

DINERO OPERATING COMPANY

Application for Hardship Gas  
Well Classification

RECEIVED

MAY 11 1984

OIL CONSERVATION DIVISION

**DINERO**  
**P. O. DRAWER 10505**  
**MIDLAND, TEXAS 79702**

May 9, 1984

*Case 8218*

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Commission  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

Dinero Operating Company respectfully submits an application for Hardship Gas Well Status for the following wells in the Dublin Ranch (Morrow) Field in Eddy County, New Mexico:

1. Big Chief Comm. No. 1 Well
2. Big Chief Comm. No. 4 Well
3. Little Squaw Comm. No. 1 Well
4. Dinero State Comm. No. 1 Well

We are also asking for emergency Hardship Gas Well Status until we receive final approval of our application.

Thank you for your consideration in this matter.

Sincerely Yours,

DINERO OPERATING COMPANY



J. M. Belque  
Petroleum Engineer

JMB/ln

Enclosures

cc: Oil Conservation Commission  
Artesia, New Mexico  
El Paso Natural Gas Company  
All offset operators

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELLS

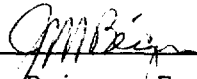
OPERATOR DINERO OPERATING COMPANY CONTACT MITCH BEIQUE  
ADDRESS P. O. DRAWER 10505, MIDLAND, TEXAS 79702 PHONE NO (915) 684-5544  
LEASE BIG CHIEF COMM. WELL NO 1 UT F SEC. 22 TWP -22-S RGE -28-E  
POOL NAME DUBLIN RANCH MORROW MINIMUM RATE REQUESTED 115 MSCF/DAY  
TRANSPORTER & PURCHASER EL PASO NATURAL GAS COMPANY  
ARE YOU SEEKING EMERGENCY "HARDSHIP" CLASSIFICATION FOR THIS WELL? X YES    NO

STATE OF TEXAS §

COUNTY OF MIDLAND §

VERIFICATION

I, J. M. BEIQUE, certify that all the information submitted with this application is true and correct to the best of my knowledge; that one copy has been submitted to the Artesia district office and that notice of the application has been sent to the purchaser, EL PASO NATURAL GAS COMPANY, and that notice of this application has been sent to each offset operator.

  
\_\_\_\_\_  
J. M. Beique, Engineer for  
DINERO OPERATING COMPANY

Subscribed and Sworn to before me, a Notary Public in and for  
Midland County, Texas, this 9th day of May, 1984.

  
\_\_\_\_\_  
Lavonda Norman, Notary Public

My Commission Expires:

1-28-88

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELLS

OPERATOR DINERO OPERATING COMPANY CONTACT MITCH BEIQUE  
ADDRESS P. O. DRAWER 10505, MIDLAND, TX. 79702 PHONE NO (915) 684-5544  
LEASE BIG CHIEF COMM. WELL NO 4 UT N SEC. 15 TWP -22-S RGE -28-E  
POOL NAME DUBLIN RANCH MORROW MINIMUM RATE REQUESTED 115 MSCF/DAY  
TRANSPORTER & PURCHASER EL PASO NATURAL GAS COMPANY  
ARE YOU SEEKING EMERGENCY "HARDSHIP" CLASSIFICATION FOR THIS WELL? X YES    NO

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COUNTY OF MIDLAND §

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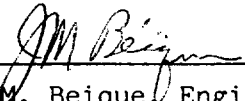
OPERATOR DINERO OPERATING COMPANY CONTACT MITCH BEIQUE  
ADDRESS P. O. DRAWER 10505, MIDLAND, TX. 79702 PHONE NO (915) 684-5544  
LEASE LITTLE SQUAW COMM. WELL NO 1 UT F SEC. 27 TWP -22-S RGE -28-E  
POOL NAME DUBLIN RANCH MORROW MINIMUM RATE REQUESTED 500 MMSCF/DAY  
TRANSPORTER & PURCHASER EL PASO NATURAL GAS COMPANY  
ARE YOU SEEKING EMERGENCY "HARDSHIP" CLASSIFICATION FOR THIS WELL? X YES    NO

STATE OF TEXAS §


COUNTY OF MIDLAND §

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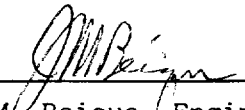
OPERATOR DINERO OPERATING COMPANY CONTACT MITCH BEIQUE  
ADDRESS P. O. DRAWER 10505, MIDLAND, TX. 79702 PHONE NO (915) 684-5544  
LEASE DINERO STATE COMM. WELL NO 1 UT C SEC. 16 TWP -22-S RGE -28-E  
POOL NAME DUBLIN RANCH MORROW MINIMUM RATE REQUESTED 60 MCF/DAY  
TRANSPORTER & PURCHASER EL PASO NATURAL GAS COMPANY  
ARE YOU SEEKING EMERGENCY "HARDSHIP" CLASSIFICATION FOR THIS WELL? X YES    NO

STATE OF TEXAS §

COUNTY OF MIDLAND §

VERIFICATION

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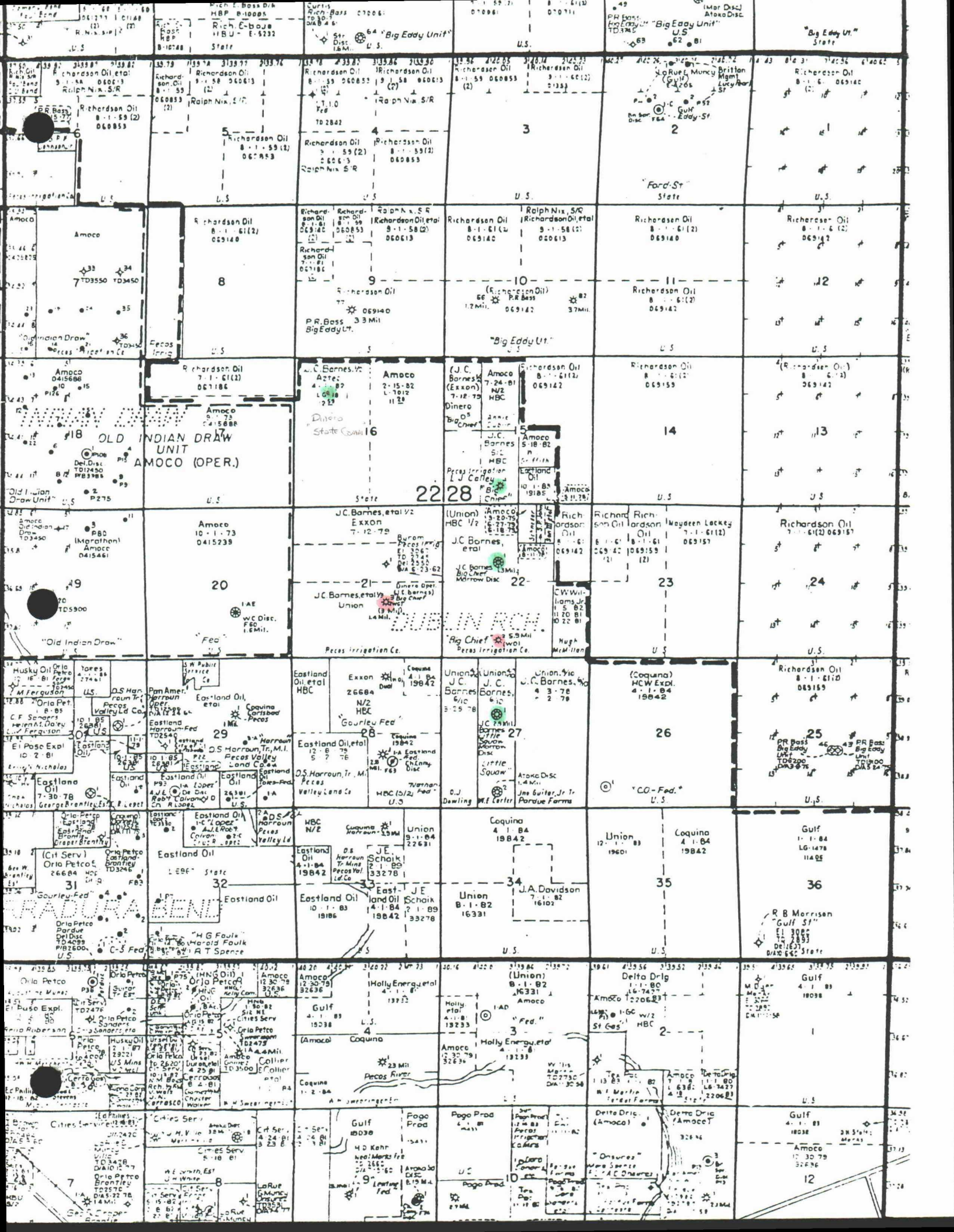
  
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1-28-88



APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELLS

Dinero Operating Company  
Dublin Ranch Morrow Wells,  
Eddy County, New Mexico

ITEM NO. I

1. In July of 1980, El Paso Natural Gas Company (Pipeline Company) shut in our Big Chief Comm. No. 3 Well due to the Market demand of the July 4th. weekend. This well had consistently been flowing over one million standard cubic foot of gas per day from the Morrow formation prior to this period. Subsequent to the five day shut in period, the well produced no significant amount of gas relative to its past history, and a great deal of time and money was spent in an attempt to return production to normal. All of this work was to no avail, and the well was eventually plugged in the Morrow formation and recompleted in the Atoka formation.

The Big Chief Comm. No. 2 Well was originally completed in the Morrow in late 1978. It tested for 2.6 million SCFPD. It was necessary to shut this well in following the acid treatment and subsequent cleanup due to an incomplete pipeline connection. When the line was finally completed over 30 days later, the well could sustain a rate of only 300 MSCFPD. This well was later plugged back in the Morrow formation and recompleted in the Atoka formation.

The estimated loss of production from just these two wells because they had been shut in is over 1500 MMSCF.

We believe that the Morrow production was lost due to the quality of sandstone and associated bentonitic clay material present in the Morrow and Atoka formation in this area. Studies of the Pennsylvanian sandstones in this area indicate an average composition of 85% fine grained quartz, 10% total clay minerals, and 5% other minerals. It is the 10% clay content that exposes these wells to the danger of lost production. This clay is composed of 95% chlorite and 5% illite. Chlorite is a very water sensitive mineral, and it occupies some of the pore space in the sandstone matrix. It has a high irreducible water saturation, and fluid retention of the chlorite during drilling, completion, or as in this case, temporary shut in periods, can lower the relative gas permeability.

These wells produce very little water, but as in the case of the Big Chief Comm No. 3 Well, enough water entered the wellbore to cover the perforations. A swabbing unit was placed on the well and 6 days were spent trying to swab back the well. All the water was recovered from the wellbore, but the damage had been done.

Therefore, we ask that the following wells be classified as HARDSHIP GAS WELLS, so that we will avoid the possibility of losing another Morrow gas well to formation damage.

BIG CHIEF COMM. NO. 1 WELL, BIG CHIEF COMM. NO. 4 WELL, LITTLE SQUAW COMM. NO. 1 WELL, and DINERO STATE COMM. NO. 1 WELL.

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELLS

Dinero Operating Company  
Dublin Ranch Morrow Wells  
Eddy County, New Mexico

ITEM NO. 2

2. Attached are the well histories showing the attempts to rectify production problems in the Morrow zones of the Big Chief No. 2 and Big Chief No. 3 wells. Since the wells which we are applying for hardship gas well status have not as yet been damaged by being shut-in, we are using these two wells to justify our case for the remaining four Morrow wells in this field.

Attached are well histories of the Big Chief Comm No. 2 Well and the Big Chief Comm. No. 3 Well. Also attached are wellbore sketches of the Big Chief Comm. No. 1 Well, Big Chief Comm. No. 4 Well, Little Squaw No. 1 Well, and the Dinero State Comm. No. 1 Well.

## COMPLETION HISTORY ON THE BIG CHIEF #2

January 15, 1979

Rigged D.A. & S. Well Service. Prep to run Gamma Correlation Log.

January 15, 1979

Rigged up Schlumberger and ran Gamma Ray Corr. Log from plug back total depth of 12,655-10,800. Unloaded 404 jts. of tub. on rack, ran 100 jts. of tub. in hole open ended.

January 17, 1979

Ran 401 jts. of tub. in hole open ended. Displaced fresh water with 275 bbls of 2% KCL waer. Pulled 2" tub. Perf. Lower Morrow formation: 12,455-464' 9 shots, 12,360-68' 8 shots, 12,346-56' 10 shots.

January 18, 1979

Ran Tub. with disc. and Otis Packer set @ 12,288'. Dropped bar @ 3:45 p.m. well kicked off, was flowing @ 300,000 cf/day. Shut well in last night. Will flow today and check with swab for fluid and give it acid wash.

January 19, 1979

SITP 2250, flowed well to pit and ran swab to bottom of tubing. No fluid in hole. Well stabilized on 3/4" choke @ 20 PSI, rate 500 MCF/day. Acidized Morrow form. with 3000 gal. MS acid & 5000 SCS of Nitro. Break down press. 9100. Treated @ 6700 PSI @ 5 bbls/min. ISIP 5000 15 min SIP 4300. Flowed well to pit, rate increased to 1.5 MMCF/Day. Still making water.

January 20, 1979

Flowed and cleaned up.

January 21, 1979

Flowed and cleaned up.

January 22, 1979

Will run Otis Plug in Packer set @ 12,288'. Prep to perf. upper Morrow Zones.

January 23, 1979

SITP 3400 PSI, flowed to pit and ran Otis Blanking Plug and set in packer @ 12,280. Released on-off tool and pulled tubing out of hole. Perf. upper Morrow formation from 12,232-42 12,170-75 12,160-64' total of 19 shots.

## COMPLETION HISTORY ON BIG CHIEF #2

January 24, 1979

Ran Otis Perma Latch Packer and on-off tool in hole with 387 jts. of 2" tub. Bottom of Packer 12,255'. Spotted 200 gal of 7½% MS acid over perms. Pulled 8 jts. of tub. and set Packer @ 12,021'. Acidized formation with 200 gal. acid. Break down press. 4900. Pumped into pay @ 4800 @ 2/bbls min. ISIP 3800, 5 min SIP 2200. Swabbed load and acid water to pit for 2 hours, fluid level 7200. Well kicked off and flowed gas and water to pit. Stabilized on 3/4" choke @ 100 psi, rate 1.6 MMCF/day.

January 25, 1979

SITP 3000#, flowed well to pit. unloaded water and stabilized @ 200 psi on 3/4" choke, rate 3 MMCF/day. Flowed well on 7/16" choke @ 550 psi, rate 2.6 MMCF/day. Rigged up Otis and attempted to pull blanking plug out of bottom of packer but have not.

January 26, 1979

Otis cont fishing for blanking plug, retrieved plug @ 10:30 PM. Flowed well to pit on 3/8" choke, flowed water and gas. No rate.

January 27, 1979

Waiting on Tie in.

January 28, 1979

Waiting on Tie in.

January 29, 1979

Waiting on Tie in.

January 30, 1979

Waiting on gas line connection (El Paso Nat. Gas.)

January 31, 1979

Waiting on Gas Line Connection.

February 1, 1979

Waiting on Gas Line Connection.

COMPLETION HISTORY ON THE BIG CHIEF #2

February 2 thru March 24, 1979

Waiting on ElPaso Gas Line connection.

March 24, 1979

Tied in well to ElPaso Line @ 12:00 noon 3500# Shut In press. @ time well was turned on. Flowing 1.871 MMCF.

March 26, 1979

Tied in & flowing.

March 27, 1979

Flowing to ElPaso Line, will have rate later today. Unloading water and waiting on well to stabilize to start 4 point test.

March 28, 1979

Flowing into ElPaso line. Start 4 pt. test if well is stabilized.

March 29, 1979

Open up and flow on larger choke and attempt to unload water.

March 30, 1979

Flow TP 600#, 950 MCF. Crew lay to blow down well. Lease operator will attempt to unload water.

April 1, 1979

Flowing no report

April 2, 1979

Flowing no report.

April 3, 1979

Closed in for pressure buildup and attempting to unload water.

April 4, 1979

TP 450#, Gas 320 MCF. Opened well to atmosphere & blow down for 2 hours & rec. an est. 3 bbl of water. Closed well in for press. build up.

April 5, 1979

Closed in 24 hrs. press. built up to 1300# in 24 hrs. Lease operator left closed for cont. press build up.

COMPLETION HISTORY ON THE BIG CHIEF #2

April 6, 1979

Left well closed for 48 hrs. Built up to 1500#. Opened well to pit and blow down, recovering 0 water. well will probably have to be swabbed off.

April 7, 1979

Shut In.

April 8, 1979

Shut In.

April 9, 1979

Shut In.

April 10, 1979

West Texas Consulting Service ran BHP. Surface press 1777# BHP @ 12,300' 2299#, no fluid.

April 11, 1979

SI BHP 2229# surface tub. press. 1777# Western Co. making up recommendation for treatment.

April 12, 1979

Prep. to acidize well.

April 13, 1979

Re-treat upper zone 6000 gal. 7½% Gelled acid 9000 Cu. ft. Nit. 72 balls Av. treat press. 8500# , 8.4 BPM. Good ball action - ISDP 4800# FST 10 min. 4250# flow to pit, well died, rig up to swabb. Shut Down.

April 14, 1979

Swabbing load back, released unit, well not coming back.

April 15, 1979

Attempting to flow well back.

April 16, 1979

T.P. 2060# flow to pit, unload very little water. Stabilized on ½" choke, 160# TP, Rate 850 MCF.

April 17, 1979

Shut In.

COMPLETION HISTORY ON THE BIG CHIEF #2

April 18, 1979

Shut In, tie back into ElPaso line this AM.

April 19, 1979

TP 2210# , open well to sales line, press came down to 500#, open to 3/4" Choke.

April 20, 1979

On line, flowing 583 MCF.

April 21, 1979

Flowing.

April 22, 1979

509 MCF 6 bbls. of fluid, TP 500#.

April 23, 1979

501 MCF 6 bbls. of fluid, TP 450#.

April 24, 1979

On Line.

April 25, 1979

Flow to line, est. 371 MCF.

April 26, 1979

Flowing to sales line.

April 27, 1979

Flowing 401 MCF.

April 28, 1979

Flowing into line.

April 29, 1979

Flowing into line.

May 1, 1979

Flowing ElPaso to run 4 pt. test as soon as possible start 24 hrs. Shut In. 5/1/79 28th - 29th 376 MCF.

COMPLETION HISTORY ON THE BIG CHIEF #2

May 2, 1979

Starting 4 pt. test @ 9:30 am.

May 3 1979

Run 4 pt. test by ElPaso .

COMPLETION HISTORY BIG CHIEF NO. 3

June 1980

Produced and sold 34,000 MSCF gas, approx. 1130 MCF/day.

July 4, 1980

ElPaso Pipeline called to inform us Bug Chief #3 had to be shut in.

July 5, 1980

Shut In.

July 6, 1980

Shut In.

July 7, 1980

Shut In.

July 8, 1980

Shut In.

July 9, 1980

Shut In.

July 10, 1980

Well back on line.

July 11, 1980

No Production.

July 12, 1980

No Production.

July 13, 1980

No Production.

July 14, 1980

No Production.

COMPLETION HISTORY ON THE BIG CHIEF #3

July 15, 1980

No Production.

July 16, 1980

No Production.

July 17, 1980

RU Mack Chase Swab Unit. Ru blow down line and started swabbing.

July 18, 1980

Bled well down. Run swab to 11,500'. Fluid level approx. 9000'. Swabbed dry, then made one swab run every hour. Shut Down.

July 19, 1980

Bled well down, ran swabb, swabbed well dry and shut down.

July 20, 1980

Shut Down.

July 21, 1980

Bled well down. Started swabbing.

July 22, 1980

Bled well down, swabbed well dry, shut down.

July 23, 1980

Bled well down, swabbed well dry. Acidized with 3500 gallons 7.5% MS acid. with corrosion inhibitor and clay stabilizers. Maximum pressure 7000 psig. Min. pressure 3400 psig. Avg. pressure 5000 psig. Average rate 3.0 BPM. ISIP 2200# 15 min. SIP 500##. 134 bbls. of load to recover. Good ball action indicated. Start swabbing, recovered, 30 bbls load. 104 bbls to recover.

July 24, 1980

Swabbing initial fluid level 7700'. Recovered 66 bbls. some gas. Final fluid level 11,800'. Rec. 66 bbls. 38 bbls to recover.

July 25, 1980

450 psig on tubing. Bled well down. Swabbed dry.

### COMPLETION HISTORY ON THE BIG CHIEF #3

July 26, 1980

Tubing pressure 750 psig. Bled well down. Initial fluid level at 6000'. Swabbed dry.

July 28, 1980

Bled well down. Swabbed dry. Total load recovered/ Put on line at 300#. Tubing pressure up to 900# 2 hours later, decreasing to 350# . Zero sales that night.

July 29, 1980

Tubing pressure 400 psig. Bled well down in 10 min. Initial fluid level at 6000'. Fluid level stayed around 7500' all day..

July 30, 1980

Tubing pressure 1400 psig. Bled well down. Initial fluid level at 6000' Swabbed all day with fluid level around 7500'. Shut Down.

July 31, 1980

Swab all day. Shut Down.

August 1, 1980

Swab all day. Shut Down.

August 2, 1980

Bled well down, swabbed well dry. put well on line, Shut Down.

August 3, 1980

Well on line.

August 4, 1980

Tub. pressure 400 psi. Bled well down. Initial fluid level 6000'. Swabbed well dry. Shut down. Rig down.

August 5, 1980

Tubing pressure 1500 psig. Bled well down. Made two swab runs. Shut Down.

August 6, 1980

Tub. press. 400 psi. Bled well down. Swabbed well dry. Rig Down, Cleaned location. Put well back on line.

OPERATOR DINEAR OPERATING COMPANY

LEASE BIG CHIEF WELL NO 1

LOCATION 1980 FNL & 1980 FWL

COUNTY EDDY

ELEVATION DF GL 3095'

CURRENT COMPLETION INTERVAL 12150-12671

FIELD W/LOCAT-MORROW

SEC 22 <sup>Township</sup> BLK 22-S <sup>Range</sup> SURVEY 28-E

STATE NEW MEXICO

TD 12733' PBDT 8-23- COMPL 197  
(Da)

AVAILABLE DATA

LOGS. DUAL LATERAL, COMPENSATED NEUTRON,

SAMPLE LOGS.

CORE: SIDEWALL-DELAWARE

DST:

PVT:

BHP:

13 3/8"-54 # Set @ 340' - 375 SX. Class C Cement

10 3/4"-40.5 # Set @ 2560' - 750 SX. Cement

5 1/2"-17.20 # Set @ 12,733' - 1450 SX. Cement

Perfs:	12150-59	7 shots	12551-56	4 shots
	12216-26	8 shots	12652-64	12 shots
	12270-74	4 shots	12670-71	4 shots
	12322-36	14 shots		
	12507-14	7 shots		

Acid:	12150-59	1500 gals.	7 1/2%
	12216-26	Frac. F/O.	20,000 gals.
	12270-74	2000 gal.	10%
	12322-36	2000 gal.	10%

Packer Set @ 12106.

2 3/8" Tubing @  
12,106, + Packer

12150-59  
(7 shots)

12216-26  
(8 shots)

12270-74  
(4 shots)

12322-36  
(14 shots)

12507-14  
(7 shots)

12551-56  
(4 shots)

12652-64 (12 shots)

12670-71 (4 shots)

5 1/2"  
T.D. 12,733'

(FUTURE WELL WORK)

OPERATOR: DINEAR OPERATING COMPANY

LEASE NAME. BIG CHIEF WELL NO 1

IP: AOF 1.310 MMCF/D

CURRENT STATUS: Flowing Gas-Sold to El Paso Natural  
Gas Company

OPERATOR DINERO OPERATING COMPANY  
LEASE BIG CHIEF WELL NO 4 FIELD DUGLIN RANCH - MORADO  
LOCATION 1980 FWL & 660 FSL SEC 15, T-22-S, R-28-E  
COUNTY Sooty STATE NEW MEXICO  
ELEVATION \_\_\_\_\_ DF \_\_\_\_\_ GL 3101 TD 12,720' PBD 12,425' COMPL 10-18-71 (Da)  
CURRENT COMPLETION INTERVAL \_\_\_\_\_

AVAILABLE DATA

LOGS. Gamma Ray - Sonic - Dual Laterolog

SAMPLE LOGS.

CORE: NONE

DST: \_\_\_\_\_

PVT: \_\_\_\_\_

BHP: \_\_\_\_\_

437' Depth of 13 3/8" casing - 48# - Set with 550 SX  
of Class C. 270 c.c.

10 3/4" Set at 2,660' - 40.5# - Set with 415 SX bits,  
200 class C.

7 5/8" Set at 11,197' - 29-33# - Set with 1600 Halb.  
bits, 300 class H.

4 1/2" - Set at 12,720' - 11.6# - Set with 250 Sacks  
Class H.

PERFS: 12,000-008 - 8 shots 12,406-10 - 4 shots

12,126-44 18 shots 12,408-18 - 10 shots

12,206-10 4 shots

12,248-54 6 shots

12,260-64 4 shots 1 shot per Ft. 54-1/4"  
holes.

ACID: 12,000-12,418' - 32,000 gal. gelled H<sub>2</sub>O

8,000 gal. CO-2

2,900 #0 Sand

3,000 gal. ACID.

7 5/8" Set at  
11,197'

Packer and  
2 3/8" Tubing at  
11,713'

PERFS:

12,000-08 - 8 shots

12,126-44 - 18 shots

12,206-10 - 4 shots

12,248-54 - 6 shots

12,260-64 - 4 shots

(FUTURE WELL WORK)

This Packer is a Otis W.B. Perma Packer.

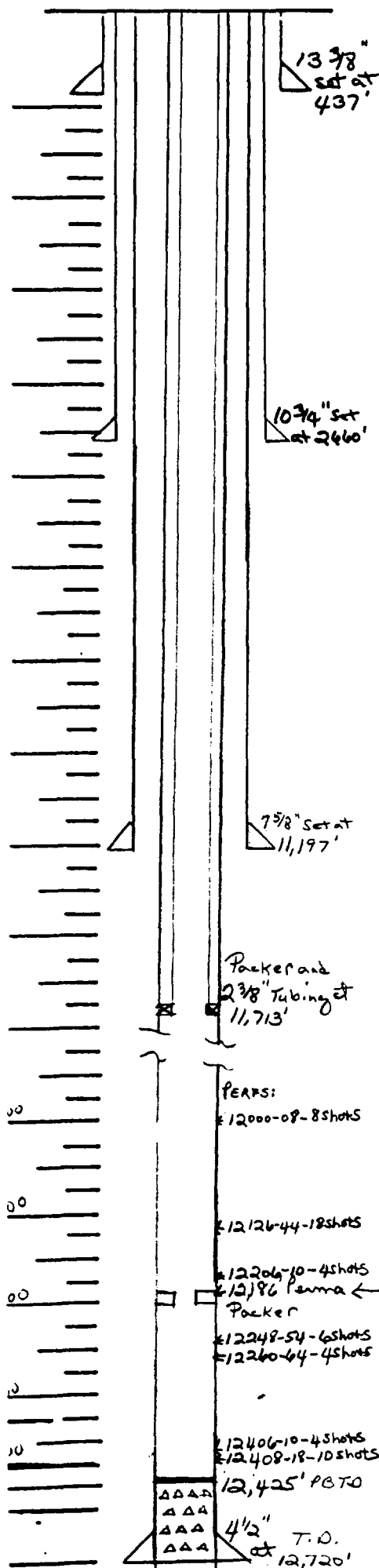
OPERATOR: DINERO OPERATING COMPANY

LEASE NAME: BIG CHIEF

WELL NO 4

IP: AOF 2.505 MMCF/DAY

CURRENT STATUS: Flowing Gas-Sold to EL PASO  
NATURAL GAS COMPANY



OPERATOR Dinero Operating Co.  
LEASE Little Squaw Comm WELL NO #1  
LOCATION 1980 FWL & 1980 FNL  
COUNTY Eddy  
ELEVATION DF GL 3074'  
CURRENT COMPLETION INTERVAL 12,198'-12,490'

FIELD DUBLIN RANCH MORROW  
SEC 27, T-22-S, R-28-E  
STATE New Mexico  
TD 12,745' PBTD Aug. 15, 1978  
COMPL 1978  
(Da)

AVAILABLE DATA

LOGS. Density + Sonic (Schlumberger)

SAMPLE LOGS.

CORE: sidewall / Delaware

DST:

PVT:

BHP:

MORROW FORMATION

13 3/8" - 54# set @ 39' - 300 sxs. class "C" cement.

8 5/8" - 24-32# set @ 3752' - 1450 sxs cement.

5 1/2" - 17-20# set @ 12,745' - 1450 sxs cement

Perfs: 12198 to 12213 11 shots.

12222 to 12232 10 shots

12483 to 12490 7 shots

1 shot per ft. - 28 - 1/4" holes

Acid: 12198 - 213

12222 - 32 20 shots - 500 gal. 7 1/2% Acid.

Packer set @ 12094

2 3/8" Tub @  
12,094 + Packer

← 12,198 - 213  
11 shots

← 12,222 - 232  
10 shots

← 12,483 - 490  
7 shots

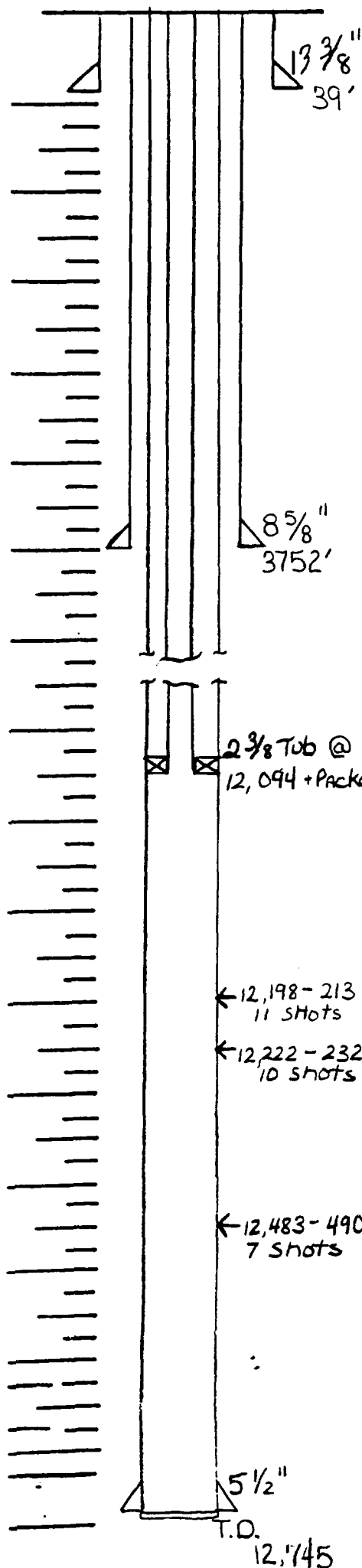
(FUTURE WELL WORK)

OPERATOR: Dinero Operating Co.

LEASE NAME. Little Squaw Comm WELL NO 1

IP: AOF 5.360 MMCFD

CURRENT STATUS: Flowing Gas - Sold to El Paso  
NATURAL GAS COMPANY



OPERATOR

Dineco Operating Co.

LEASE

Dineco State Comm WELL NO 1

LOCATION

660 FNL &amp; 1980 FNL

COUNTY

Eddy

ELEVATION

DF

GL 3082.6'

FIELD

Dublin Ranch-McCrea

SEC 16-

T-22-S, R-28-E

STATE

NEW MEXICO

TD

12,690' PBTD 2450 COMPL 1982 NOV. 5 Da

CURRENT COMPLETION INTERVAL

## AVAILABLE DATA

LOGS. Density Neutron Gamma Ray, Dual  
Late log Gamma Ray

SAMPLE LOGS.

CORE: NO

DST:

PVT:

BHP:

16" - 65# ft @ 450' - 550 sx CL.C. 2% CC circ.

10 3/4" - 40.5# ft @ 2595' - 11000 sx. Halb. Lt. 200 sx CL.C.

7 5/8" - 2640# ft - 39# @ 10,727' - 350

4 1/2" - 12,677' - 350

PERFS: 11,951' to 12,128' 0.29 39 HOLES

ACID: 11,951' - 12,128' - 9000 gals

11,951' - 12,128' - 19,000 gals + 19,300# sand frac

PACKER: 11,555

(FUTURE WELL WORK)

OPERATOR:

Dineco Operating Co.

LEASE NAME

Dineco State Comm

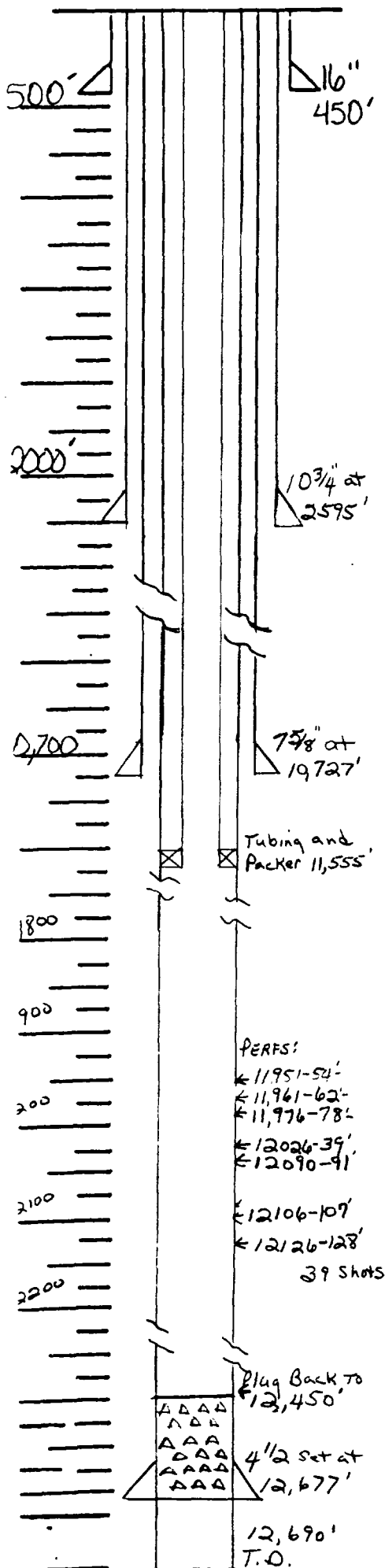
WELL NO

1

IP:

CURRENT STATUS:

Flowing Gas - sold to El Paso Natural Gas company



APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELLS

Dinero Operating Company  
Dublin Ranch Morrow Wells  
Eddy County, New Mexico

ITEM NO. 3

3. Assuming that the Big Chief Comm. No. 2 would have produced at 75 percent of its maximum flowing rate of 2.6 MMCFPD, prior to being shut in for lack of a pipe line connection, it would have produced a total of 1.18 BCF more gas than the actual production from that zone. This represents not only a loss of energy reserves, but also a loss of over four million dollars in gross revenue from this one well.

The waste of production from the Big Chief Comm. No. 3 Well is not as dramatic, but still considerable. If production had not been so drastically curtailed in the Morrow zone due to damage occurring while the well was shut in, an additional 416 million cubic feet of gas could have been produced.

The production curves for these wells are also attached, showing the Morrow production and the basis for estimating lost reserves.

The completion history of these two example wells shows that no amount of swabbing or acidizing will return the original rate of production once the damage is done. The wells will not return to normal production if for any reason the formation has been damaged because of encroaching water.

1,000,000

Dinero Operating Company  
Big Chief Comm. No. 2  
Dublin Ranch (Morrow)/(Atoka)  
Eddy County, New Mexico  
N.M.# P.U.#17086  
El Paso Natural Gas/Permian  
T.D. 12,740' PBTD: 12,024'

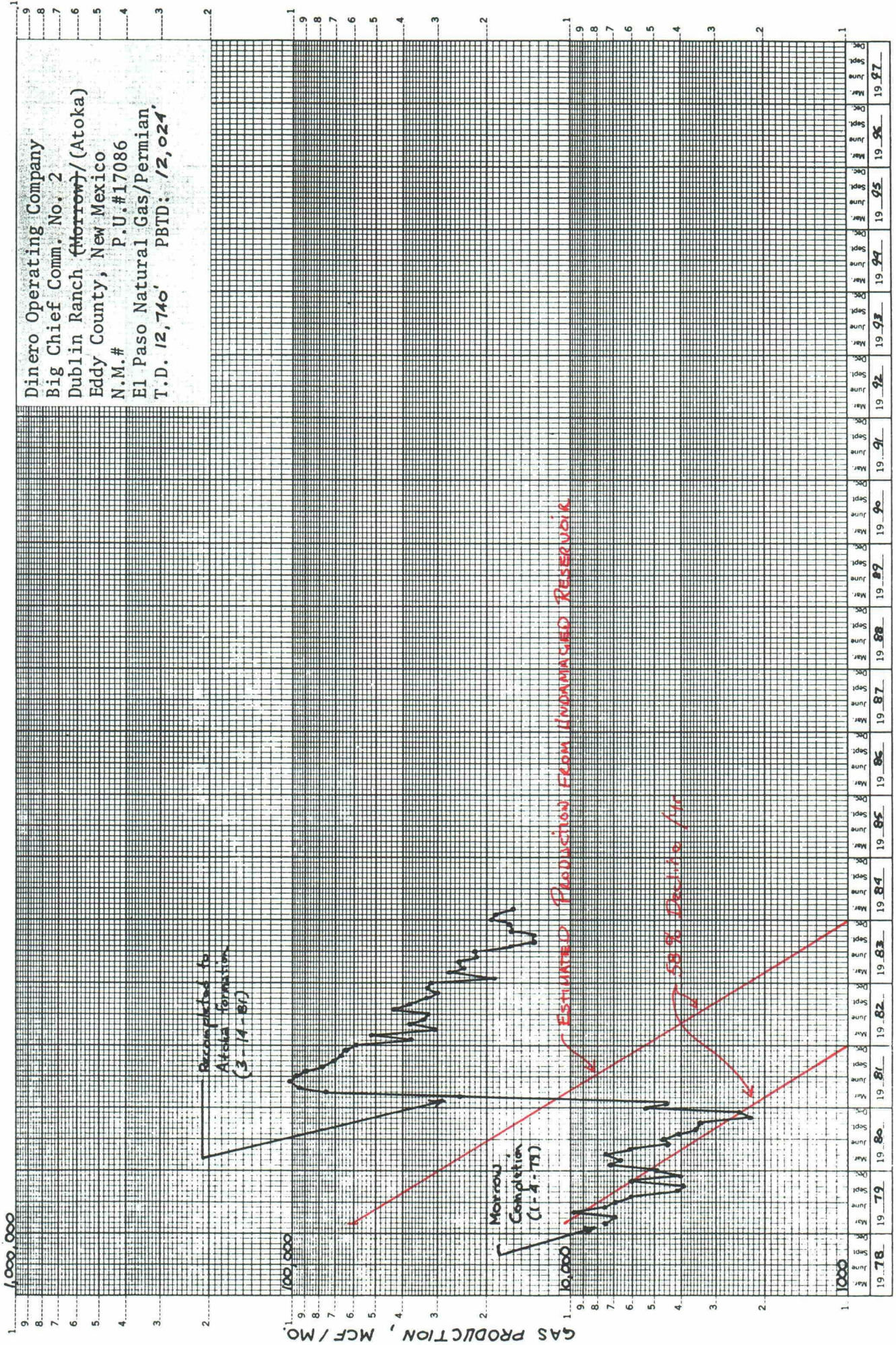
Recompleted to  
Atoka formation  
(3-14-81)

Morrow  
Completion  
(1-4-79)

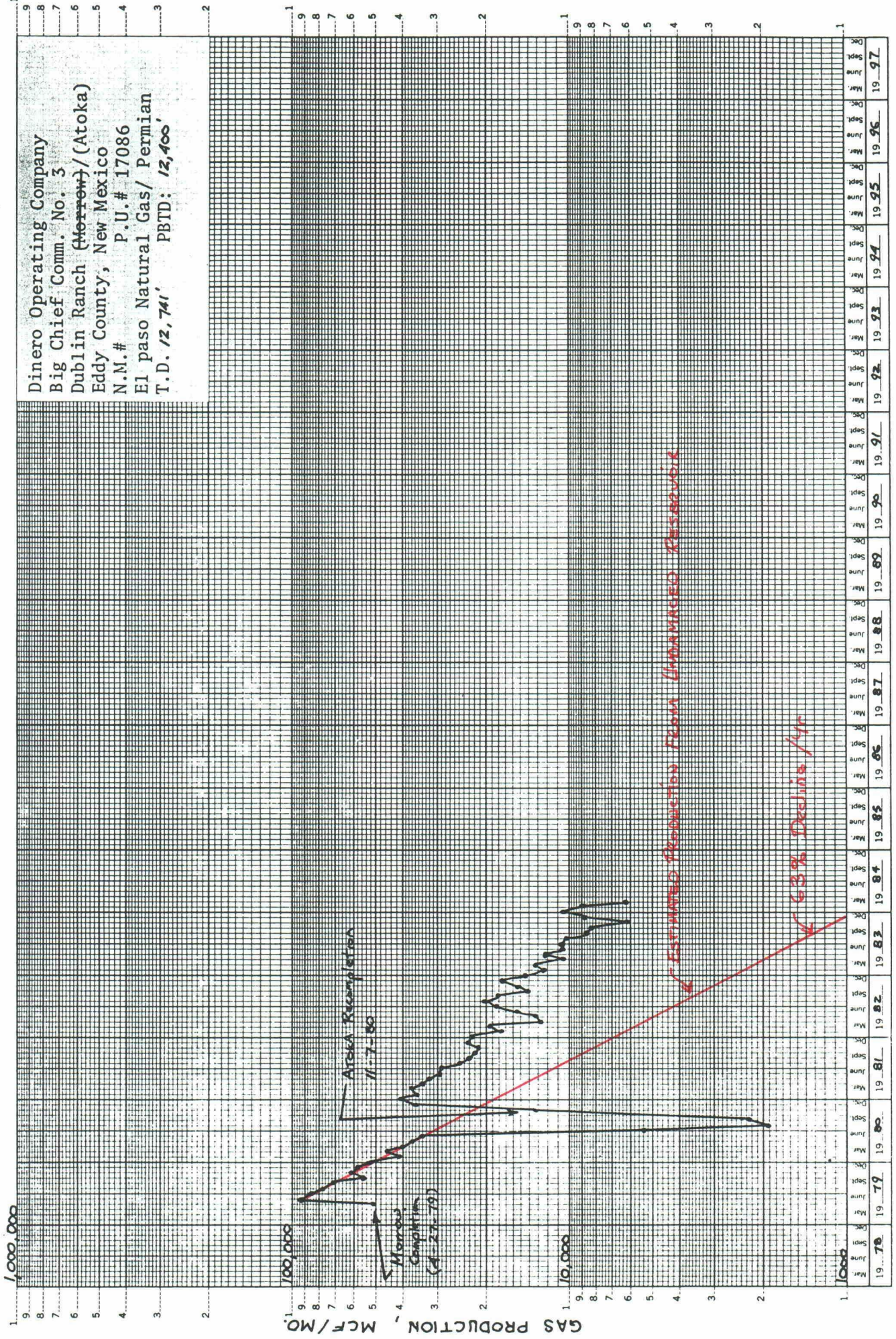
ESTIMATED PRODUCTION FROM UNDAMAGED RESERVOIR

58% Decline / yr

GAS PRODUCTION, MCF / MO.



Dinero Operating Company  
 Big Chief Comm. No. 3  
 Dublin Ranch (Hewitt)/(Atoka)  
 Eddy County, New Mexico  
 N.M.# P.U.# 17086  
 El Paso Natural Gas/ Permian  
 T.D. 12,741' PBTD: 12,400'



APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELLS

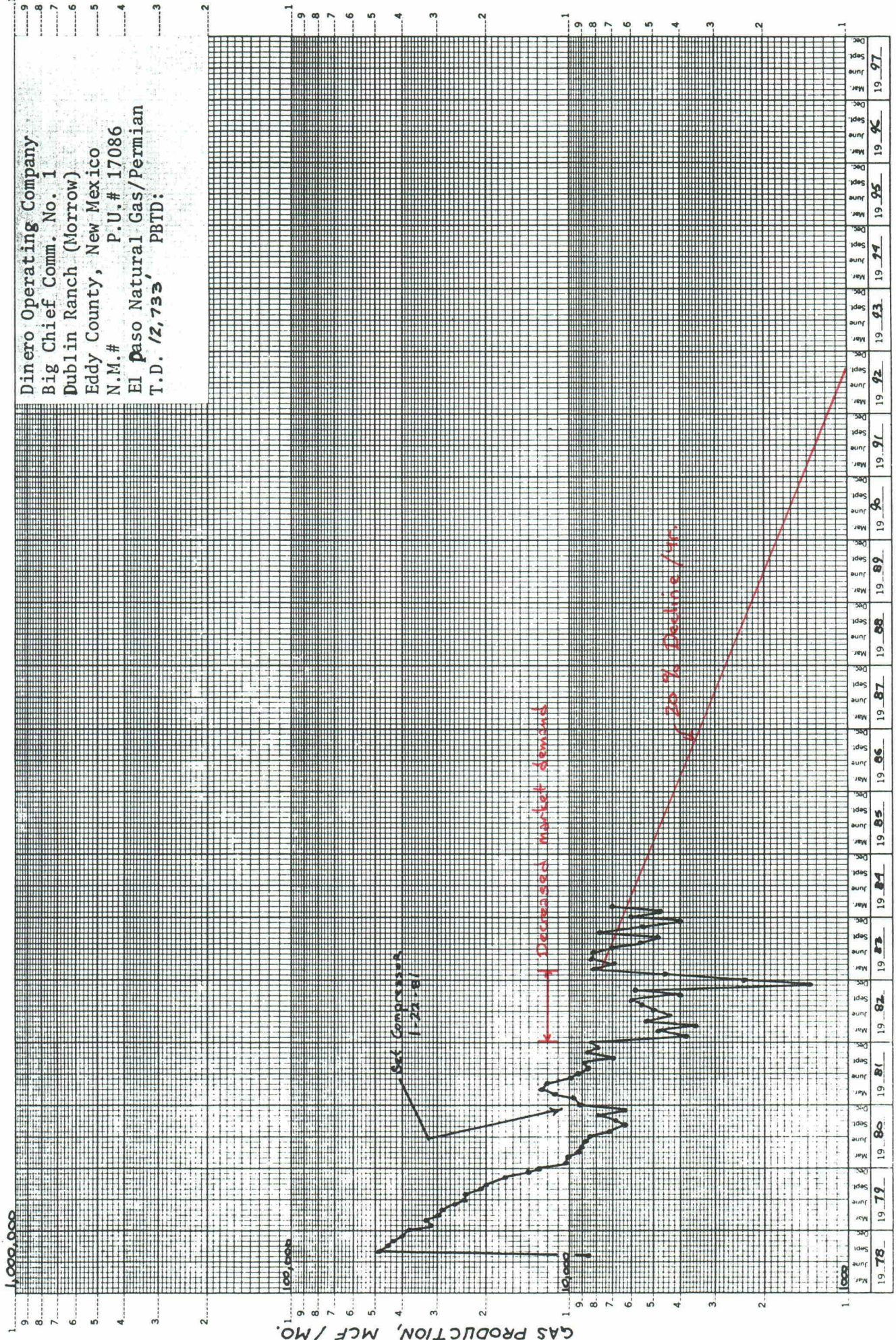
Dinero Operating Company  
Dublin Ranch Morrow Wells  
Eddy County, New Mexico

ITEM NO. 4

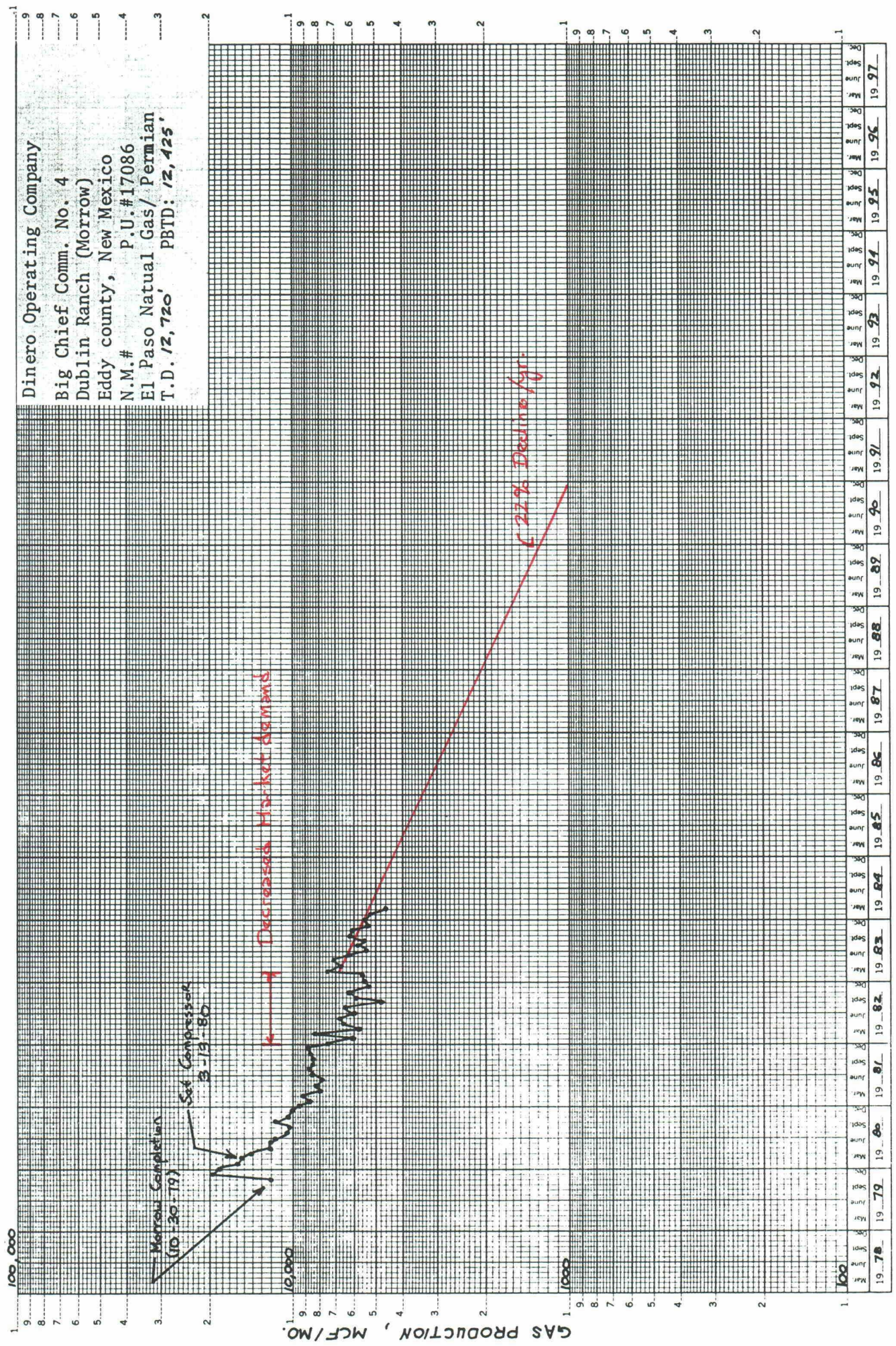
4. Failure to obtain a HARDSHIP GAS WELL status for the Morrow wells in question would lead to premature abandonment and loss of reserves as follows:

BIG CHIEF COMM. NO. 1	304 MMCF
BIG CHIEF COMM NO. 4	225 MMCF
LITTLE SQUAW COMM. NO. 1	1065 MMCF
DINERO STATE COMM. NO. 1	21 MMCF

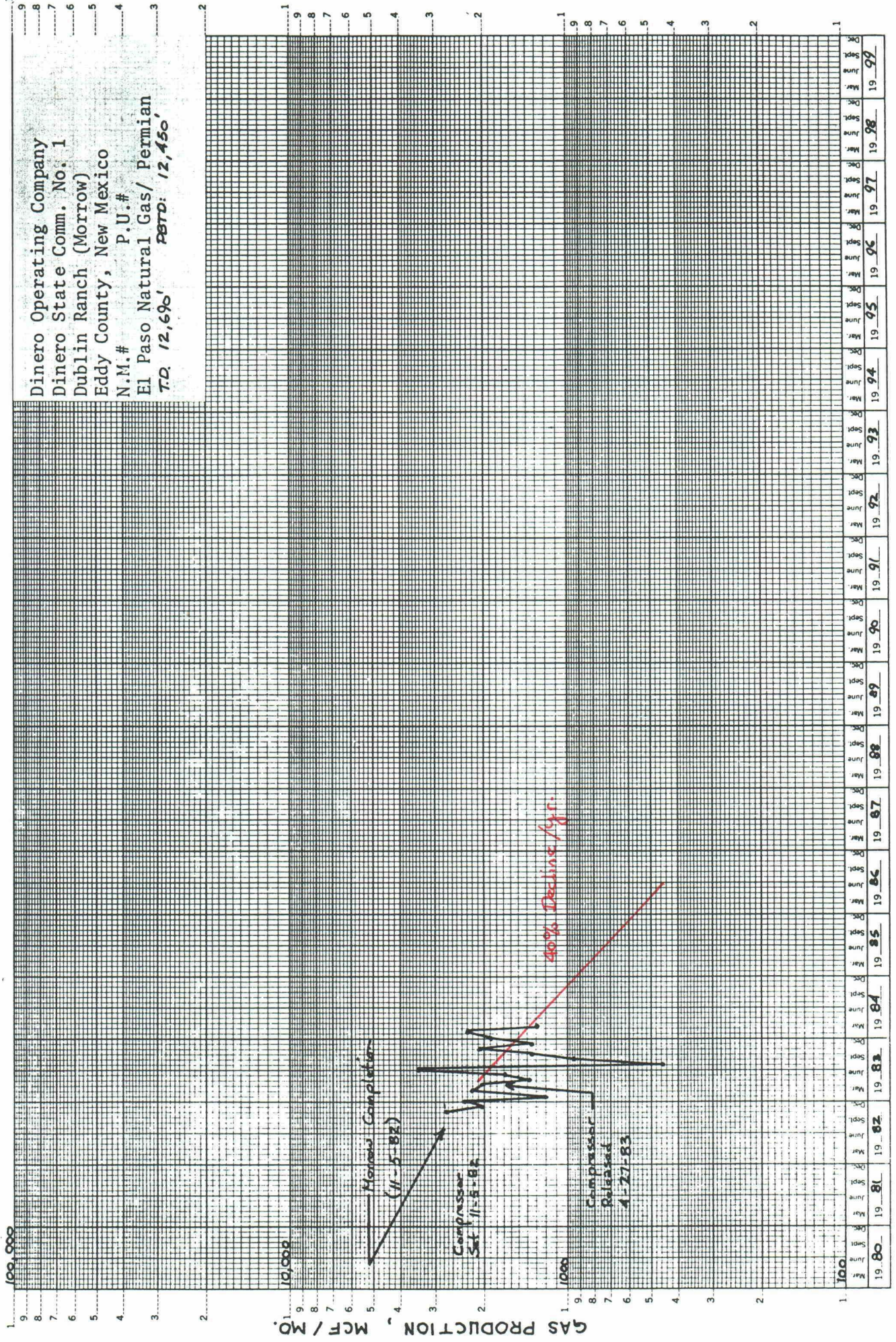
Dinero Operating Company  
 Big Chief Comm. No. 1  
 Dublin Ranch (Morrow)  
 Eddy County, New Mexico  
 N.M.# P.U.# 17086  
 El Paso Natural Gas/Permian  
 T.D. 12,733' PBTD:



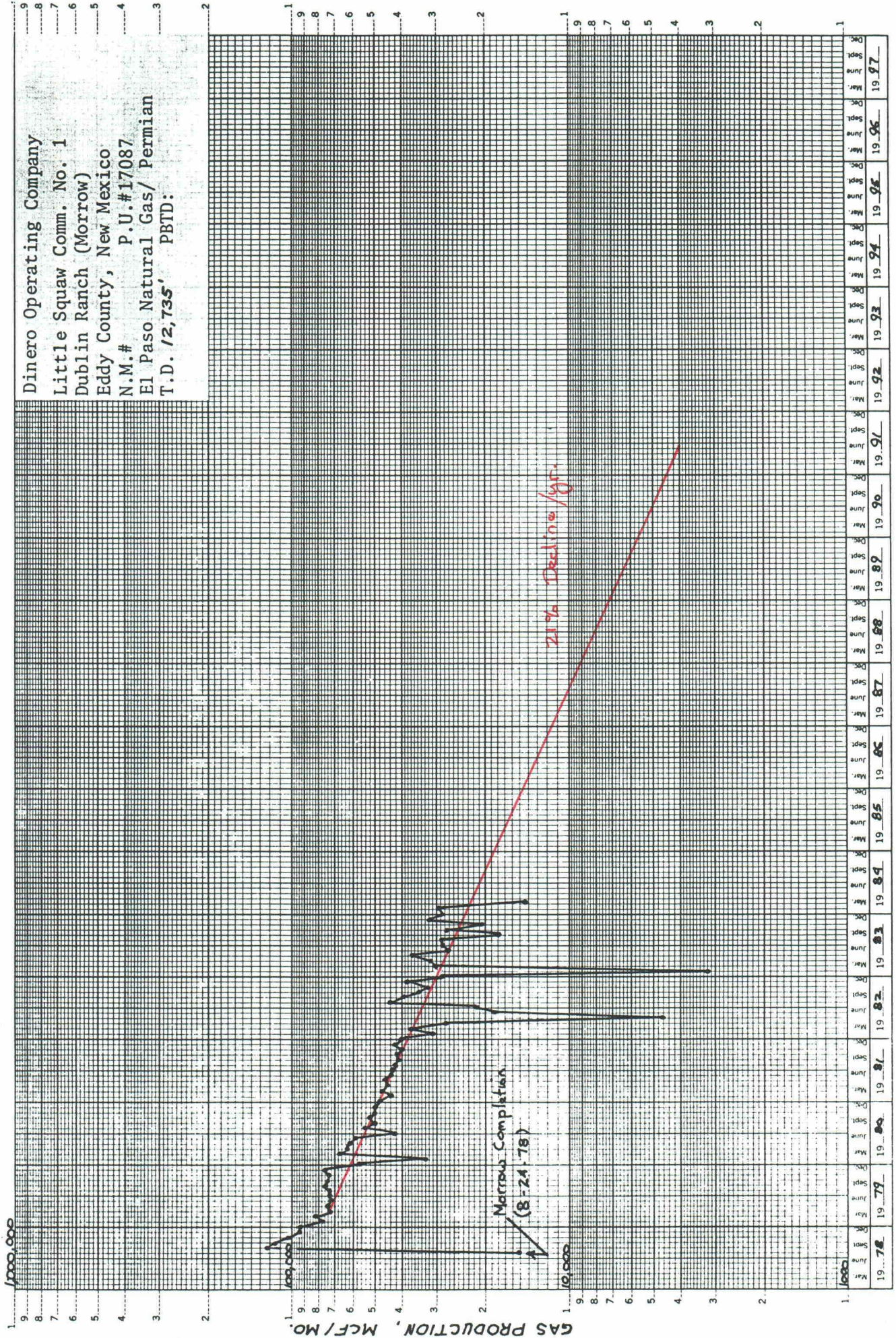
Dinero Operating Company  
 Big Chief Comm. No. 4  
 Dublin Ranch (Morrow)  
 Eddy county, New Mexico  
 N.M.# P.U.#17086  
 El Paso Natural Gas/ Permian  
 T.D. 12,720' PBD: 12,425'



Dinero Operating Company  
 Dinero State Comm. No. 1  
 Dublin Ranch (Morrow)  
 Eddy County, New Mexico  
 N.M.# P.U.#  
 El Paso Natural Gas/ Permian  
 T.D. 12,690' P.D. 12,450'



Dinero Operating Company  
 Little Squaw Comm. No. 1  
 Dublin Ranch (Morrow)  
 Eddy County, New Mexico  
 N.M.# P.U.#17087  
 El Paso Natural Gas/ Permian  
 T.D. 12,735' PBTD:



APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELLS

Dinero Operating Company  
Dublin Ranch Morrow Wells  
Eddy County, New Mexico

ITEM NO. 5

5. Minimum sustainable producing rate as determined by well production history:

BIG CHIEF COMM NO. 1 WELL 115 MSCF/DAY  
The production curve for this well shows that when the well produced less than 3000 MCF/MONTH or 100 MCF/DAY, it took more than two months for the well to recover its full production capability.

BIG CHIEF COMM. NO. 4 115 MSCF/DAY  
This well, along with the Big Chief Comm. No. 1 Well, require a compressor to overcome El Paso's high line pressure. This rate maintains the minimum economic justification for this well.

LITTLE SQUAW COMM. NO. 1 500 MMSCF/DAY  
This well is the last of our successful Morrow completions. Lowering the rate less than 500 MSCF/DAY would jeopardize successful drainage of this zone.

DINERO STATE COMM. NO. 1 MAX. RATE  
This well produces about 40-50 MCF/DAY and is barely economical to operate as it is. Any cutback would render this well uneconomical.

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-4-65

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

Owner <b>J. C. Barnes Oil Company</b>			Lease <b>Big Chief Comm.</b>		Well No. <b>One</b>
Section <b>F</b>	Section <b>22</b>	Township <b>22-S</b>	Range <b>28-E</b>	County <b>Eddy County, New Mexico</b>	

Actual Footage Location of Well:

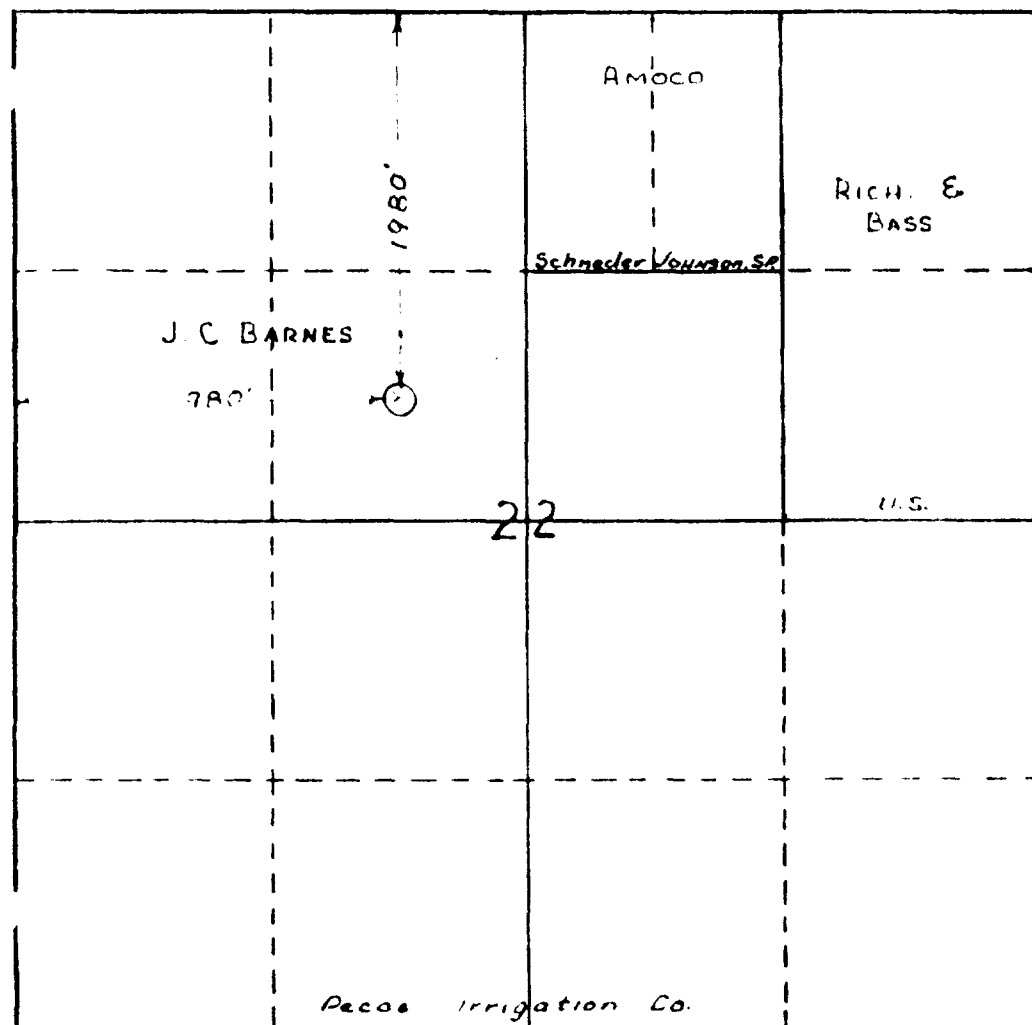
<b>1980</b>	feet from the <b>North</b>	line and <b>1980</b>	feet from the <b>West</b>	line
Ground Level Elev. <b>3095'</b>	Producing Formation <b>Morrow</b>	Pool <b>Undesignated</b>	Dedicated Acreage: <b>320</b> Acres	

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 interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

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

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  
*Russell J. Remick*  
Position  
**President**

Company  
**J. C. Barnes Oil Company**

Date  
*January 24, 1979*

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.

**March 9, 1978**

Date Surveyed  
**Orig. signed by-W. D. Watson,**

Registered Professional Engineer  
and/or Land Surveyor

**3959**

Certificate No.

310 660 100 1320 1680 1980 2310 2640 2000 1800 1000 800 0

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

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

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

Owner <b>J. C. Barnes Oil Company</b>			Lease <b>Big Chief</b>		Well No. <b>4</b>
Unit Letter <b>N</b>	Section <b>15</b>	Township <b>22S</b>	Range <b>28E</b>	County <b>Eddy</b>	
Actual Footage Location of Well: <b>1980</b> feet from the <b>West</b> line and <b>660</b> feet from the <b>South</b> line					
Ground Level Elev. <b>3101</b>	Producing Formation <b>Morrow</b>		Pool <b>Dublin Ranch</b>		Dedicated Acreage: <b>320</b> 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 interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Comm.

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.

EXXON	AMOCO	RICHARDSON	BASS
J22S		R28E	FEDERAL O. & G.
EXXON	PECOS IRRIGATION	AMOCO	RICHARDSON-BASS
OPERATOR:	J. C. BARNES OIL COMPANY		
	GRIFFETH		
	PECOS IRRIGATION	EASTLAND OIL CO.	FEDERAL O. & G. 069142
1980'	Q#4		
	660'		
	H! GRANDI	FEDERAL	

CERTIFICATION

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

Name J. C. Barnes  
Field Supt.  
Position  
J. C. BARNES OIL COMPANY  
Company  
May 25, 1979  
Date

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

May 11, 1979  
Date Surveyed  
W. D. Watson, Jr.  
Registered Professional Engineer and/or Land Surveyor

Certificate No. **3959**

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-4-65

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

Operator <b>J. C. Barnes Oil Company</b>			Location <b>Little Squaw Comm.</b>		Well No. <b>One</b>
Plot Letter <b>F</b>	Section <b>27</b>	Township <b>22-S</b>	Range <b>28-E</b>	County <b>Eddy County, New Mexico</b>	

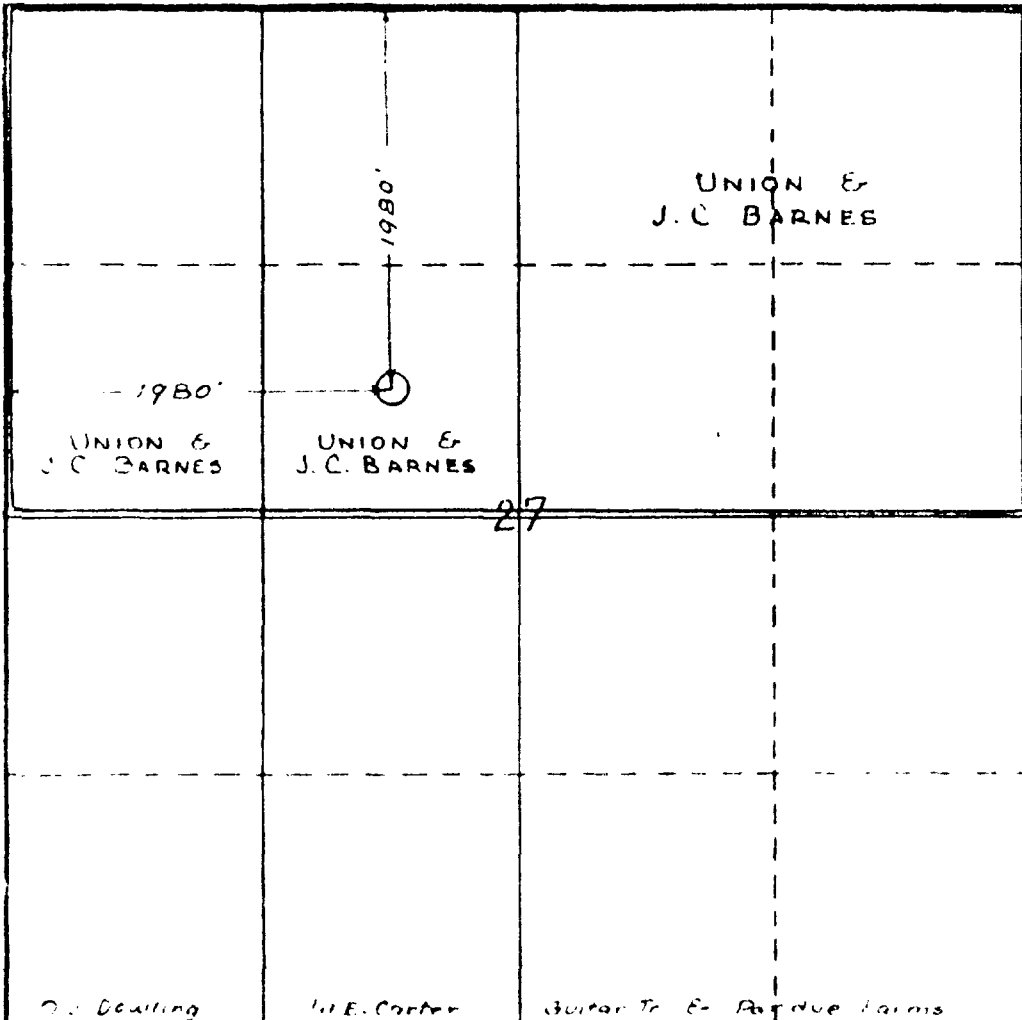
Actual Footage Location of Well:					
1980 feet from the West line and		1980 feet from the North line			
Ground Level Elev. <b>3074'</b>	Producing Formation <b>Morrow</b>	Pool <b>Undesignated</b>		Dedicated Acreage: <b>320</b> Acres	

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 Communitization

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.

*Russell J. Hamstead*  
Name

President

Position

J. C. Barnes Oil Company

Company

*January 24, 1979*  
Date

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.

March 9, 1978

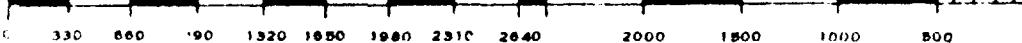
Date Surveyed

Orig. signed by W. D. Watson,

Registered Professional Engineer  
and/or Land Surveyor

3959

Certificate No.



NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-120  
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator <b>Dinero Operating Co.</b>		Lease <b>Dinero State Comm.</b>		Well No. <b>1</b>
Section <b>C</b>	Range <b>16</b>	Township <b>22 South</b>	Range <b>28 East</b>	County <b>Eddy</b>
Actual Footage Location of Well: <b>660</b> feet from the <b>north</b> line and <b>1980</b> feet from the <b>west</b> line				
Well Level Elev. <b>3082.6</b>	Producing Formation <b>Morrow</b>	Pool <b>Wm. Dublin Ranch Morrow</b>	Dedicated Acreage <b>320</b>	

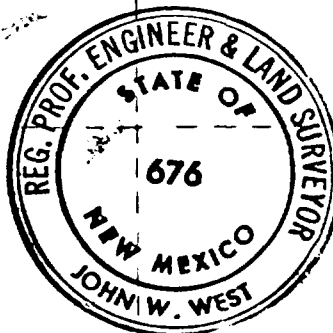
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
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If 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.

DINERO OPERATING COMPANY	
1980'	DINERO STATE COMM. NO. 1
Southland Royalty 160 acres-50% W.I. in dedicated acreage LG-0018	Amoco 160 acres-50% W.I. in dedicated acreage L-7012
DINERO OPERATING COMPANY	
STATE	



CERTIFICATION

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

*L. C. McClure*  
L. C. McCLURE

FIELD SUPT.

DINERO OPERATING COMPANY

June 15, 1981

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 of survey  
June 5 & 6, 1981

Registered Professional Engineer and/or Land Surveyor

*John W. West*

Certificate No. **JOHN W. WEST** 676

DINERO OPERATING COMPANY, DUBLIN RANCH MORROW WELLS,  
EDDY COUNTY, NEW MEXICO, OFFSET OPERATORS AND PURCHASER:

OFFSET OPERATORS:

1. Bass Enterprises Production Company  
First City National Bank Tower  
201 Main Street  
Ft. Worth, Texas 76102
2. Amoco Production Company      &      Amoco Production Company  
P. O. Drawer A                      P. O. Box 3092  
Levelland, Texas 79336              Houston, Texas 77001
3. Santa Fe Minerals  
731 W. Wadley  
Midland, Texas 79701
4. Exxon Company, U.S.A.  
P. O. Box 1547  
Houston, Texas 77001
5. Union Oil Company of California  
P. O. Box 671  
Midland, Texas 79702
6. HCW Exploration Company  
601 N. Loraine  
Midland, Texas 79701

TRANSPORTER & PURCHASER:

1. El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978