2. Left CIPB @ 7580'.
3. 7-23-65 Set HEW Model D @ 7315'. Hydrotested tbg.
4. Mesaverde produces up casing - tbg annulus.
5. Dakota IBHP = 2522 PSI.
6. $160,000 to deepen & dual.

Prepared By: PAD Date: 2-1-84 Verified By: Date:
P. A. Doyle

Well Name Florance 19 Unit H Sec 3 T 30 R 9

- COMPLETION & WORKOVER RECORD -

Zone #4 - Formation Dakota Date 9/62 Perfs w/JSPF 1 hole, 7563, 7464, 7559, 7554, 7529, 7520, 7515, 7511, 7500, 7486. 2 JSPF: 7560-555, 7531-29, 7518-13.
Press Tstd _____ PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 28 M gal wtr, Sand: 22M # 40/60 Mesh
Frac Rate 22 BPM Frac Pressure 4550 PSI ISIP 3400 PSI
Comments

Zone # 5 - Formation Dakota Date 9/62 Perfs w/JSPF 7487-86, 7465-63, 2 SJPF
Press Tstd _____ PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 27 M gal wtr, Sand: 20 M # 40/60 Mesh
Frac Rate 24 BPM Frac Pressure 4200 PSI ISIP 3000 PSI
Comments

Zone # 6 - Formation Dakota Date 9/62 Perfs w/JSPF 7425-41, 2 JSPF
Press Tstd _____ PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 52 M gal wtr, Sand: 30 M # 20/40 Mesh
Frac Rate 22 BPM Frac Pressure 4100 PSI ISIP 2700 PSI
Comments

Zone #7 - Formation Dakota Date 9/62 Perfs w/JSPF 2 JSPF; 7362-60, 7354-48, 7340-38.
Press Tstd ___ PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 26 M gal wtr, Sand: 15M # 20/40 Mesh
Frac Rate 27 BPM Frac Pressure 4000 PSI ISIP 2400 PSI
Comments

Zone # 8 - Formation MV Date 11/62 Perfs w/JSPF 1 JSPF; 5326, 5307, 5288, 5272, 5242, 5238, 5234, 5229, 5228, 5224, 5219, 5190, 5183, 5158, 5112.
Press Tstd 4000 PSI, Spot Acid - Type _____ Gallons _____ BDISIP -0-
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 83 M gal wtr, Sand: 75 M # 20/40 Mesh
Frac Rate 37 BPM Frac Pressure 3500 PSI ISIP -0- PSI
Comments

Zone # 9- Formation MV Date 11/62 Perfs w/JSPF 1 JSPF: 5096, 5084, 5079, 5049, 5042, 5034, 5028, 5009, 4998, 4950, 4941, 4900, 4930, 4885, 4878.
Press Tstd 3850 PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 46 M gal wtr, Sand: 45M # 20/40 Mesh
Frac Rate 34 BPM Frac Pressure 3600 PSI ISIP -0- PSI
Comments
Zone #10 - Formation MV Date 11/62 Perfs w/JSPF 1 JSPF, 4861, 4849, 4820, 4829, 4807, 4801, 4793, 4786, 4749, 4723, 4712, 4778, 4738, 4707, 4700, 4755.
Press Tstd 3700 PSI, Spot Acid - Type _____ Gallons _____ BDISIP _____
Acid: Vol. & Type _____, # balls ___, Rate ___ BPM, Press. ___ PSI
Frac: Fluid Volume & Type 58 M gal wtr, Sand: 60M # 20/40 Mesh
Frac Rate 37 BPM Frac Pressure 3600 PSI ISIP -0- PSI
Comments

Prepared By: _____ Date: _____ Verified By: _____ Date: _____

NEW MEXICO OIL CONSERVATION COMMISSION

GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
Tenneco Oil Company	Mesaverde	San Juan

Address	TYPE OF TEST – (X)	Scheduled [X]	Completion [ ]	Special [ ]
P.O. Box 3249, Englewood, CO 80155				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT/BBL
Florance	19	H	3 .	30	9	5/28/85	F	N/A	400		24	0	42.8	0	14.23	0

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Ursula Sedgwick
(Signature)

Administrative Supervisor
(Title)

(Date)

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
Tenneco Oil Company	Dakota	San Juan

Address	TYPE OF TEST - (X)	Scheduled [X]	Completion [ ]	Special [ ]
P.O. Box 3249, Englewood, CO 80155				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
Florance	19	H	3	30	9	5/28/85	F	N/A	730		24	0	42.8	0	72.73	0

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Venita Sanchez
(Signature)

Administrative Supervisor
(Title)

(Date)

FLORANCE 19

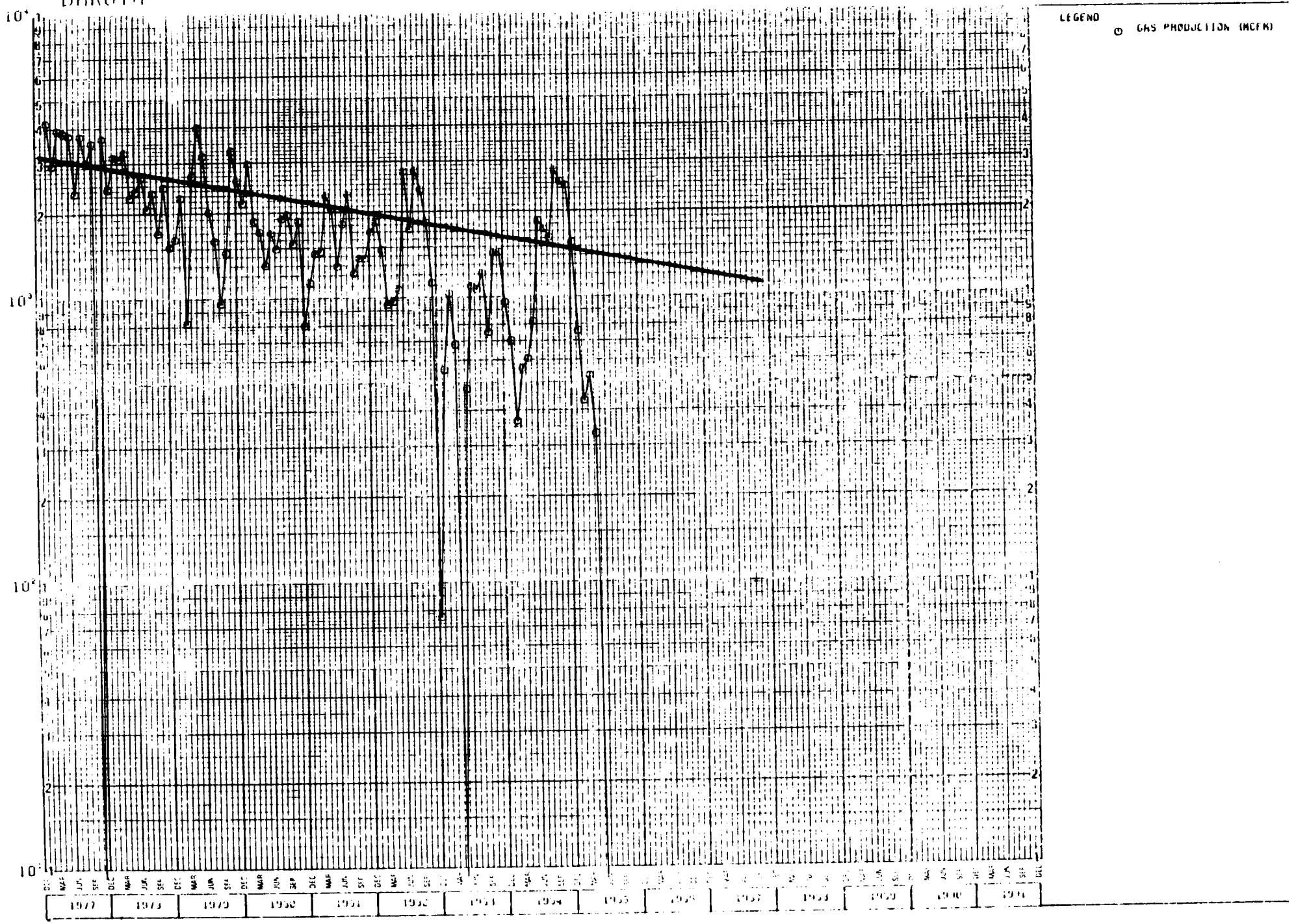
DETERMINATION OF ALLOCATION PERCENTAGES

The decline rates and reserve estimate for the Mesaverde and Dakota are indicated below:

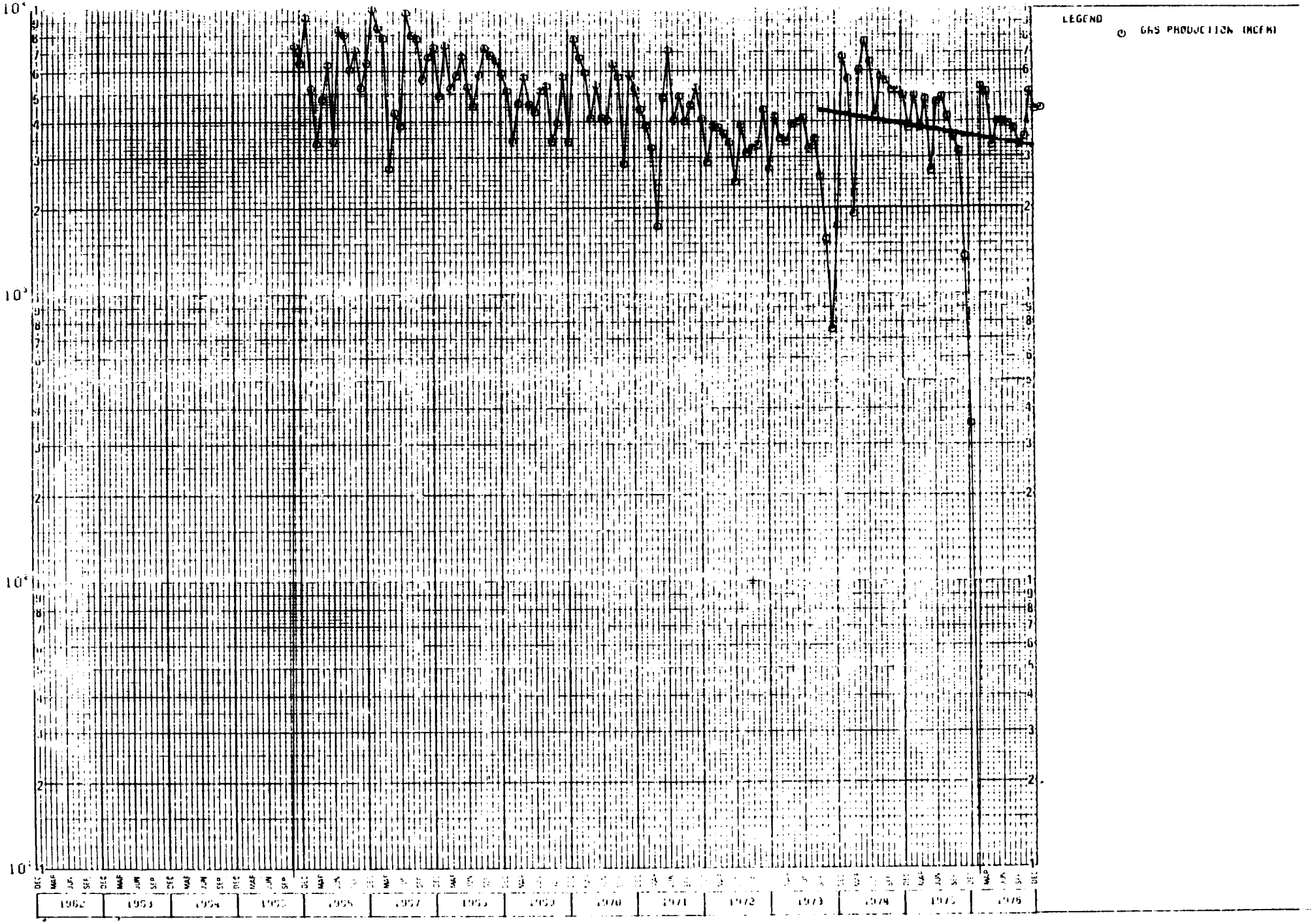
	DECLINE PERCENTAGE	REMAINING RESERVES
MESAVERDE	6%	1.2 BCF
DAKOTA	9%	166.0 MMCF

0353

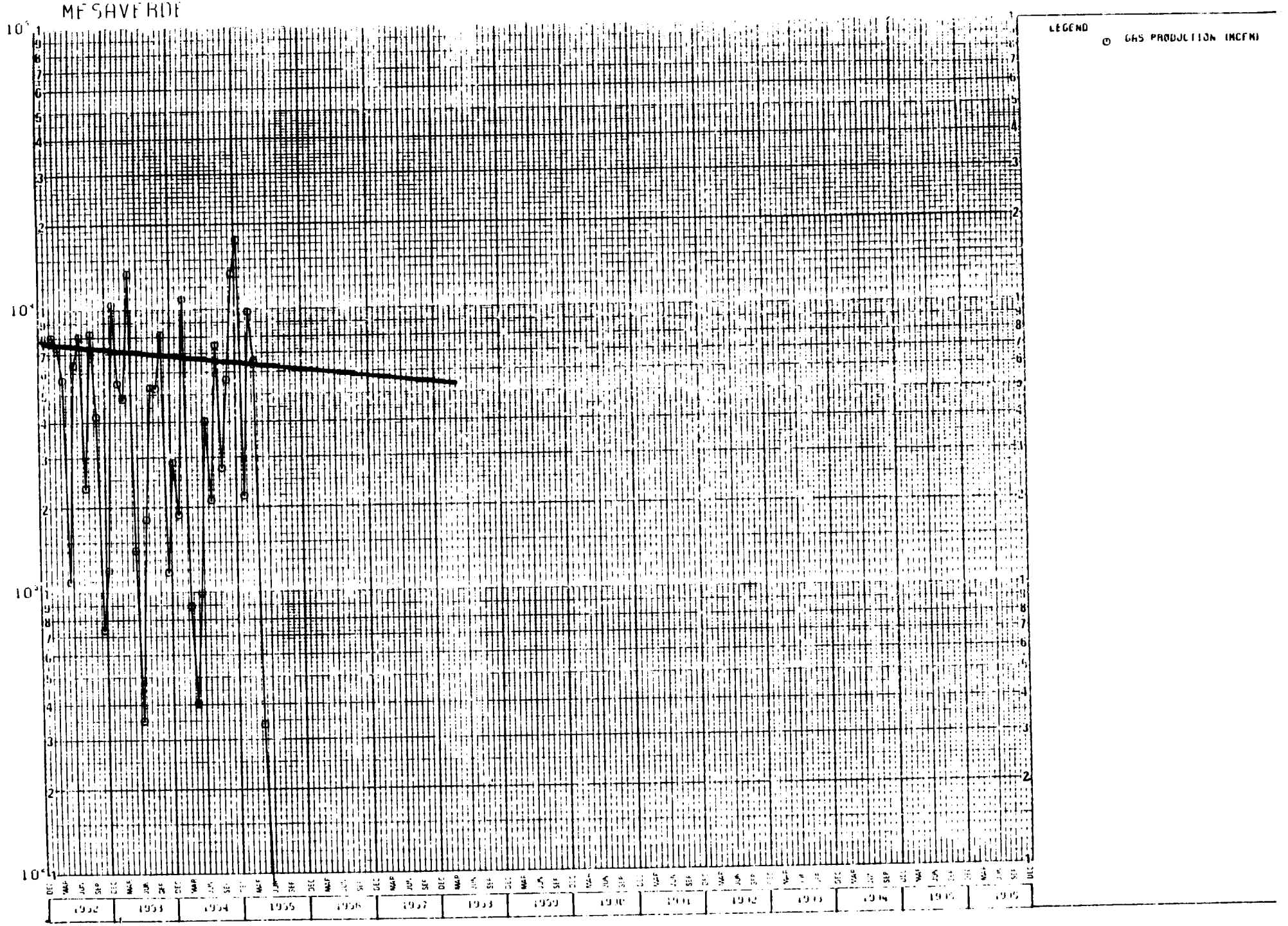
FLORANCE 19
03UN0019W03H
DAKOTA



FLORANCE 19
030N009W03H
DAKOTA



FLORANCE 19
030N009W03H
MESAVERDE



FLORANCE 19
030N009W03H
MESAVERDE