

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

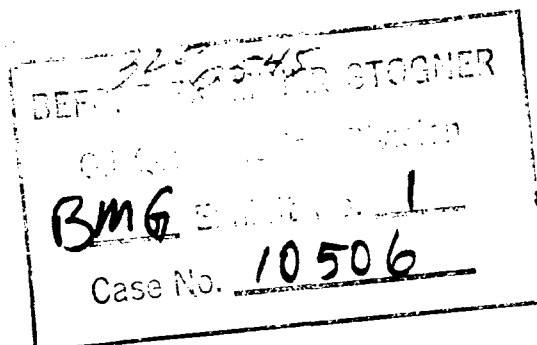
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

June 26, 1992

Jim Artindale
Canadian Hunter Exploration Ltd.
2000, 605 - 5th Ave. S.W.
Calgary, Alberta T2P 3H5

Re: Jicarilla 3F and 2A Well Testing Program

Dear Jim:



The test commencement approval date is not June 12, but will be the day that you pull the rods out of the 2A well. The 3F well should have been shut-in due to allowable restrictions.

- Step #1: Pull the rods on the 2A well and conduct a static gradient to provide an estimate of BHP.
- Step #2: Install new rods and pump in the 2A well and lower the pump as far as possible. The 2A well will be produced for 2-4 weeks to evaluate its commerciality. Following this period the rods will be removed and the 2A shut-in for 2-3 weeks, and recorders equivalent to GRC strain gauges will be installed in the 2A well.
- Step #3: During the 2-3 week shut-in of the 2A, the 3F will be returned to production for 30 days at a rate not exceeding 800 BOPD to initiate a single large interference pulse.
- Step #4: The 3F well will then be shut-in for 20 days and a pressure buildup on the 3F well will be recorded using a continuous Echometer device. The 3F well must also be deadweight tested.
- Step #5: The 3F well will be produced at a reduced rate of 600 BOPD for 7 days, GOR recorded and oil and gas samples taken. The 3F well will continue to produce for periods of 7 days each at rates of 400 and 200 BOPD using the same procedure as at 600 BOPD.

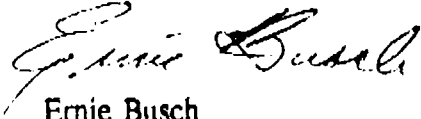
Until the start of step #3 the allowable for the 3F well will be 37 BOPD. At the start of step #3 the allowable will be 800 BOPD for 50 days, 600 BOPD for 7 days, 400 BOPD for 7 days and finally 200 BOPD for 7 more days. This will allow for the high rate of production and 20 days of shut-in at 800 BOPD allowable to make up over-production.

*BMG Exhibits 1 through 4
Complete Set*

3F and 2A well testing
P. 2.

At the end of the 71 days the allowable will revert back to 37 BOPD.

Your's truly,

A handwritten signature in cursive script, appearing to read "Ernie Busch".

Ernie Busch
District Geologist/Deputy Oil & Gas Inspector

xc: Jim Lister - Fax (303) 825-0534
Larry Van Ryan
Al Greera

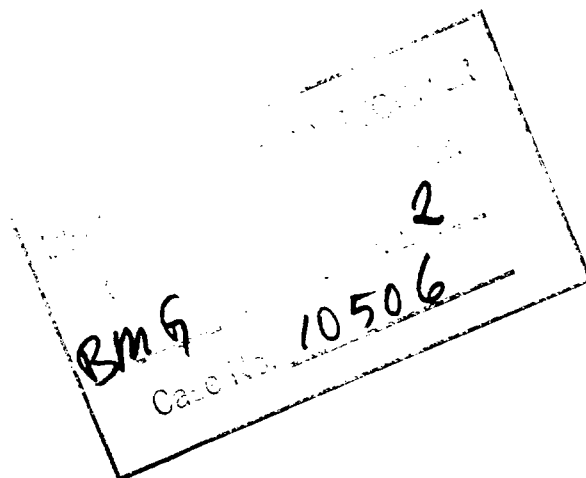
BENSON-MONTIN-GREER DRILLING CORP.

221 PETROLEUM CENTER BUILDING, FARMINGTON, NM. 87401 505-325-8874

July 2, 1992

FAX TO JIM ARTINDALE
403-260-1779

Mr. Jim Artindale
Canadian Hunter Exploration Ltd.
#435 - 4th Avenue SW
Calgary, Alberta T2P 3A8



Re: JICARILLA 3-F AND 2-A
INTERFERENCE TEST

Dear Jim:

I have a copy of Ernie Busch's letter of June 22nd. I am not sure I understand when the 3-F well will be shut in at the beginning of the test; but since it has been producing at a high rate long enough to probably have reached the end of the initial transients set up when the well began to flow through the casing the first of June, it seems to me essential that you get a pressure build-up when you shut the well in. About all you can do here would be the continuous echometer survey - but that could be quite helpful.

As to the interference test itself I strongly recommend that you have a bomb in the 3-F as well as the 2-A: unless you know that the pressure is declining at the same rate in both wells at the end of the transient period you have no way of being assured that the information developed will be useful for estimating reservoir characteristics.

Regards,

ARG/tlp

File 318-C

cc: Ernie Busch, OCD, Aztec
Jim Lister, AHSL, Denver
Larry Van Ryan, OCD, Santa Fe

BENSON-MONTIN-GREER DRILLING CORP.

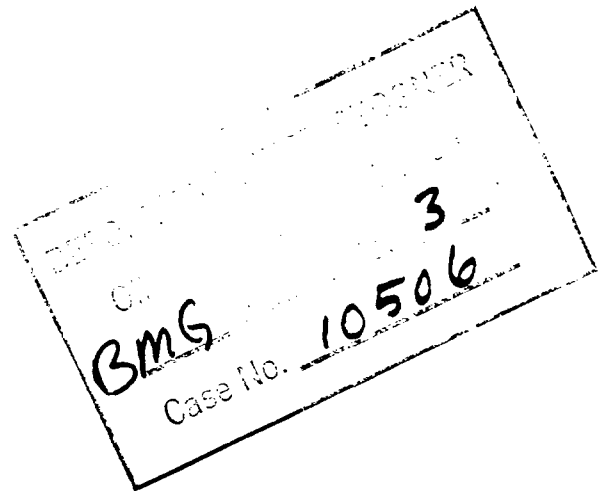
221 PETROLEUM CENTER BUILDING, FARMINGTON, NM. 87401 505-325 8874

July 6, 1992

FAX TO JEFF KIRN, JIM LISTER,
AND JIM ARTINDALE

Mr. Jeff Kirn 303-825-0534
and Mr. Jim Lister
American Hunter Exploration, Ltd.
410 Seventeenth Street
Suite 1220
Denver, CO 80202

Mr. Jim Artindale 403-260-1779
Canadian Hunter Exploration Ltd.
#435 - 4th Avenue SW
Calgary, Alberta T2P 3A8



Re: 3-F'S DECLINING PRODUCTIVITY:
PARAFFIN ???
IMPLICATIONS FOR TESTING

Gentlemen:

The decline in production rate of the 3-F, noted by Jeff last week, may be the consequence of paraffin build-up. After talking with Jeff, I reviewed our files, and for your information I show below some statistics we found in Canada Ojitos Unit wells:

PRODUCTION THROUGH 2-1/2" TUBING

At flow rates of about 400 BOPD and higher with near-wellhead surface flow line temperatures of 70° and higher, there were no downhole paraffin problems.

PRODUCTION THROUGH ANNULUS OF 2" TUBING AND 5-1/2" CASING

Here, at flow rates of 900 BOPD and higher with near-wellhead surface flow line temperatures of 80° and higher, there were no down hole paraffin problems. At 700 to 800 BOPD and lower with near-wellhead surface flow line temperatures of 75° and lower,

BENSON-MONTIN-GREER DRILLING CORP.

Mr. Jeff Kirn
Mr. Jim Lister
Mr. Jim Artindale

July 6, 1992
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paraffin would build up and restrict flow rates requiring treatment every month or so.

IMPLICATIONS FOR 3-F

We did not determine precise conditions controlling paraffin build-up in the flow string, nor do we know how it would project to your situation, but certainly it warrants your looking into.

We will be going by your 3-F Wednesday to pick an alternate location in Section 9, and unless you instruct us to the contrary we will measure your surface flow line temperature and advise you.

If paraffin has built up in the 30 or so days the 3-F has been flowing through the casing, it will probably eliminate use of echometer surveying to estimate bottom hole pressures, and I would think necessitate a change in the testing procedure set out in Ernie Busch's letter of June 26.

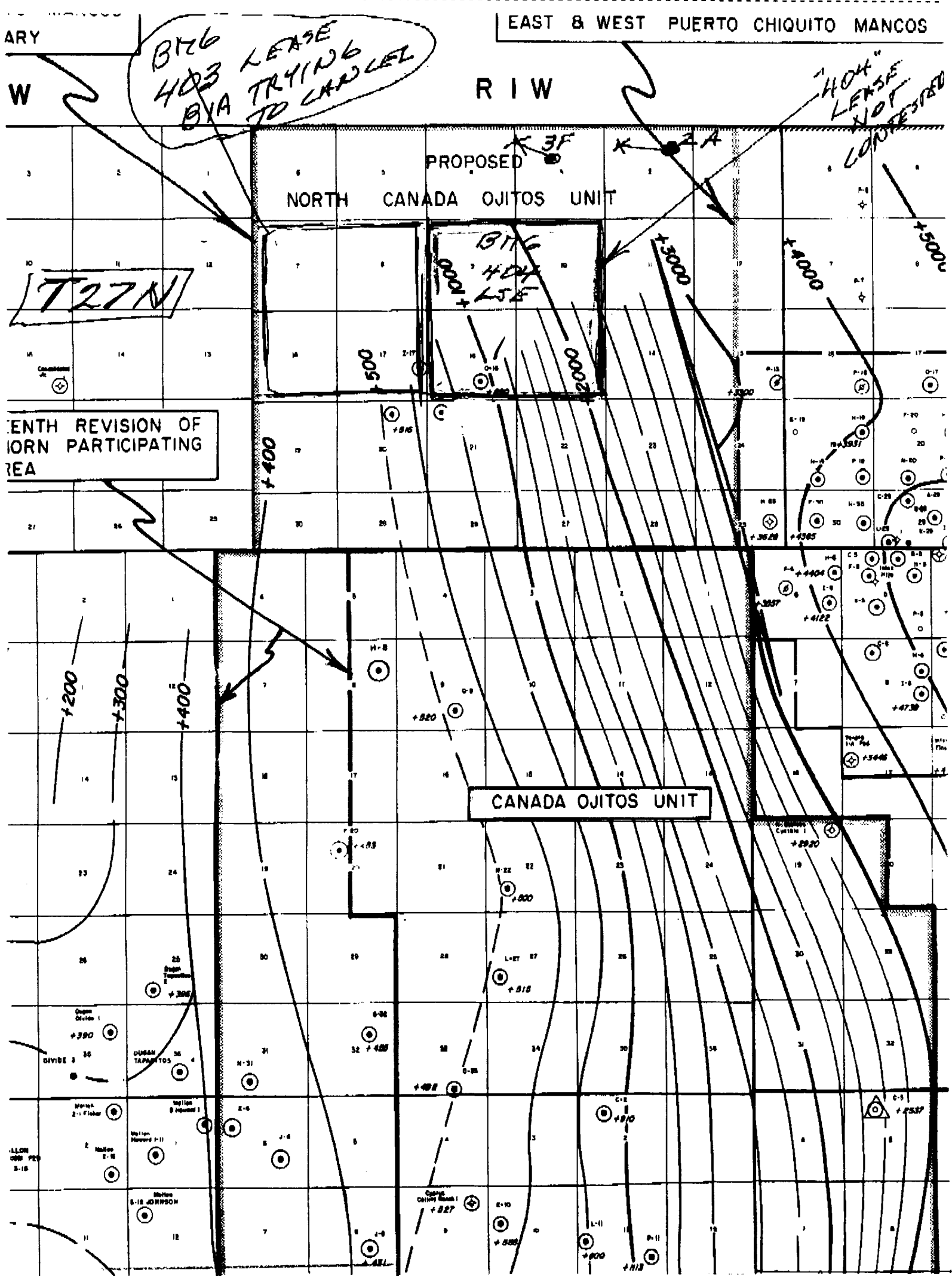
Regards,



ARG/tlp

File 318-C

cc: Ernie Busch, NMOCD, Aztec
Larry Van Ryan, NMOCD, Santa Fe



1992-07-07 17:02

505 327 9207 B-M-G

100 010
BEFORE EXAMINER STOGNER

OIL CONSERVATION DIVISION

Bm6 EXHIBIT NO. 4

CASE NO.