Case Number

4387

Application

Transcripts.

Small Exhibits

ETC.

Memo

From
D. S. NUTTER
CHIEF ENGINEER

To Virgil Stoaks

Canada Ojibwa

Farmington N.H

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 15,1970

EXAMINER HEARING

IN THE MATTER OF:

Application of Benson-Montin-Greer Drilling Corporation for surface commingling of oil, Rio Arriba County, New Mexico.

Case No. 4387

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. HATCH: This is the application of Benson-Montin-Greer Drilling Corporation for surface commingling of oil, Rio Arriba County, New Mexico. The applicant seeks authority to commingle the production from its Cañada Ojitos Unit Well No. 13, a non-participating well located in Unit L of Section 27, Township 26 North, Range 1 West, Rio Arriba County, New Mexico, with oil production from the participating area of said unit.

MR. COOLEY: Mr. J. Cooley, Farmington, New Mexico. We have one witness, Mr. Stoabs I'd like to have sworn.

VIRGIL L. STOABS,

being duly sworn according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. COOLEY:

Q Where do you reside, Mr. Stoabs, and who are you employed by?

A I reside in Farmington, New Mexico and I am employed with Benson-Montin-Greer Drilling Corporation.

Q Do you have any technical qualifications with respect to the oil industry?

A Yes, sir. I am a graduate Petroleum Engineer. I graduated from the University of Oklahoma in 1950 with a BS Degree.

Q What experience, if any, do you have in this field?

A I have been actively engaged in engineering for twenty years now.

Q Are you personally familiar and have you been personally active in the area of the Cañada Ojitos Unit?

A Yes, since the discovery well was drilled.

Q Has this been largely under your personal supervision?

A Yes, sir.

MR. COOLEY: Are the witness' qualifications acceptable?

MR. NUTTER: Yes. They are.

MR. COOLEY: I have three exhibits I'd like marked.

(Whereupon, Exhibits 1, 2 and 3 were marked for identification.)

Q Mr. Stoabs, I hand you what has been marked as Exhibit No. 1 in this case and ask you to describe the legend thereon, what it represents.

A Exhibit 1 is Exhibit A to the Cañada Ojitos Unit, which is a map of the unit area and showing the various tracts therein.

Q How is that outlined -- what color?

A We have the participating area that is outlined in blue and we have outlined the participating area in brown.

Q Is there a well located thereon?

A The No. 13 L-27 Well is indicated in red. We have also

indicated two tracts, one in blue within the participating area and one in yellow outside the participating area. The significance of these colors indicate that they are the only two tracts within the unit boundary which are not owned by a common working interest ownership. All the tracts have the same working interest ownership.

Q With respect to this application, only the area colored in blue is involved, is that correct?

A Yes.

Q And to what extent is there a difference in ownership in that block?

A There is one owner in the half section colored in blue who owns approximately twenty-two percent interest whereas in the balance of the participating area acreage, that his ownership is zero.

Q What is that owner's name?

A It is John R. Anderson of Farmington, New Mexico.

Q Have you personally contacted Mr. Anderson with respect to this application?

A Yes. I have.

Q Does he have any objection to the Commission granting the relief requested here?

A None whatever.

Q Mr. Stoabs, I hand you what has been marked as Exhibit

2, B, possibly in this case, and ask you to describe what is shown thereon.

A Again, this is an outline of the Cañada Ojitos Unit area where we have outlined the present participating area in brown and have indicated our oil gathering system with green and red; the difference being that on the red lines we have fiberglass pipe installed and on the green lines we have steel pipe installed.

Q Does this plat also show the location of the Unit 13 L-27 Well?

A Yes. It does.

Q And does it lie outside the participating present boundaries of the participating area of the Cañada Ojitos Unit?

A Yes.

Q Is the well in question, the Unit 13 L-27, a commercial well of the quality necessary to allow it to eventually be included within the participating area of the Cañada Ojitos Unit?

A Yes, sir.

Q Why has this not been done to date?

A Well, the time factor involved and getting the approval and paper work accomplished.

Q Is it a relatively recently completed and tested well?

A Yes, sir. It was on April 6, 1970.

Q What, in your opinion, is the producing capability of this well?

A At the present time the well production has been approximately 250 barrels per day and, of course, we have a gas injection program underway in the area. This production has been restricted due to the available injectivity and we have recently installed a new compressor in our compressor train and expect to have more gas available for injection and at that time we hope to increase the production of the No. 13 L-27.

Q In your opinion, is the productivity of that well in excess of the present production of approximately 250 barrels of oil per day?

A Yes, sir.

Q If this application is not granted what will be necessitated with respect to the disposition of the production from the well in question, L-27?

A The production would then have to be trucked to the nearest Shell receiving station which is located in Bloomfield approximately 115 miles away. The cost of that trucking would be in the range of ninety cents per barrel.

Q As opposed to what costs for handling it through the pipeline system?

A Approximately twenty-five cents per barrel.

Q Is it your proposal then -- the applicant's proposal,

Mr. Stoabs -- to commingle production from this well which is presently outside the participating area and allocate it on a different basis than participating oil with the oil produced from the participating area -- do you understand the question?

A I don't quite understand what you mean by allocating.

Q Well, presently the production from the L-27 Well is allocated and belongs to -- paid out in a different fashion than the oil in the participating area, is that correct?

A The production from the L-27, as we propose to handle it, will pass through our like unit which --

Q You don't understand the question. At present, inasmuch as the L-27 is outside the participating area, the ownership of the oil produced from that well is paid out to different people in different percentages than is the oil within the participating unit, is that correct?

A Yes, sir.

Q You do propose to expand the participating area to include this well, do you not?

A Yes, sir.

Q Once this is accomplished, will there be a retroactive accounting with respect to all oil produced from the L-27?

A Yes. The accounting will be retroactive to the date of the approval of what will be the eighth expansion that will

include the number 13 L-27 and that date will be April 1, 1970, the first of the month of the date the well is completed. That will include the production from the No. 13 L-27 and the production from the participating area.

Q So to summarize that point, if I understand you, there will eventually be, upon expansion -- approval of the eighth expansion of the participating area, a retroactive reallocation of all production from that well which will make it in common with all other wells in the participating area?

A Yes, sir. That is correct.

Q Now, at this time, prior to this expansion, do you intend -- how do you intend to measure the production from the L-27 and allocate it?

A We have a meter installed at the L-27 Well site which we meter the production as it goes into the gathering system. We then, of course, meter at our like unit when we sell to Shell, at the point we sell to Shell. The difference between these two meters results in the production attributed to the participating area.

Q You will actually measure the production from the L-27?

A Yes, sir.

Q By meter?

A Yes.

Q One or more meters?

A We have two meters installed.

Q At the L-27?

A Yes.

Q Would you describe that installation?

A Well, we have one meter downstream of our production unit which meters the oil as it goes into our surge tank located on location and another meter downstream of the surge tank which meters it as it goes into the gathering system itself.

MR. NUTTER: At this point, Mr. Stoats, may I [illegible] you? On all these other wells, you have, by [illegible] characters in the legend here, described the installation [illegible] at the location, but there is nothing shown for the [illegible]. Could you tell us what is located there at that well [illegible] -- is there a separator there --

THE WITNESS: Yes. There is a high-pressure and [illegible] [illegible] production unit. That [illegible]

[illegible]

in Section 2?

THE WITNESS: Yes, sir. We have a situation there where the oil wells will gravity into our surge tank for our like unit.

MR. NUTTER: Okay. Fine. Thanks.

Q (By Mr. Cooley) Would you describe the particular type of meters that are installed at the L-27?

A They are both Barton Positive Displacement, commonly referred to as a Floco Meter.

Q I hand you what has been marked as Exhibit 3 in this case and ask you if that is a brochure which describes in detail the precise meters that are there installed?

A Yes, sir.

Q In your opinion, Mr. Stoabs, is the accuracy, the overall accuracy of the metering system which you have installed on the L-27 Well, at least equal to or possibly surpassing manual methods of measurement?

A Yes, sir.

Q Now, to complete the overall procedure by which you measure all the oil involved, is it correct that you will actually meter the production from the L-27 by virtue of the two meters described and then subtract that volume from the master meter that goes into the Shell pipeline?

A Yes, sir.

Q Thereby arrive at the amount of production from the

participating area?

A Yes, sir.

Q There are no meters on the individual wells in the participating area?

A Yes, sir. There are meters on some of the individual wells in the participating area and, of course, we have tank batteries where we can test the wells individually -- do test them, but the total oil as shipped to the Shell pipeline is our like unit figure and that is what we use for this actual production of the unit during any one month rather than try to keep up with the individual wells on a precise individual well production basis.

Q Do you deem it necessary to conduct any tests to prove the accuracy of the two meter installations that you have installed on the 13 L-27?

A No, sir.

Q If the Commission felt it wise, is it physically possible for you to do so?

A Yes, sir. We simply gauge the tanks or the single tank there that we have feeding into the flow line and compare that gauge with the meter readings.

Q You could strap the surge tank as you have described?

A Yes.

Q And gauge it?

A Yes.

Q Do you also have means available in your physical installation to ascertain the gravity of the oil produced from the L-27?

A Yes, sir.

Q Have you, through your history of experience in this field, already ascertained the gravity of that oil?

A Yes, sir, and it is the same gravity as the participating oil production.

Q Is there any question in your mind but what it is located in the same common source of supply or the same pool as the wells in the participating area?

A No, question whatever.

Q Were Exhibits 1 and 2 prepared by you or under your supervision?

A Yes, sir.

Q Exhibit 3 is material furnished you by the manufacturer of the meters in question?

A Yes, sir.

MR. COOLEY: Mr. Chairman, that concludes our direct examination and we offer in evidence Applicant's Exhibits 1, 2 and 3.

MR. NUTTER: There being no objections, Exhibits 1, 2 and 3 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1, 2 and 3 were admitted into evidence.)

MR. NUTTER: Does anyone have any questions of Mr. Stoabs?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Stoabs, when do you expect to submit this eighth participating area for approval?

A In the immediate future.

Q And it would be made retroactive to April 1, 1970?

A That is under the terms of the unit agreement. Yes, sir.

Q So if there is any error in determining the production by means of the proper amounts of production to the participating area and to the non-participating well as a result of using the subtraction method for determining that production, then this error would be evened out by making the participating area retroactive anyway, wouldn't it?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Stoabs?

You may be excused.

Do you have anything further, Mr. Cooley?

MR. COOLEY: No.

MR. NUTTER: Does anyone have anything they wish to

offer in 4387?

We will take it under advisement.

I N D E X

E X H I B I T S

Exhibits	Marked	Admitted into Evidence
Applicant's Exhibits 1, 2 and 3	3	13

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, Peter A. Lumia, Certified Shorthand Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

Peter A. Lumia
Certified Shorthand Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4387 heard by me on July 15, 1970.

..... Examiner
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

July 20, 1970

Mr. Jack Cooley
Burr & Cooley
Attorneys at Law
152 Petroleum Center Building
Farmington, New Mexico

Re: Case No. 4387
Order No. R-4001
Applicant:
Benson-Montin-Greer Drlg.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC x

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4387
Order No. R-4001

APPLICATION OF BENSON-MONTIN-GREER
DRILLING CORPORATION FOR SURFACE COM-
MINGLING OF OIL, RIO ARRIBA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:30 a.m. on July 15, 1970, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of July, 1970, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Benson-Montin-Greer Drilling Corporation, is the operator of the Canada Ojitos Unit Well No. 13, a non-participating well located in Unit L of Section 27, Township 26 North, Range 1 West, NMPM, West Puerto Chiquito-Mancos Pool, Rio Arriba County, New Mexico, and of various participating wells in said unit and pool.

(3) That the applicant seeks authority to commingle the oil production from said Unit Well No. 13 with oil production from the participating area of said unit.

(4) That the applicant proposes to separately meter the production from said Unit Well No. 13, meter the commingled production, and then allocate production to the participating area of said unit by the subtraction method.

(5) That approval of the subject application will result in economic savings to the operator, prevent waste, and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Benson-Montin-Greer Drilling Corporation, is hereby authorized to commingle oil production from its Canada Ojitos Unit Well No. 13, a non-participating well located in Unit L of Section 27, Township 26 North, Range 1 West, NMPM, West Puerto Chiquito-Mancos Pool, Rio Arriba County, New Mexico, with oil production from the participating area of said unit.

(2) That adequate facilities shall be installed and maintained by the applicant in conformance with applicant's Exhibit No. 2 introduced in this case to permit determining the producing capacity of the above-described non-participating Unit Well No. 13 and the total producing capacity of the wells in the participating area of the above-described unit by separately metering the production from said Unit Well No. 13 and the commingled oil production and subtracting the former from the latter.

(3) That the oil production shall be allocated to the non-participating Unit Well No. 13 and to the participating area of said unit on the basis of the subtraction method described in Order (2) above.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

esr/

Docket No. 17-70

DOCKET: REGULAR HEARING - WEDNESDAY - JULY 15, 1970

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

ALLOWABLE: Consideration of the allowable production of gas for August, 1970, from thirteen prorated pools in Lea, Eddy, and Roosevelt Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico for August, 1970.

THE FOLLOWING CASES WILL BE HEARD BEFORE DANIEL S. NUTTER, EXAMINER, OR ELVIS A. UTZ, ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF SAID BUILDING AT 9:30 A.M.

CASE 4381:

Southeastern New Mexico nomenclature case calling for an order for the creation, extension, and contraction of certain pools in Lea, Chaves, Eddy and Roosevelt Counties, New Mexico.

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Atoka production and designated as the West Crossroads-Atoka Pool. The discovery well is the Union Oil Company of California Lea "M" State Well No. 1 located in Unit A of Section 6, Township 10 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 10 SOUTH, RANGE 36 EAST, NMPM
SECTION 6: NE/4

(b) Create a new pool in Lea County, New Mexico, classified as an oil pool for Devonian production and designated as the West Garrett-Devonian Pool. The discovery well is the Freeport Oil Company Mattie Price Well No. 1 located in Unit A of Section 6, Township 17 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 38 EAST, NMPM
SECTION 6: NE/4

(c) Create a new pool in Chaves County, New Mexico, classified as an oil pool for Devonian production and designated as the Race Track-Devonian Pool. The discovery well is the Klabzuba, Munson, and Seamon White Well No. 1 located in Unit I of Section 13, Township 10 South, Range 27 East, NMPM. Said pool described as:

(Case No. 4381 continued)

TOWNSHIP 10 SOUTH, RANGE 27 EAST, NMPM
SECTION 13: NE/4 SE/4

(d) Contract the Bough Permo-Pennsylvanian Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM
SECTION 18: NE/4

(e) Extend the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM
SECTION 18: NE/4

(f) Extend the Blinebry Oil Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
SECTION 30: SW/4

(g) Extend the Bluitt-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM
SECTION 20: NW/4

(h) Extend the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
SECTION 6: E/2
SECTION 7: N/2

(i) Extend the High Plains-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
SECTION 14: SW/4

(j) Extend the Loco Hills-Queen Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM
SECTION 31: SE/4 NE/4 and NE/4 SE/4

(k) Extend the Midway-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
SECTION 17: S/2

(l) Extend the Quail-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
SECTION 12: S/2

TOWNSHIP 19 SOUTH, RANGE 35 EAST, NMPM
SECTION 7: SW/4

(m) Extend the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
SECTION 34: NW/4

(n) Extend the East Weir-Tubb Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
SECTION 12: NE/4 and N/2 SE/4

CASE 4382: In the matter of the application of the Oil Conservation Commission upon its own motion for an order for the contraction of the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico, by the deletion of certain lands in Township 28 North, Ranges 8 and 9 West; Township 29 North, Ranges 8, 9, and 10 West; and Township 30 North, Range 10 West; further, for the extension of the Blanco-Pictured Cliffs Pool and the South Blanco-Pictured Cliffs Pool in San Juan County, New Mexico, to include, among other lands, the lands being deleted from the aforesaid Aztec-Pictured Clifs Pool; and for the further extension of the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico.

CASE 4383: Application of MWJ Producing Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the rules governing the Baum-Upper Pennsylvanian Pool to permit the drilling of an oil well at an unorthodox location 330 feet from the North line and 2310 feet from the West line of Section 9, Township 14 South, Range 33 East, Lea County, New Mexico.

CASE 4384: Application of Shell Oil Company for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 3606 feet to 3680 feet in its Eastland Shell Federal Well No. 1 located in Unit A, Section 35, Township 8 South, Range 30 East, Cato-San Andres Pool Area, Chaves County, New Mexico.

CASE 4385: Application of King Resources Company for a unit agreement, Otero County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Brokeoff Mountain Unit Area comprising 37,747 acres, more or less, of Federal, State and Fee lands in Townships 24, 25, and 26 South, Ranges 19 and 20 East, Otero County, New Mexico.

CASE 4386: Application of Texaco Inc. for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for applicant's wells located on its V. G. Kinahan Federal and Peery Federal leases comprising respectively, Sections 20 and 29 of Township 15 South, Range 30 East, Little Lucky Lake-Devonian Pool, Chaves County, New Mexico. Applicant seeks authority to dispose of produced salt water in an unlined surface pit located in Unit K of said Section 29.

CASE 4387: Application of Benson-Montin-Greer Drilling Corporation for surface commingling of oil, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle the production from its Cañada Ojitos Unit Well No. 13, a non-participating well located in Unit L of Section 27, Township 26 North, Range 1 West, Rio Arriba County, New Mexico, with oil production from the participating area of said unit.

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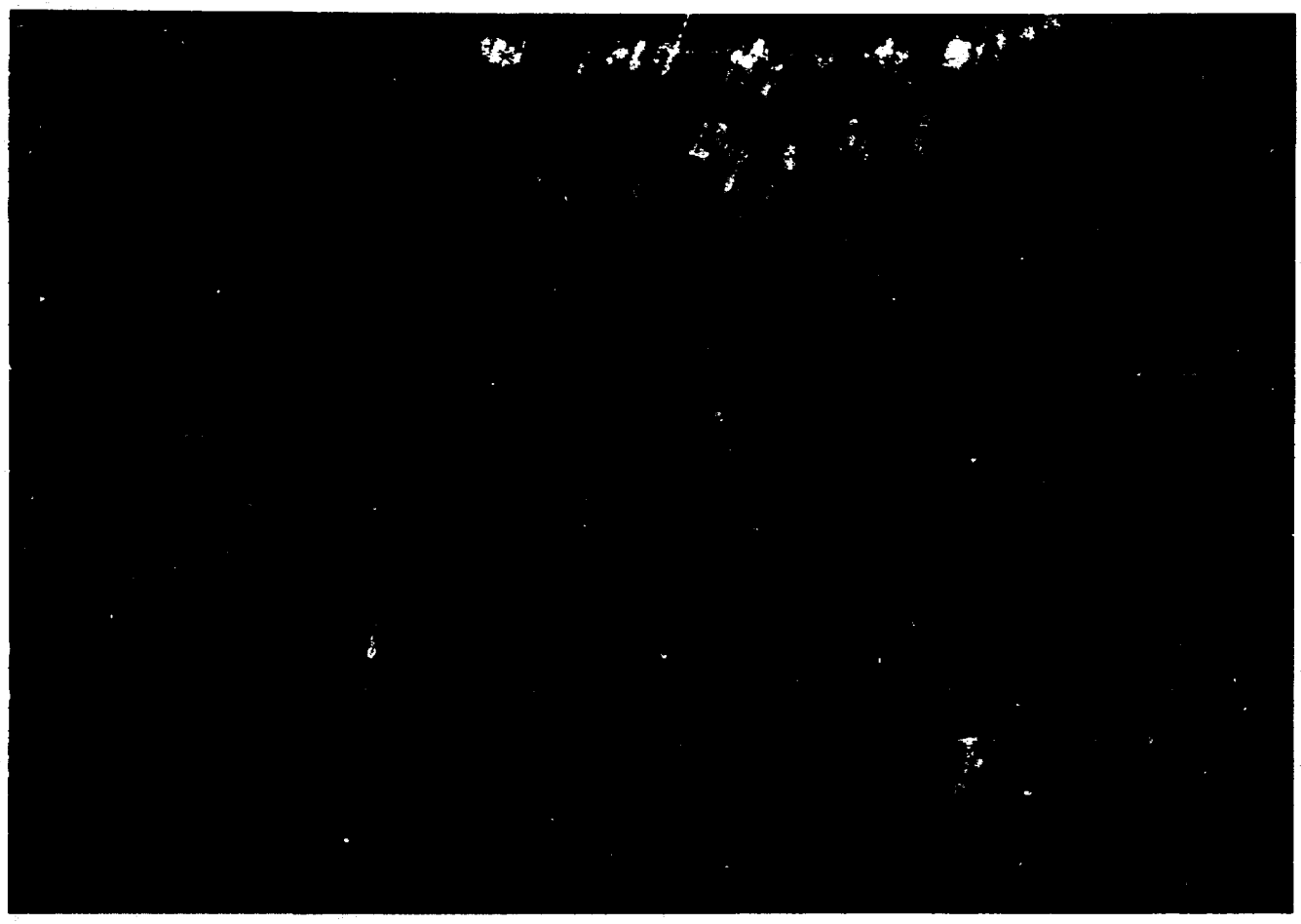

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Model F-500
Positive Displacement Meter

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
APPL EXHIBIT NO. 3
CASE NO. 4387

Controls and Instruments ITT

A DIVISION OF INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION
580 MONTEREY PASS ROAD, MONTEREY PARK, CALIFORNIA 91754

Supersedes:
L4-F500-1-2
Dated: 2/1/66

PARTS PRICE LIST
FLOCO F500 SERIES PD METERS

No.: L4-F500-1-3
Page: 1 of 6
Date: 7/1/66

ITEM	DESCRIPTION	PART NUMBER	PER UNIT	UNIT PRICE
* 1	Screw	1612	2	$ .15
2	Register box assembly	332	1	9.50
3	Register lid	293	1	1.50
4	Register lid pin	292	1	.10
5	Retaining ring	1216	1	.75
6	Register glass	337	1	.50
7	Gasket	1214	1	.35
8	Register assembly (specify unit of measurement when ordering)	331	1	23.50
9	Register gasket	253	1	.25
*10	Calibration gear, drive (specify diameter and number of teeth when ordering)	329	1	1.00
*11	Calibration gear, driven (specify diameter and number of teeth when ordering)	330	1	1.00
12	Worm gear assembly - 20:1	257	1	8.00
13	Worm gear assembly - 40:1	256-D-40	1	5.00
14	Worm gear assembly - 80:1	327	1	7.00
15	Screw	334	2	.15
16	Gear case adapter assembly - 20:1	1498-20	1	39.50
17	Gear case adapter assembly - 40:1	1498-40	1	39.50
18	Gear case adapter assembly - 80:1	1498-80	1	39.50
*19	Seal assembly, low pressure - 20:1	1474-20	1	19.50
*20	Seal assembly, low pressure - 40:1	1474-40	1	19.50
*21	Seal assembly, low pressure - 80:1	1474-80	1	19.50
22	Oil plug	1502	1	.10
23	Register adapter assembly	281	1	12.50
24	Seal housing	1469	1	7.50
25	Bushing	1035	1	1.00
26	"O" ring	654	1	.35
*27	"O" ring	1139	1	.50
28	Spring	1464	1	.50
29	Gear - 2 prong	914	1	.75
30	Shaft assembly - 20:1	1473-20	1	7.00
31	Shaft assembly - 40:1	1473-40	1	7.00
32	Shaft assembly - 80:1	1473-80	1	7.00
33	Spring cup	1470	1	.40
34	Floating bearing	1471	1	.75
35	"O" ring	654	1	.35
36	"O" ring	935	1	.35
37	Seal, "U" cup	315	1	1.25

ITEM	DESCRIPTION	PART NUMBER	PER UNIT	UNIT PRICE
38	Washer	313	2	$ .15
39	Spacer ring	1499	1	.50
40	"O" ring	652	1	.35
41	"O" ring	935	1	.35
42	Washer	1901	1	.10
43	Retaining ring	922	1	.10
44	Washer	313	1	.15
45	"O" ring	934	1	.35
*46	Body bolts	308	8	.40
47	Register sideplate assembly	2506	1	45.00
48	Sampler sideplate assembly	2507	1	47.50
*49	Body seal	304	2	1.50
50	Nut, blind	915	1	1.75
51	"O" ring	1139	1	.50
*52	Nut, bearing	1254	2	.50
*53	Rotor bearing - Aluminum Bronze	2529	2	3.50
*54	Rotor bearing - Carbon Graphite	2496	2	3.50
*55	Rotor bearing - Meehanite	2528	2	3.50
*56	Replaceable wearplate - register side	2275	1	8.50
*57	Replaceable wearplate - sampler side	2276	1	8.50
58	"O" ring	1139	1	.50
59	"O" ring	652	1	.35
60	Alignment plug	2508	1	3.00
*61	Gasket	1116	1	.10
62	Register sideplate & bushing assembly	2497	1	33.50
63	Sampler sideplate & bushing assembly	2498	1	35.00
64	Bushing	2512	2	3.00
*65	Rotor assembly, 1" or 2" meter (See Note 1)			
	(a) Buna-N (yellow dot)	AE-4R	1	37.00
	(b) Viton (red dot)	2326	1	57.00
	(c) Butyl (green dot)	2667	1	57.00
	(d) Neoprene (white dot)	2684	1	57.00
	(e) Ethylene Propylene (green white green)	2772	1	57.00
	(f) Thiokol (blue dot)	2763	1	65.00
*66	Rotor assembly 3" meter (See Note 1)			
	(a) Buna-N (yellow dot)	AE-14R	1	72.00
	(b) Viton (red dot)	2561	1	115.00
	(c) Butyl (green dot)	2668	1	115.00
	(d) Neoprene (white dot)	2685	1	115.00
	(e) Ethylene Propylene (green white green)	2777	1	115.00

ITEM	DESCRIPTION	PART NUMBER	PER UNIT	UNIT PRICE
	(f) Thiokol (blue dot)	2768	1	$125.00
67	Rotor hinge pin, 1" or 2" meter	364	3	.60
68	Rotor hinge pin, 1" or 2" meter (for Delrin rotor only, not shown in drawing)	1517	3	.60
69	Rotor hinge pin, 3" meter	2814	3	.75
*70	Rotor hinge, 1" or 2" meter (See Note 1)			
	(a) Buna-N	361	3	6.00
	(b) Viton	2334	3	9.50
	(c) Butyl	2675	3	9.50
	(d) Neoprene	2692	3	9.50
	(e) Ethylene Propylene	2775	3	9.50
	(f) Thiokol	2776	3	10.00
71	Rotor hinge, 3" meter (See Note 1)			
	(a) Buna-N	252	3	11.00
	(b) Viton	2569	3	18.50
	(c) Butyl	2676	3	18.50
	(d) Neoprene	2693	3	18.50
	(e) Ethylene Propylene	2780	3	18.50
	(f) Thiokol	2771	3	20.00
*72	Rotor hinge spring	362	3**	2.25
*73	Rotor hinge spring, epoxy coated (not shown)	362-EC	3**	3.50
*74	Rotor spring grommet			
	(a) Buna-N	363	6	.25
	(b) Viton	2338	6	.35
	(c) Butyl	2681	6	.35
	(d) Neoprene	2698	6	.35
	(e) Ethylene Propylene	2724	6	.35
	(f) Thiokol	2723	6	.50
75	Rotor hub, 1" or 2" meter (See Note 1)			
	(a) Buna-N	1528	1	25.00
	(b) Viton	2327	1	35.00
	(c) Butyl	2669	1	35.00
	(d) Neoprene	2686	1	35.00
	(e) Ethylene Propylene	2773	1	35.00
	(f) Thiokol	2764	1	37.50
76	Rotor hub, 3" meter (See Note 1)			
	(a) Buna-N	1530	1	46.00
	(b) Viton	2562	1	66.00
	(c) Butyl	2670	1	66.00
	(d) Neoprene	2687	1	66.00

ITEM	DESCRIPTION	PART NUMBER	PER UNIT	UNIT PRICE
	(e) Ethylene Propylene	2778	1	$ 66.00
	(f) Thiokol	2769	1	72.00
77	Screw, bridge	309-S	2**	.75
78	Washer	310	2**	.10
79	Bridge assembly, 1" or 2" meter, Delrin (standard)	AE-3D	1	17.50
80	Bridge assembly, 1" or 2" meter, steel	AE-3	1	23.50
81	Bridge assembly, 1" or 2" meter, 316 SS	2406	1	65.00
82	Bridge assembly, 3" meter, Delrin (standard)	2790	1	35.00
83	Bridge assembly, 3" meter, steel	2819	1	47.00
84	Bridge assembly, 3" meter, 316 SS	2820	1	130.00
85	Bridge seal, set of 2			
	(a) Buna-N	2791	1	3.50
	(b) Viton	347	1	3.50
	(c) Butyl	2726	1	3.50
	(d) Neoprene	2727	1	3.50
	(e) Ethylene Propylene	2729	1	3.50
	(f) Thiokol	2728	1	3.50
86	Bridge seal, set of 4			
	Viton only	258	1	7.00
	(For other construction materials, order two sets of above)			
87	Wedge	302	1**	.15
88	Liner, 316 stainless steel, 1" or 2" meter	301	1	15.00
89	Liner, 316 stainless steel, 3" meter	2656	1	20.00
90	Dowel pin	303	4	.15
91	Body assembly, 1" meter	1135	1	65.00
92	Body assembly, 2" meter	1132	1	65.00
93	Body assembly, 3" meter	2848	1	102.50

NOTES:
* Indicates recommended spare parts.
** Double these quantities for 3" meters.

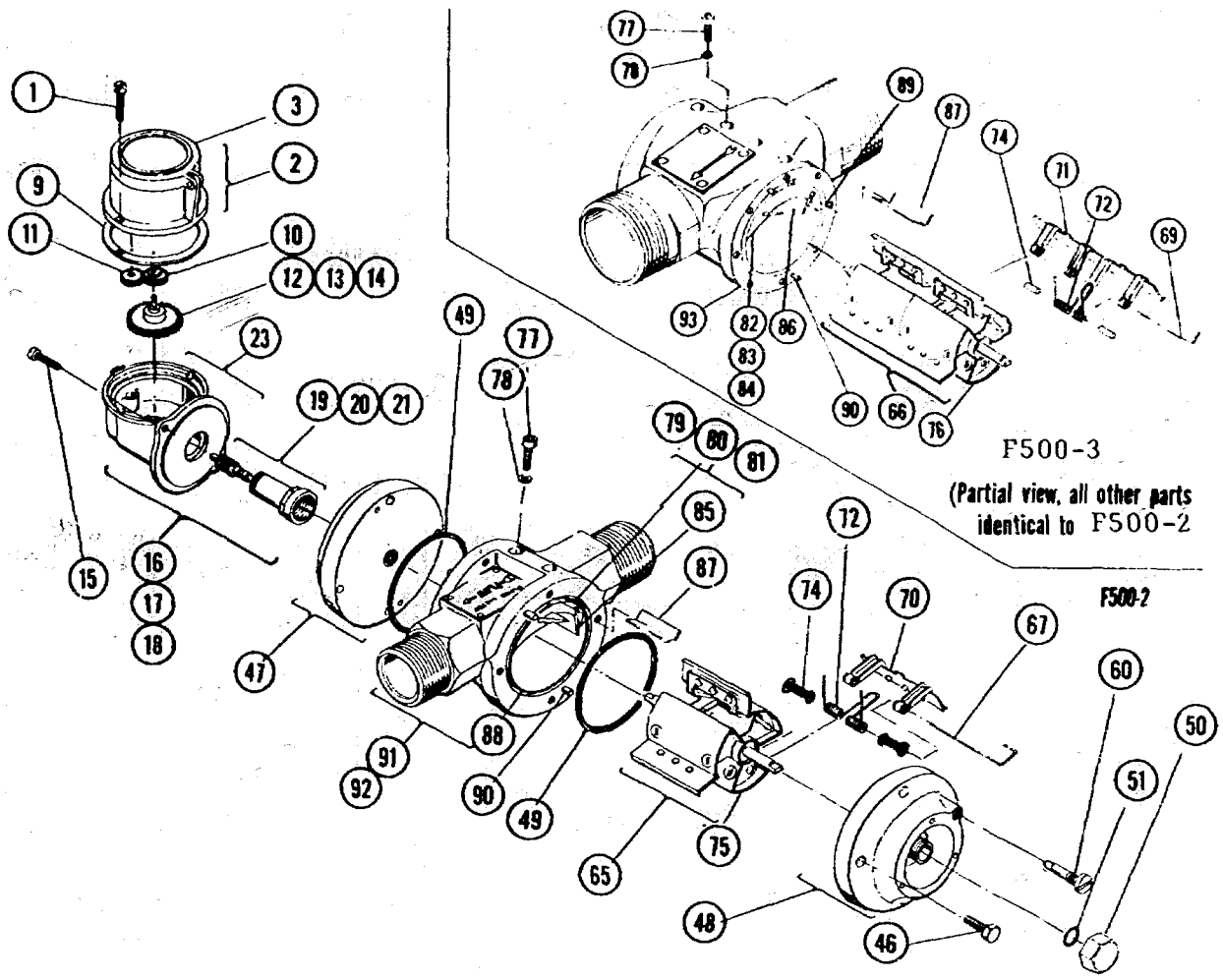
1. Standard Floco meters are furnished with Buna-N elastomers. Most special elastomers are stock items, but may require additional time if stock is depleted.

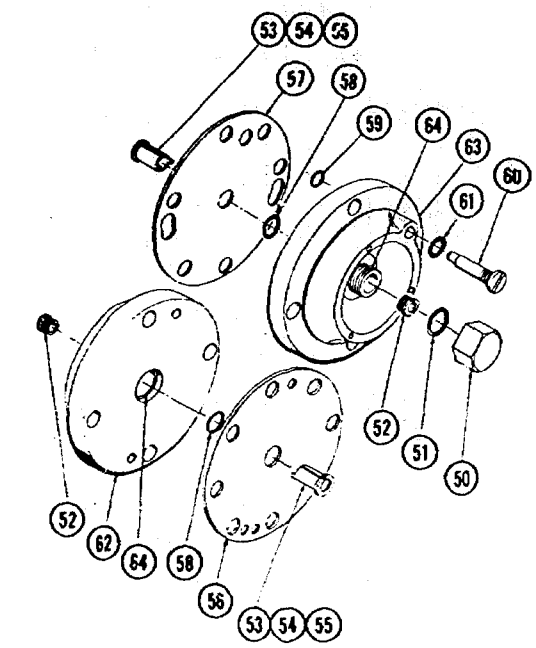
2. When ordering parts, please specify serial number and meter model number of instrument with which they are to be used.

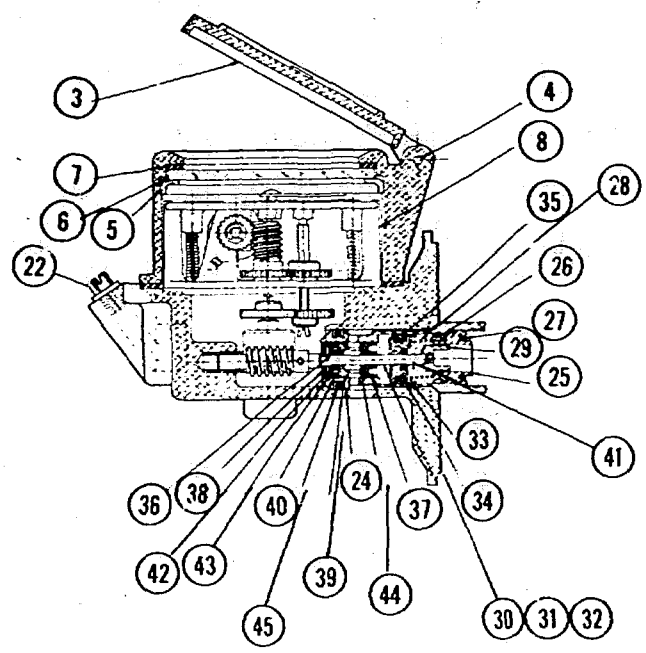
3. Minimum parts order is $5.00. Identification drawing is on Page 5.

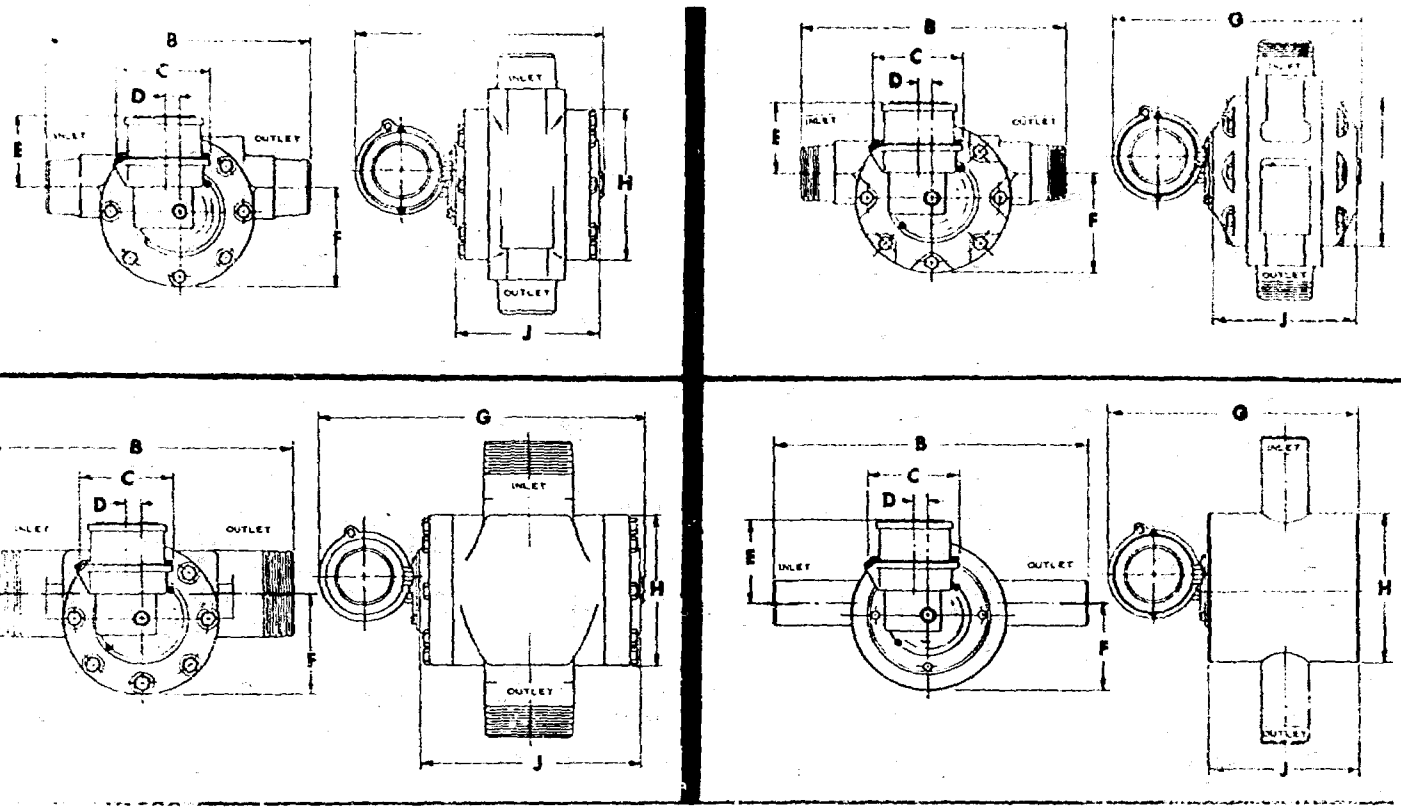
4. Parts are listed in order of disassembly.

Prices are f.o.b. shipping point, and are subject to change without notice. (3D)


F500-3
(Partial view, all other parts identical to F500-2
F500-2







DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	J
F500-1	See Below	10	3-1/2	1	1-7/8	4	9-13/16	6	5-3/4
F500-2	" "	10-1/2	3-1/2	1	1-7/8	4	9-13/16	6	5-3/4
F500-3	" "	12	3-1/2	1	1-7/8	4	12-13/16	6	8-3/4
F2500-1	" "	10	3-1/2	19/32	2-15/16	4	9-13/16	6	5-3/4
F2500-2	" "	10-1/2	3-1/2	19/32	2-15/16	4	9-13/16	6	5-3/4
F2500-3	" "	12	3-1/2	19/32	2-15/16	4	12-13/16	6	8-3/4
F3500-1	" "	10	3-1/2	19/32	2-15/16	4	9-13/16	6	5-3/4
F3500-2	" "	10-1/2	3-1/2	19/32	2-15/16	4	9-13/16	6	5-3/4
F3500-3	" "	12	3-1/2	19/32	2-15/16	4	12-13/16	6	8-3/4
F5000-1	" "	12-1/2	3-1/2	19/32	3-7/16	3-1/2	9-15/16	6	6

NOTE: ALL DIMENSIONS MAY VARY ± 1/16 IN.

FLANGE DIMENSION "A" (FACE TO FACE)

	150 OR 300 RF OR RTJ			400 OR 600 RF OR RTJ			900 OR 1500 RF OR RTJ		
	1"	2"	3"	1"	2"	3"	1"	2"	3"
F500-1 *	12								
F500-2		12							
F500-3			12						
F2500-1				12 6/8			13 3/4		
F2500-2					13			13 1/2	
F2500-3						13			13 1/2
F3500-1							13 3/4		
F3500-2								13 1/2	
F3500-3									13 1/2
F5000-1									

* 150 LB FLANGES ONLY

SPECIFICATIONS

MODEL	N. P. T. PIPE SIZE	CAPACITY G. P. M. * MIN.	CAPACITY G. P. M. * MAX.	MAX. TEMP. FAHR.	MAX. W.P.	APPROX. SHIPPING WEIGHT
F500-1	1" FEMALE	1	60	180	500	31
F500-2	2" MALE	1	60	180	500	31
F500-3	3" MALE	3	90	180	500	47
F2500-1	1" FEMALE	1	60	180	2500	37
F2500-2	2" MALE	1	60	180	2500	37
F2500-3	3" MALE	3	90	180	2500	52
F3500-1	1" FEMALE	1	60	180	3500	43
F3500-2	2" MALE	1	60	180	3500	41
F3500-3	3" MALE	3	90	180	3500	59
F5000-1	1" FEMALE	1	60	180	5000	44

* BASED ON PALE HYDRAULIC OIL
935 S. G., 210 API, 110SSU AT 100 DEG F

BENSON-MONTIN-GREER DRILLING CORP.
221 PETROLEUM CENTER BUILDING
FARMINGTON, NEW MEXICO 87401
PHONE: 325-8874

May 22, 1970

New Mexico Oil Conservation Commission
Box 2088
Santa Fe, New Mexico

Attention: Mr. A.L. Porter, Jr.

Gentlemen:

Enclosed herewith is a xerox copy of our letter to the U.S. Geological Survey requesting approval for marketing crude oil production from the Canada Ojitos Unit 13(L-27), non-participating oil well. Also enclosed for your convenience is the map showing the oil gathering system and the wells serviced by it.

We include also, a xerox copy of the Geological Survey letter of approval from this request. We hereby request the approval of the New Mexico Oil Conservation Commission in this matter.

Yours very truly,

BENSON-MONTIN-GREER DRILLING CORP.

BY: Virgil L. Stoabs
Virgil L. Stoabs, Vice- President

VLS:ld

Enclosures

cc: Aztec Office
New Mexico Oil Conservation Commission

BENSON-MONTIN-GREER DRILLING CORP.
221 PETROLEUM CENTER BUILDING
FARMINGTON, NEW MEXICO 87401
PHONE: 325-8874

May 7, 1970

U.S. Department of the Interior
Geological Survey
Roswell, New Mexico

Attention: Mr. Carl Traywick

Re: REQUEST FOR U.S.G.S. APPROVAL
TO RUN OIL PRODUCTION FROM
CANADA OJITOS UNIT NO. 13 (L-27)
NP WELL THROUGH THE CANADA OJITOS
UNIT LACT SYSTEM

Gentlemen:

This letter is to request approval of the U.S.G.S. for the marketing of crude oil production from the Canada Ojitos Unit No. 13 (L-27) non-participating oil well by commingling this oil with participating area production and selling to Shell Pipe Line Corporation through our existing facilities, including LACT unit.

The oil production from the Canada Ojitos Unit No. 13 (L-27) NP well will be metered at the well location before it enters the gathering system. The accounting will be based on this meter reading.

We hereby respectfully request U.S.G.S. approval for this means of marketing and accounting for oil production from the Canada Ojitos Unit No. 13 (L-27) NP oil well.

Yours very truly,

BENSON-MONTIN-GREER DRILLING CORP.

BY: _____
Virgil L. Stoabs
Vice-President

VLS:ney

United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

May 19, 1970

Benson-Montin-Greer Drilling Corporation
221 Petroleum Center Building
Farmington, New Mexico 87401

Gentlemen:

Your letter of May 7 requests approval for the commingling of production from the Canada Ojitos unit well No. 13 (L-27), in the NW¼SW¼ sec. 27, T. 26 N., R. 1 W., N.M.P.M., Federal lease No. Santa Fe 081222-B, with Niobrara-Greenhorn participating area production for the purpose of selling such production through existing unit facilities. Unit well No. 13 (L-27) was completed in the Mancos on April 7, 1970, for an initial potential of 85 BOPD and you have indicated in previous conferences that the lands proven productive by such well will be included in the eighth revision to the Niobrara-Greenhorn participating area.

The method of commingling set forth in your letter is hereby approved subject to like approval by the New Mexico Oil Conservation Commission. Any changes in the system must receive prior approval from this office. Your "Lessees Monthly Report of Sales and Royalty", form 9-361, should show all meter readings and computations used in allocating production to the lease and the participating area.

Please notify our Durango office when the commingling installation is completed so that a field inspection of the system can be made.

Sincerely yours,

Carl C. Traywick

CARL C. TRAYWICK
Acting Oil and Gas Supervisor

DRAFT

GMH/esr
July 16, 1970

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE No. 4387

Order No. R-~~3401~~ 4001

APPLICATION OF BENSON-MONTIN-GREER DRILLING CORPORATION FOR SURFACE COMMINGLING OF OIL, RIO ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:30 a.m. on July 15, 1970, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of July, 1970, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Benson-Montin-Greer Drilling Corporation, is the operator of the Canada Ojitos Unit Well No. 13, a non-participating well located in Unit L of Section 27, Township 26 North, Range 1 West, NMPM, West Puerto Chiquito-Mancos Pool, Rio Arriba County, New Mexico, and of various participating wells in said unit and pool.

(3) That the applicant seeks authority to commingle the oil production from said Unit Well No. 13 with oil production from the participating area of said unit.

(4) That the applicant proposes to separately meter the production from said Unit Well No. 13, meter the commingled production, and then allocate ~~the~~ production ~~to said non-participating Unit Well No. 13 and~~ to the participating area of said unit by the subtraction method.

(5) That approval of the subject application will result in economic savings to the operator, prevent waste, and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Benson-Montin-Greer Drilling Corporation, is hereby authorized to commingle oil production from its Canada Ojitos Unit Well No. 13, a non-participating well located in Unit L of Section 27, Township 26 North, Range 1 West, NMPM, West Puerto Chiquito-Mancos Pool, Rio Arriba County, New Mexico, with oil production from the participating area of said unit.

(2) That adequate facilities shall be installed and maintained by the applicant in conformance with applicant's Exhibit No. 2 introduced in this case to permit determining the producing capacity of the above-described non-participating Unit Well No. 13 and ~~xhax~~ the total producing capacity of the wells in the participating area of the above-described unit by separately metering the production from said Unit Well No. 13 and the commingled oil production and subtracting the former from the latter.

(3) That the oil production shall be allocated to the non-participating Unit Well No. 13 and to the participating area of said unit on the basis of the subtraction method described in Order (2) above.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.