

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Operator PENROC OIL CORPORATION Contact Party STERLING J. TALLEY
Address PO DRAWER 831, MIDLAND, TEXAS 79702 Phone No. 915-683-1861
Lease ANGELL RANCH Well No. 1 UT B Sec. 33 TWP 19S RGE 28E
Pool Name WINCHESTER-MORROW GAS Minimum Rate Requested 350 MCFGPD
Transporter Name EL PASO NATURAL GAS CO. Purchaser (if different) —

450.4CF/D

Are you seeking emergency "hardship" classification for this well? X yes — no

Applicant must provide the following information to support his contention that the subject well qualifies as a hardship gas well.

- 1) Provide a statement of the problem that leads the applicant to believe that "underground waste" will occur if the subject well is shut-in or is curtailed below its ability to produce. (The definition of underground waste is shown on the reverse side of this form)
- 2) Document that you as applicant have done all you reasonably and economically can do to eliminate or prevent the problem(s) leading to this application.
 - a) Well history. Explain fully all attempts made to rectify the problem. If no attempts have been made, explain reasons for failure to do so.
 - b) Mechanical condition of the well (provide wellbore sketch). Explain fully mechanical attempts to rectify the problem, including but not limited to:
 - i) the use of "smallbore" tubing; ii) other de-watering devices, such as plunger lift, rod pumping units, etc.
- 3) Present historical data which demonstrates conditions that can lead to waste. Such data should include:
 - a) Permanent loss of productivity after shut-in periods (i.e., formation damage).
 - b) Frequency of swabbing required after the well is shut-in or curtailed.
 - c) Length of time swabbing is required to return well to production after being shut-in.
 - d) Actual cost figures showing inability to continue operations without special relief
- 4) If failure to obtain a hardship gas well classification would result in premature abandonment, calculate the quantity of gas reserves which would be lost
- 5) Show the minimum sustainable producing rate of the subject well. This rate can be determined by:
 - a) Minimum flow or "log off" test; and/or
 - b) Documentation of well production history (producing rates and pressures, as well as gas/water ratio, both before and after shut-in periods due to the well dying, and other appropriate production data).
- 6) Attach a plat and/or map showing the proration unit dedicated to the well and the ownership of all offsetting acreage.
- 7) Submit any other appropriate data which will support the need for a hardship classification.
- 8) If the well is in a prorated pool, please show its current under- or over-produced status.
- 9) Attach a signed statement certifying that all information submitted with this application is true and correct to the best of your knowledge; that one copy of the application has been submitted to the appropriate Division district office (give the name) and that notice of the application has been given to the transporter/purchaser and all offset operators.

PENROC Oil Corporation

P. O. DRAWER 831 • MIDLAND, TEXAS • 79702

Telephone (915) 683-1861

April 27, 1984

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

Attention Mr. Joe D. Ramey
Director

Re: Angell Ranch No. 1
B-Sec. 33, T19S, R28E
Eddy County, New Mexico

Dear Sir:

This is to request that the captioned well be placed in the "Hardship" classification in order that it will not be completely shut-in during a period of low gas demand.

If in fact the subject well is shut-in or curtailed below its ability to produce, "underground waste" will occur.

The Angell Ranch No. 1 is in the Winchester-Morrow Gas Pool. It was completed 12/15/76 in the Upper Morrow sands through a series of perforations 10,912'-10,956'. Total depth 11,248'. PBTD 10,972'. Initial Potential - CAOF 3,242 MCFGPD plus 24 barrels condensate and 48 barrels water. Shut-in tubing pressure 2662#. Gas connection to El Paso sales line was 1/24/77.

Attachment I is a production decline curve plotted from date of first sales in January, 1977 through ~~March~~^{May}, 1984. Included above the curve are annual produced volumes of gas. Well performance was good until approximately the middle of 1979 at which time decline of pressure coupled with water volume caused difficulty in maintaining flow. It became necessary to install a compressor in November, 1979 to keep the well on line.

We were asked to cut back on production in early 1982 and it was found that a decrease in daily volume below the fluid moving capacity afforded by formation pressure and compressor caused the well to load and attempt to die. A daily average volume of 450 MCFPD gas was produced during the months of April through July, 1982. This was down considerably from the 710 MCFGPD produced August, 1981 through February, 1982.

PENROC OIL CORPORATION
Angell Ranch No. 1
Eddy County, New Mexico
Energy and Minerals Department
Oil Conservation Division
Page 2.

Then the well was shut-in by El Paso 9 days in August, all of September, and 24 days in October, 1982. The well was dead and had to be swabbed two days to produce.

Production from November 1982 through May, 1982 averaged only 422 MCFGPD. Then in June, 1983 the Angell Ranch loaded and ceased to produce. This time it was swabbed for four days before "Kicking-off".

That period of June, 1983 through March, 1984 shows a daily average gas production of 357 MCF.

Even though soap sticks have been used to help facilitate flow since late 1979 and this action continues on a twice a week basis, it is readily apparent that each time the well goes down a lower plateau of daily gas volumes are experienced. If shut-downs are allowed even for short durations it will necessitate costly swabbing expense on top of already high operations costs. However, even more important, the observed lower plateaus of production will occur more severely and the decline curve will plunge downward more rapidly. This simply means that "underground waste" will be a reflection of reserves that can never be recovered.

It is difficult to keep this well producing at its current rate so it is actually at or near its minimum sustainable producing rate which is approximately 350 MCFPD.

From May, 1980 to present date the amount of water to be moved has increased from ~~.01~~ barrel/MCF to ~~.0625~~ barrel/MCF.
.01 .0625

Attachment II is a Well Bore Sketch of the Angell Ranch well showing casing sizes and setting depths, cement amounts and position of cement as well as tubing, packer, perforations, etc. This illustrates a typical completed well situation for the area. No mechanical attempts have been made to alleviate water other than compressor installation.

The Winchester Morrow Gas Pool is non-prorated.

Attachment III is a plat of the area which shows the proration unit attributed to the Angell Ranch well being outlined in orange color and the well itself circled in orange. Lease ownership and other wells also are indicated.

It is requested that the Angell Ranch well be placed in the "Hardship" classification with a minimum sustainable flow rate of ~~350~~ MCF
450

PENROC OIL CORPORATION
Angell Ranch No. 1
Eddy County, New Mexico
Energy and Minerals Department
Oil Conservation Division
Page 3.

gas per day. It is beleived that action is warrented based on the facts presented and made quite evident by the well performance shown on the decline curve.

Very truly yours,

PENROC OIL CORPORATION

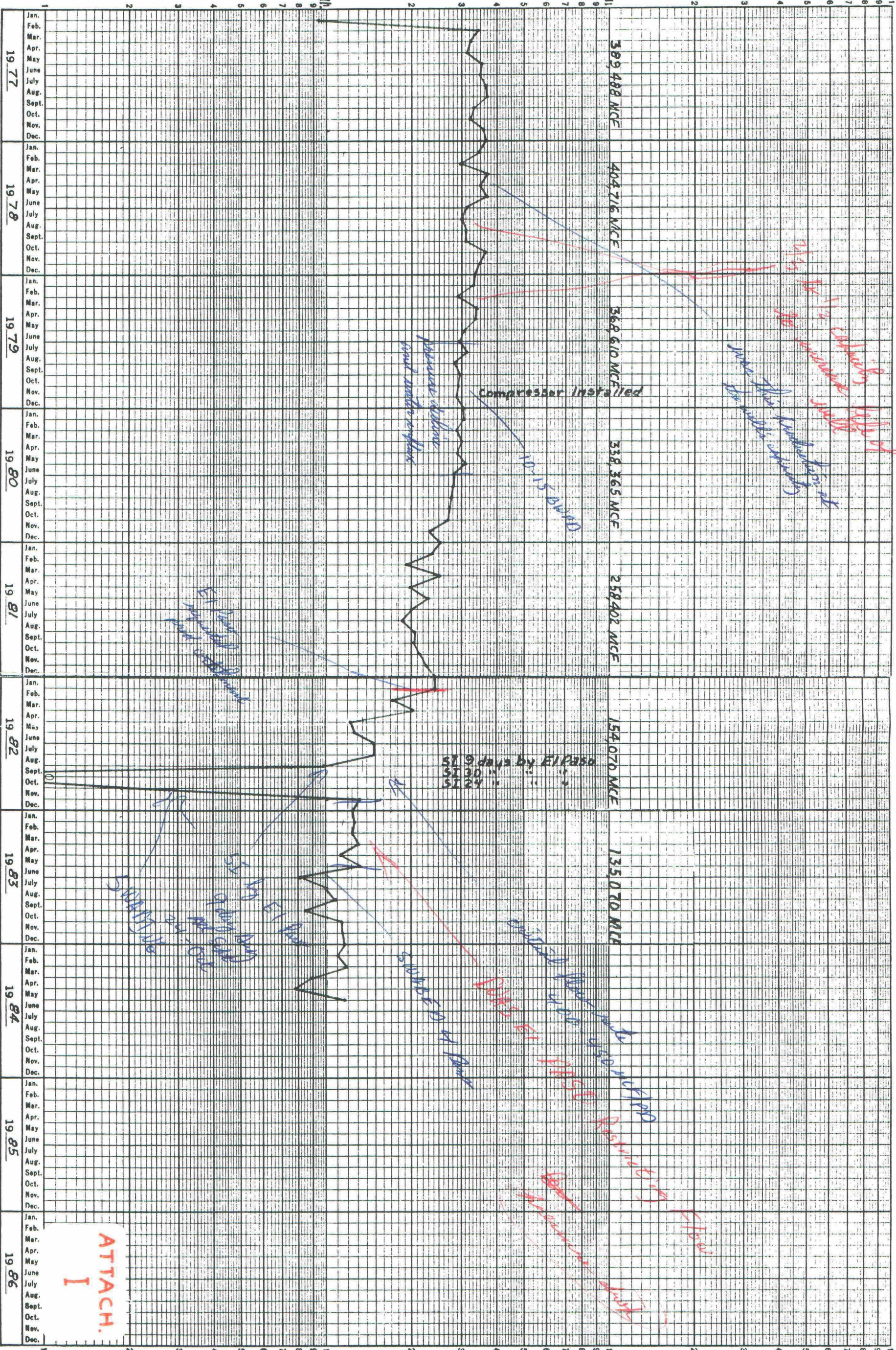

Sterling J. Talley
President

SJT:msr

Attachments

GAS - VOLUME

PENROC OIL CORP. ANGELL RANCH No. 1



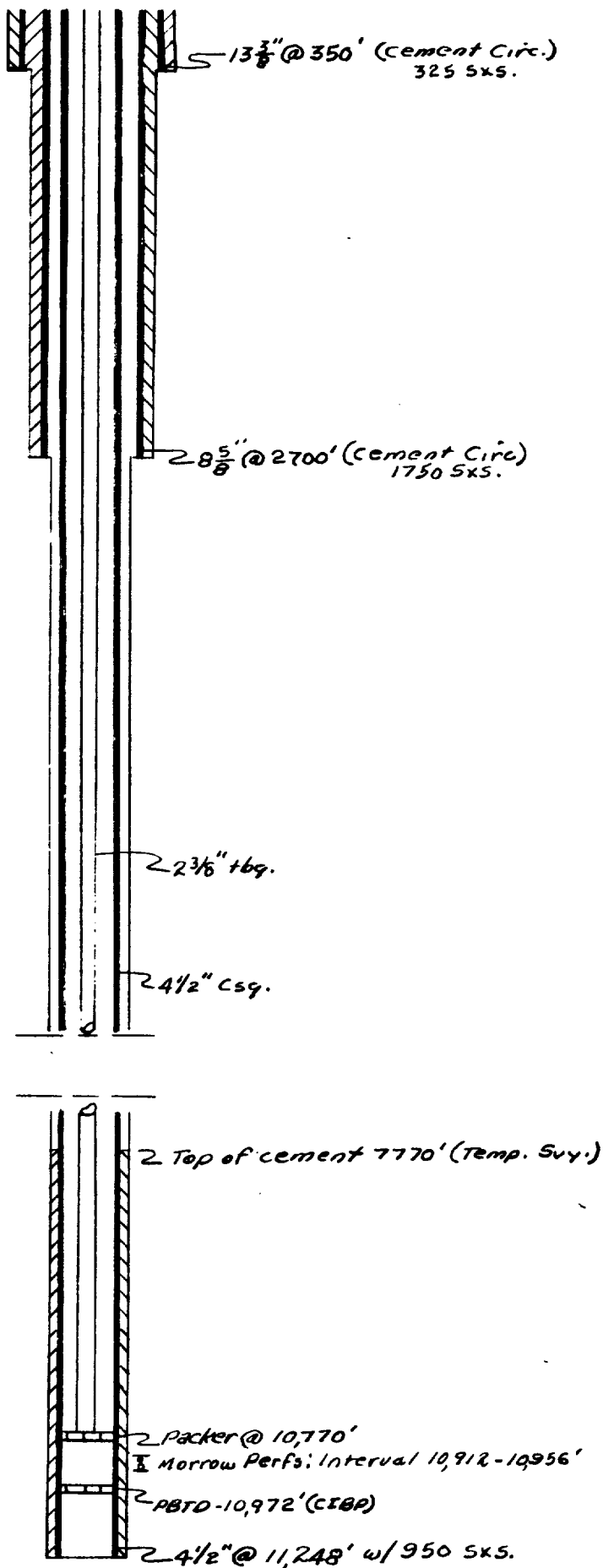
BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION
Penroc EXHIBIT NO. 1
CASE NO. 8211

PENROC OIL CORPORATION
ANGELL RANCH NO. 1
1980' FEL, 660' FNL, 33-195-28E Lea Co., New Mex.

Well Bore Sketch
 (Not to Scale)

BEFORE EXAMINER STOGNER
 OIL CONSERVATION DIVISION
 Penroc EXHIBIT NO. 2
 CASE NO. 8211

Examiner _____
 Case No. 8211
 EXHIBIT NO. 2



ATTACH.

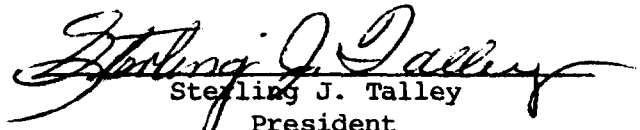
II

Penroc EXHIBIT NO. 3
CASE NO. 8211

This Attachment IV is to certify that all the information submitted with this application is true and correct to the best of my knowledge.

It is further certified that one copy of this application has been transmitted to the Artesia Division District office and that notice of the application has been transmitted to the transporter/purchaser which in this case is El Paso Natural Gas Company.

Notice has also been provided to offset operators being Cities Service, Gulf, Dorchester, Southland Royalty and Hondo Drilling.


Sterling J. Talley
President
PENROC OIL CORPORATION

Examiner	_____
Case No.	8211
EXHIBIT NO.	4

BEFORE EXAMINER STOCKER
OIL CONSERVATION DIVISION
EXHIBIT NO. 4
CASE NO. 8211

GAS WELL REPORT

PENROC

ANGELL RANCH Com #1

DATE - FROM

5-2

19 54

TO

5-9

19 84

DATE 8 A.M.	WELL NO.	CHART		PRESSURE		CHOKE	METER RUN TEMP.	SEPARATOR		STOCK TANK		SPEC. GRAV.	LIQUID PRODUCTION	TANK NO.	ESTIMATED MCF
		ST.	DIF.	TUBING	CASING			PRESS.	TEMP.	FT.	IN.				
2		7.0	3.5	250						6	5		0	10897	372
3		6.7	4.6	240						6	7		3		468
4		6.2	4.5	260						6	7		0		424
5		6.7	4.0	240						6	8		2		407
6		6.7	4.0	240						6	8		0		407
7		6.6	4.0	240						6	8		0		401
8		6.5	4.0	240						6	9		1		395
9		6.0	4.5	220						6	9		0		410

TANK RUNS

Examiner _____

Case No. 8211

EXHIBIT NO. 5

PENROC Oil Corporation
P. O. Drawer 831
Midland, Texas 79702

C.S.

135

RUNS

TOTAL

135

O.S.

129

PROD.

6

REMARKS

ATTACH.

V

GAS WELL REPORT

PENROC

LEASE

DATES FROM

TO

ANGELL RANCH Com #1

5-10

1984

5-17

1984

DATE 8 A.M.	WELL NO.	CHART ST. DIF.	PRESSURE TUBING CASING	CHOKE	METER RUN TEMP.	SEPARATOR PRESS. TEMP.	STOCK TANK FT. IN.	SPEC. GRAV.	LIQUID PRODUCTION	TANK NO.	ESTIMATED MCF
10		6.8 3.2	250				6 11		4	10897	330
11		7.0 2.5	200				6 11		0		266
12		7.4 4.0	300				7 0		1		449
13		7.3 3.6	300				7 1		2		399
14		7.3 3.6	300				7 2		2		399
15		6.7 4.0	280				7 3		1		407
16		6.7 4.0	260				7 3		0		407
17		6.4 4.5	220				7 5		4		437

TANK RUNS

GCS. 149
 RUNS —
 TOTAL 149
 O.S. 129
 PROD. 20

REMARKS

PENROC Oil Corporation
 P. O. Drawer 831
 Midland, Texas 79702

GAS WELL REPORT

PENROC

LEASE

ANGELL RANCH Com #1

DATES FROM

5-18

1984

TO

5-25

1984

DATE 8 A.M.	WELL NO.	CHART		PRESSURE		CHOKE	METER RUN TEMP.	SEPARATOR		STOCK TANK		SPEC. GRAV.	LIQUID PRODUCTION	TANK NO.	ESTIMATED MCF
		ST.	DIF.	TUBING	CASING			PRESS.	TEMP.	FT.	IN.				
18		6.9	3.5	220									1	10899	367
19		8.5	3.0	270									0		387
20		8.1	2.0	200									0		246
21		8.0	1.5	200									0		182
22		7.9	1.0	200									0		120
23		6.8	4.5	260									4		465
24		6.2	4.5	260									0		424
25		6.7	4.0	240									0		407

*Condensate
and not water?*

TANK RUNS

C.S. 154
 RUNS —
 TOTAL 154
 O.S. 129
 PROD. 25

REMARKS

PENROC Oil Corporation
P. O. Drawer 831
Midland, Texas 79702

GAS WELL REPORT

PENROC

LEASE

ANGELL RANCH Com #1

DATES FROM

5-26

1984

TO

6-1

1984

DATE 8 A.M.	WELL NO.	CHART ST. DIF.	PRESSURE TUBING CASING	CHOKE	METER RUN TEMP.	SEPARATOR PRESS. TEMP.	STOCK TANK FT. IN.	SPEC GRAV.	LIQUID PRODUCTION	TANK NO.	ESTIMATED MCF
		6.7 4.0	240				7 8		0	10897	407
26											
		7.8 4.0	300				7 8		0		474
27											
		7.9 3.5	300				7 8		0		420
28											
		8.2 3.0	290				7 8		0		373
29											
		6.8 3.5	210				7 8		0		361
30											
		6.8 3.5	240				7 8		0		361
31											
		6.9 3.8	240				7 8		0		398
6-1											

TANK RUNS

C.S.	154
RUNS	
TOTAL	154
O.S.	129
PROD.	25

REMARKS

PENROC Oil Corporation
P. O. Drawer 831
Midland, Texas 79702

Kraftbill 144-2 BOX 800 TULSA, OK 74101

BEFORE EXAMINER STOGNER

OIL CONSERVATION DIVISION

EXHIBIT NO. 5

CASE NO. 8277

PENROC Oil Corporation

P. O. DRAWER 831 • MIDLAND, TEXAS • 79702

Telephone (915) 683-1861

April 27, 1984

Re: Application for Classification
as Hardship Gas Well
Angell Ranch Well No. 1
B-33-19S-28E
Eddy County, New Mexico

Gulf Oil Company
P. O. Box 1150
Midland, Texas 79702

Gentlemen:

According to our records you are a diagonal offset operator to the captioned well operated by Penroc Oil Corporation. The proration unit assigned to this well includes the north one-half of Section 33.

Please be advised that Penroc has filed application with the New Mexico Oil Conservation Division for the Angell Ranch well to be placed in the Hardship Gas Well Classification. This would allow the well not to be completely shut-in during periods of low gas demand. It is difficult to keep this well producing normally even with compressor assistance. It has already suffered formation damage because of previous shut-in periods.

If you have any questions let us hear from you.

Very truly yours,

PENROC OIL CORPORATION

Sterling J. Talley
Sterling J. Talley
President

Examiner _____
Case No. 8211
EXHIBIT NO. 6

SJT:msr

PENROC Oil Corporation

P. O. DRAWER 831 • MIDLAND, TEXAS • 79702

Telephone (915) 683-1861

April 27, 1984

Re: Application for Classification
as Hardship Gas Well
Angell Ranch Well No. 1
B-33-19S-28E
Eddy County, New Mexico

Cities Service Oil & Gas Corp.
P. O. Box 1919
Midland, Texas 79702

Gentlemen:


According to our records you are an offset operator to the captioned well operated by Penroc Oil Corporation. The proration unit assigned to this well includes the north one-half of Section 33.

Please be advised that Penroc has filed application with the New Mexico Oil Conservation Division for the Angell Ranch well to be placed in the Hardship Gas Well Classification. This would allow the well not to be completely shut-in during periods of low gas demand. It is difficult to keep this well producing normally even with compressor assistance. It has already suffered formation damage because of previous shut-in periods.

If you have any questions let us hear from you.

Very truly yours,

PENROC OIL CORPORATION


Sterling J. Talley
President

SJT:msr

PENROC Oil Corporation

P. O. DRAWER 831 • MIDLAND, TEXAS • 79702

Telephone (915) 683-1861

April 27, 1984

Re: Application for Classification
as Hardship Gas Well
Angell Ranch Well No. 1
B-33-19s-28E
Eddy County, New Mexico

Southland Royalty Company
21 Desta Drive
Midland, Texas 79705

Gentlemen:


According to our records you are an offset operator to the captioned well operated by Penroc oil Corporation. The proration unit assigned to this well includes the north one-half of Section 33.

Please be advised that Penroc has filed application with the New Mexico Oil Conservation Division for the Angell Ranch well to be placed in the Hardship Gas Well Classification. This would allow the well not to be completely shut-in during periods of low gas demand. It is difficult to keep this well producing normally even with compressor assistance. It has already suffered formation damage because of previous shut-in periods.

If you have any questions let us hear from you.

Very truly yours,

PENROC OIL CORPORATION


Sterling J. Talley
President

PENROC Oil Corporation

P. O. DRAWER 831 • MIDLAND, TEXAS • 79702

Telephone (915) 683-1861

April 27, 1984

Re: Application for Classification
as Hardship Gas Well
Angell Ranch Well No. 1
B-33-19S-28E
Eddy County, New Mexico

Dorchester Exploration, Inc.
3300 North A, Building 8, Suite 100
Midland, Texas 79701

Gentlemen:

According to our records you are an offset operator to the captioned well operated by Penroc Oil Corporation. The proration unit assigned to this well includes the north one-half of Section 33.

Please be advised that Penroc has filed application with the New Mexico Oil Conservation Division for the Angell Ranch well to be placed in the Hardship Gas Well Classification. This would allow the well not to be completely shut in during periods of low gas demand. It is difficult to keep this well producing normally even with compressor assistance. It has already suffered formation damage because of previous shut-in periods.

If you have any questions let us hear from you.

Very truly yours,

PENROC OIL CORPORATION


Sterling J. Talley
President

SJT:msr

PENROC Oil Corporation

P. O. DRAWER 831 • MIDLAND, TEXAS • 79702

Telephone (915) 683-1861

April 27, 1984

Re: Application for Classification
as Hardship Gas Well
Angell Ranch Well No. 1
B-33-19S-28E
Eddy County, New Mexico

Hondo Drilling Company
410 North Loraine
Midland, Texas 79702

Gentlemen:

According to our records you are a diagonal offset operator to the captioned well operated by Penroc Oil Corporation. The proration unit assigned to this well includes the north one-half of Section 33.

Please be advised that Penroc has filed application with the New Mexico Oil Conservation Division for the Angell Ranch well to be placed in the Hardship Gas Well Classification. This would allow the well not to be completely shut-in during periods of low gas demand. It is difficult to keep this well producing normally even with compressor assistance. It has already suffered formation damage because of previous shut-in periods.

If you have any questions let us hear from you.

Very truly yours,

PENROC OIL CORPORATION


Sterling J. Talley
President

SJT:msr

BEFORE EXAMINER STOGHER	
OIL CONSERVATION DIVISION	
P. O. NO.	EXHIBIT NO. <u>6</u>
CASE NO.	<u>8211</u>