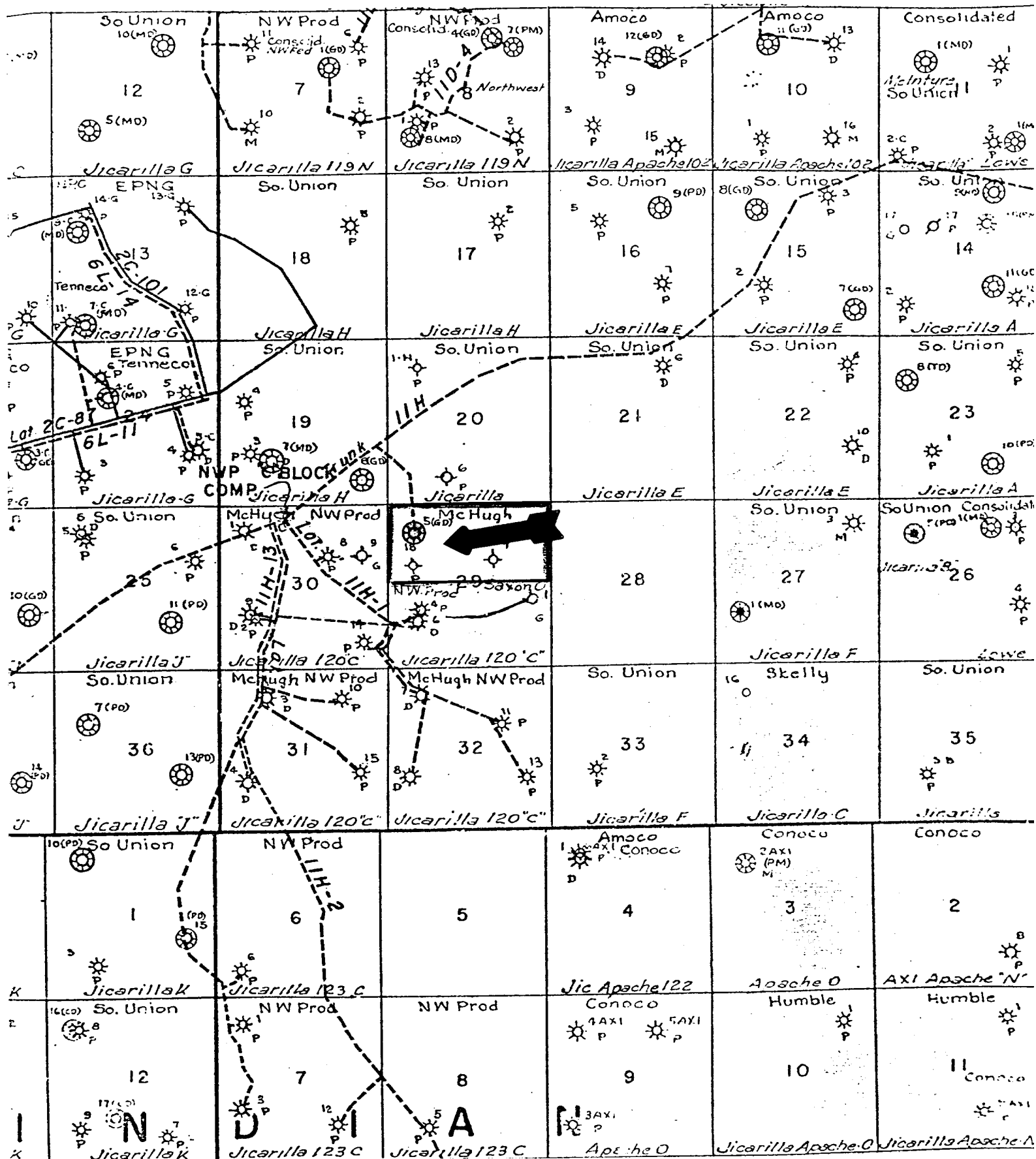


Township 26 North, Range 4 West, N.M.P.M.



Well Location

— Tapacito Gallup and
Basin Dakota Dedicated
Acreage

Jicarilla #5
D-29-26N-4W

APPLICATION OF JEROME P. McHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No. 6146

Exhibit No. 1

Resume of Jicarilla #5

Well Completion History

Post Office Box 234
Zip Code 87401

DUGAN PRODUCTION CORP.

THOMAS A. DUGAN, President

709 BLOOMFIELD RD.
FARMINGTON, NEW MEXICO

November 7, 1968

TELEPHONE: 325-9184 Office
325-5694 Home

Area Code 505

Jerome P. McHugh
Jicarilla #5
7 A.M. Morning Drilling Report

6/26/68	E. V. Echohawk staked location 890' fnl 880' fw1, Sec. 29, T26N, R4W, Rio Arriba County, New Mexico. Elev. 6847'.			
9/26/68	Move in Arapahoe Drilling Rig #7.			
9/27/68	Spud 12 1/4" hole 9:00 P.M., 9/26/68. Drilled to 207' 1/2 ⁰ - 207' Water. Ran 6 jts. 8 5/8" O.D., 24#, J-55, 8R ST&C csg. T.E. 192' set at 205' RKB cement w/175 sx. Class "A" 2% Cacl. P.O.B. 3:30 A.M, 9/27/68. Cement circulated - W.O.C.			
9/28/68	207' Repair rig and pressure test csg. - held O.K.			
9/29/68	2063' 3/4 ⁰ - 1171' 2 ⁰ - 2063'	1/2 ⁰ - 528' 1/2 ⁰ - 1484'	1/2 ⁰ - 858' 1/4 ⁰ - 1891'	Water
9/30/68	3177' 1 3/4 ⁰ - 2980'	1 3/4 ⁰ - 2360' 1 1/2 ⁰ - 3177'	1 3/4 ⁰ - 2671'	Water
10/1/68	4025' 1 ⁰ - 4010'	1 1/4 ⁰ - 3480'	1 1/4 ⁰ - 3790'	Water
10/2/68	4496'	3/4 ⁰ - 4321'	1 ⁰ - 4395'	wt. 9.0 vis 34
10/3/68	4834'	1 ⁰ - 4695'	1 ⁰ - 4772'	wt. 9.2 vis 33
10/4/68	5200'	1/2 ⁰ - 4978'		wt. 8.9 vis 33
10/5/68	5580'	3/4 ⁰ - 5261'		wt. 8.9 vis 35
10/6/68	5850'	1/2 ⁰ - 5580'	1/2 ⁰ - 5661'	wt. 9.2 vis 40
10/7/68	6170'	1/2 ⁰ - 5881'		wt. 8.9 vis 40
10/8/68	6585'	3/4 ⁰ - 6410'		wt. 9.1 vis 44
10/9/68	7002'	1/2 ⁰ - 6715'	3/4 ⁰ - 6898'	wt. 9.1 vis 43
10/10/68	7355'	1 ⁰ - 7168'		wt. 9.2 vis 42
10/11/68	7583'	1 ⁰ - 7545'		wt. 9.1 vis 41

APPLICATION OF JEROME P. McHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No.

6146

Exhibit No.

2

Post Office Box 234
Zip Code 87401

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Page 2

Jicarilla #5 Morning Drilling Report (Cont'd)

10/12/68	7697'	wt. 9.3 vis 43
10/13/68	7761'	wt. 9.2 vis 40
10/14/68	7845' 1 ⁰ - 7845' Condition hole to log.	wt. 9.2 vis 75
10/15/68	7845' Attempt to log - bridge at 7300'. Went in hole - conditioned hole. Pulled out of hole - ran Welex Density and Gamma Ray log. Conditioned hole - laid down drill pipe. wt. 9.1 vis 43	
10/16/68	7847' wt. 9.1 vis 43 Ran 245 jts. 4 1/2" O.D., 34 jts. 11.6#, 211 jts. 10.5#, J-55, 8R ST&C csg. T.E. 7859.55' set at 7847' RKB. Cemented first stage with 150 sx. Class "A" 8% gel. plus 260 sx. Class "C" 2 1/2# salt per sx. P.O.B. 1:40 P.M., 10/15/68. Good mud returns while cementing. Max. cementing pressure 900 psi. Reciprocated csg. free while cementing. Cemented second stage through Baker two stage tool at 5755' with 175 sx. Class "A" 40% Diacel "D" 12 1/2# gilsonite per sx. P.O.B. 5:50 P.M., 10/15/68. Good mud returns while cementing. Max. cementing pressure 800 psi. Closed Baker tool with 2500 psi. Cemented third stage through Baker two stage tool at 3545' with 250 sx. Class "A" 40% Diacel "D". P.O.B. 7:00 P.M., 10/15/68. Good mud returns while cementing - no cement to surface. Max. cementing pressure 800 psi. Closed Baker tool with 2500 psi.	
10/17/68	Move out Arapahoe Rig #7.	
10/18/68	Move in Signal Rig #1.	
10/19/68	PBSD 7810' Rigged up - went in hole with bit and casing scraper, drilled Baker stage tools at 3545' and 5755'.	
10/20/68	PBSD Cleaned out to 7810', circulated hole clean, tested csg. and B.O.P. to 4000 psi - held O.K., displaced hole, spotted 250 gal. 15% HCl acid, pulled out of hole, ran Jet-Tech Gamma Ray Correlation log. Perf. 2 jets per ft. 7745'-49', 7754'-60', 7783'-87', 7789'-94', and 7796'-7800', frac with Dowell 4000 HP 40,000# 20-40 sd., 48,500 gal. water w/2 1/2# J-166 friction reducing agent per 1000 gal., I.F. 3300 psi, max. 3300 psi, ave. 2800 psi, min. 2600 psi, final 3200 psi. Instant shut in 2000 psi, 10 min. shut in 1900 psi. Ave. I.R. 53 B/M. (Cont'd)	

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Page 3

Jicarilla #5
Morning Drilling Report (Cont'd)

- 10/20/68 (Cont'd) Perf. 2 jets per ft. 7646'-54', frac all perf. w/53,600 gal. water w/2 1/2# J-166 per 1000 gal., 40,000# 20-40 sd. I.F. 3500 psi, ave. 3200 psi, max. 4000 psi, final 4000 psi. Instant shut in 2200 psi, 10 min. shut in 1900 psi. Ave. I.R. 50 B/M. Made five ball drops of 10 balls each, good ball action. Perf. 2 jets per ft. 7083' to 7101'. Spot 500 gal. HCl acid to Gallup perf., established injection rate at 64 B/M at 3000 psi, assume Gallup perf. open, let acid soak - frac all perf. w/40,000# 20-40 sd., 51,500 gal. water with 20# Adomite Aqua fluid loss additive per 1000 gal. water. I.F. 3800 psi, ave. 3800 psi, min. 3200 psi, max. 4000 psi, final 3900 psi. Instant shut in 2100 psi, 10 min. shut in 1900 psi. Ave. I.R. 43 B/M. Made 4 ball drops of 5 balls each, good ball action. Laid blow lines, let well flow back. Well kicked off strong at 6:15 A.M. making est. 40,000 MCF through 7" blow line.
- 10/21/68 PBDT 7810' Let well flow to atmosphere a total of 5 1/2 hrs., well blowing strong, not much water or oil. Shut well in, wait on water and kill trucks. Hooked up 2 B.J. pump trucks, killed well with 200 bbls. water. Jet-Tech ran Baker Model "D" packer with flapper valve in place on wire line set at 7584' RKB. Pumped in 200 bbls. water, well on vac., pump into well continually while running tbg. Ran 241 jts. 2 3/8" O.D., 4.7#, J-55, 8R EUE Lone Star tbg. T.E. 7579.55' set at 7588' RKB with Baker blast joints. 7073' to 7113', Baker Model "H" sliding sleeve valve at 7175', Baker Model "F" seating nipple at 7552' and Baker seal assembly at 7584'. Landed tbg. with 15,000# wt. at packer. Nippled up, drop ball, pumped into tbg. to pump out float, wait on day light.
- 10/22/68 PBDT 7810' Swab tbg. to 7200', Dakota would not kick off, float probably not out of Dakota tbg., released rig.
- 10/23/68 Move out Signal Rig.
- 10/24/68 Check well, Gallup side unload some water, Dakota side dead.
- 10/25/68 Gallup kicked off strong.
- 10/29/68 Dowell pump 35 bbls. water into Dakota, drop ball with swab cup, pumped in 35 bbls. water - no pressure increase. Drop three sticks soap, pumped in 35 bbls. water, had pressure increase and instant drop back. Well flowing back.
- 10/30/68 Dakota kicked off making estimated 1200 MCF. Shut in for test.

DIAGRAMATIC SKETCH OF DUAL

COMPLETION

8-5/8" OD Casing
@ 205' cemented
with 175 sacks

Stage tool @ 3545'
cemented with 200
sacks 40% Diacel "D"

Stage tool @ 5755'
cemented with 175
sacks 40% Diacel "D"

Top of Gallup - 6757'
Gallup Perforations 7083-7101'
Base of Gallup - 7240'

Two Baker "Blast Joints"
7073-7113' 3.062" OD

Baker Model "H" sliding
sleeve valve @ 7175'
Baker Model "F" seating
nipple @ 7552'

Baker Model "D" Packer
@ 7584'
2-3/8" OD Tubing
set @ 7586'

4-1/2" OD casing set
@ 7847'. First stage
cemented with 650 cu ft

Top of Dakota - 7641
Dakota Perforations 7646-7654'
7745-7749, 7754-7760, 7783-
7787, 7789-7794', 7796-7780'

7083
7101

7646
7800

APPLICATION OF JEROME P. MCHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No. 6146

Exhibit No. 3

T-26-N, R-4-W, N.M.F.M.

12	7	8	9	10	11	12
13	18	17	16	15	14	13
24	19 u	20 ↓	21	22	23	24
25	30	* 148088 1282	28	27	26	25
36	31	32	33	34	35	36
1	6	5	4	3	2	1
12	7	8	9	10	11	12

17 1/2 QRR
Northwest Prod. Corp.

1976 Production

Tapacito Gallup Pool Wells

* Well Location

— Gas Production

— Oil Production

u T-A - *unreported*

APPLICATION OF JEROME P. McHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

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Exhibit No. 4

T-26-N, R-4-W, N.M.P.M.

54447 0 12 • 46585 314	7	38910 336 • • • 23590 0	462609 36839 708 689	26716 49699 809 871	56774 • 586 11 33514 591	12
67605 • 248 13 • 21147 55	18	17	19206 445 16	• 51205 791 15 33758 915	• 54986 756 14 73298 991	53296 • 13 620 32725 607
• 96954 777 24 117339 872	19 54937 236 69213 1116	20	21	22 41000 974	• 46217 422 23 26434 432	• 25419 813 24
• 87261 153 25 99247 688	• 84665 709 30 66885 499	* 47609 242 29 • 13536 154	28	27	• 68517 1258 26	25
• 85052 1052 36 99912 1560	• 51439 525 31 • 73406 893	• 28593 304 32 • 39365 1001	33	34	35	36
• 67776 328 1 70608 694	6	5	4	3	2	1
• 40130 685 12 • 13671 207	7	8	9	10	11	12

12 1/2 a/c ORR
Northwest Prod Corp.

1976 Production

Basin Dakota Pool Wells

- * Well Location
- Gas Production
- Oil Production

APPLICATION OF JEROME P. McHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No. 6146

Exhibit No. 5

SHUT-IN PRESSURES

<u>DATE</u>	<u>GALLUP</u> (casing)	<u>DAKOTA</u> (tubing)
November 2, 1968	1696	2379
April 27, 1969	---	1475
June 11, 1969	1070	----
September 17, 1969	888	1348
May 5, 1970	662	1042
September 16, 1970	540	880
July 19, 1971	450	882
September 6, 1971	430	790
June 19, 1972	382	752
August 1, 1973	352	742
January 31, 1974	240	690
May 7, 1974	270	660
May 22, 1975	---	742
July 25, 1975	690	265
December 10, 1975	354	-0-
February 4, 1977	245	645
June 8, 1977	-0-	712
August 25, 1977	250	650

APPLICATION OF JEROME P. MCHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No. 6146

Exhibit No. 6

Oil and Gas Production of
the Jicarilla #5 Well from the
Tapacito Gallup Pool and the
Basin Dakota Pool

1976

Tapacito Gallup Pool

Gas	148088 MCF
Oil	1282 Barrels

Basin Dakota Pool

Gas	47609 MCF
Oil	242 Barrels

December, 1977

Tapacito Gallup Pool

Gas	15464 MCF
Oil	173 Barrels

Basin Dakota Pool

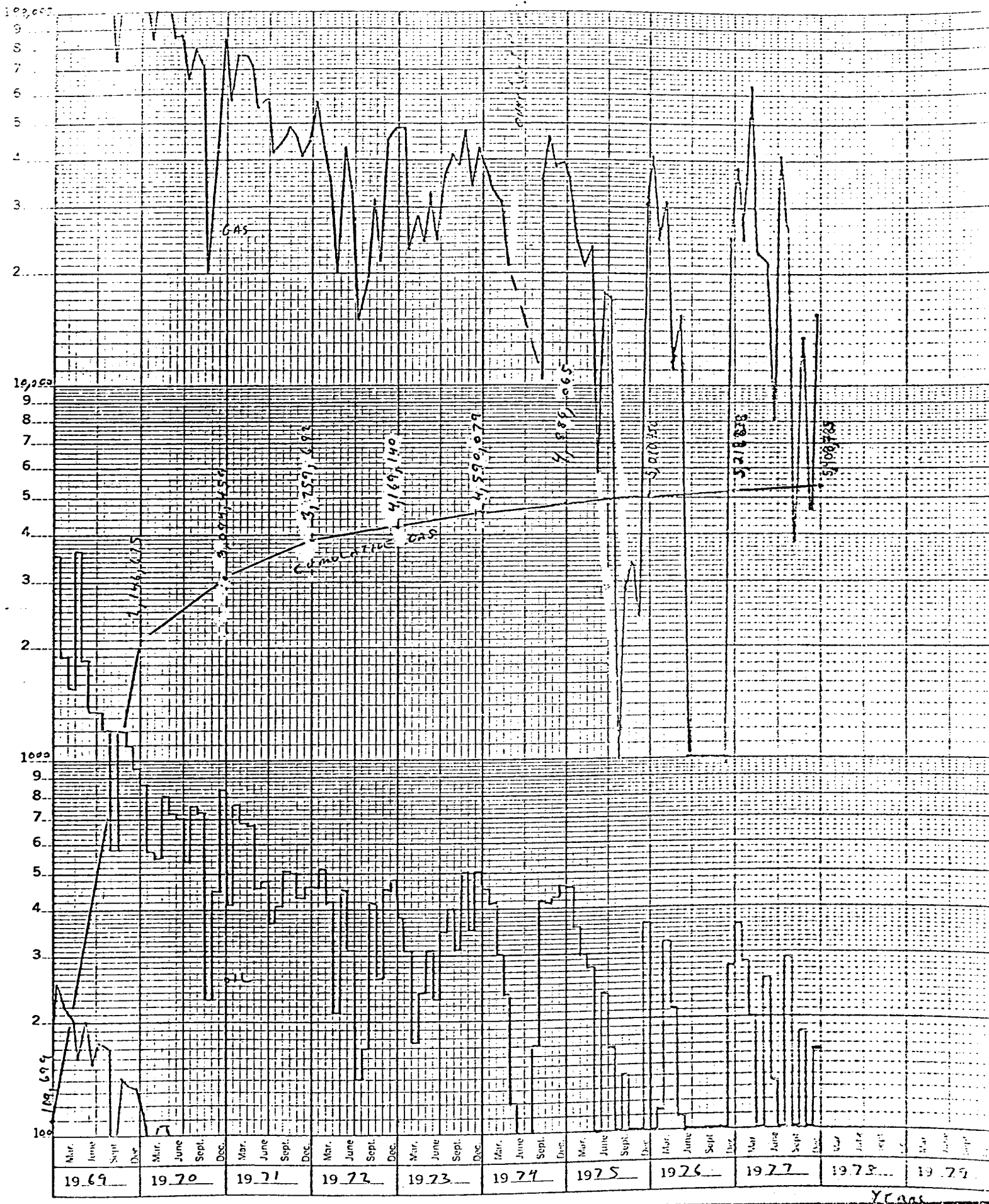
Gas	4284 MCF
Oil	-0-

APPLICATION OF JEROME P. MCHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No. 6146

Exhibit No. 7

PRODUCTION DECLINE CURVE
Tapacito Gallup Pool
Jicarilla #5 Well



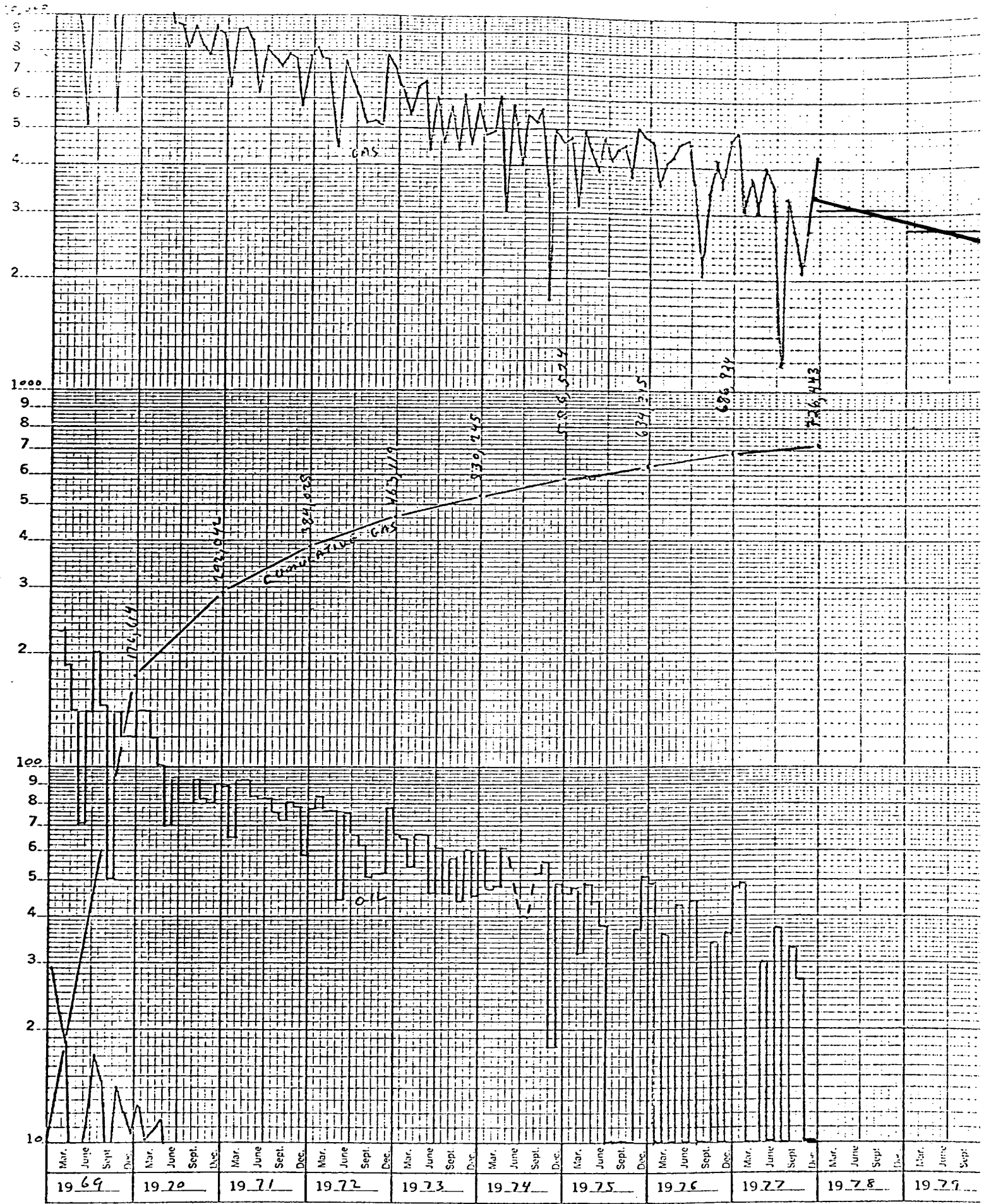
Anticipated Production

APPLICATION OF JEROME P. McHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No. 6146

Exhibit No. 8

PRODUCTION DECLINE CURVE
 Basin Dakota Pool
 Jicarilla #5 Well



ave 530/MCF
 3100 MCF/MO for 1978

— Anticipated Production

APPLICATION OF JEROME P. McHUGH FOR DOWNHOLE COMMINGLING OF Jicarilla #5 Well, Rio Arriba County, New Mexico	
Case No.	6146
Exhibit No.	9

Operator Jerome P. McHugh		Pool Tapacito Gallup			County Rio Arriba									
Address Box 234, Farmington, NM 87401		TYPE OF TEST - (X)		Scheduled ☒ Special ☐										
LEASE NAME Jicarilla	WELL NO. 5	LOCATION			DATE OF TEST 12-22-77	CHOKE SIZE --	T.B.G. PRESS. --	DAILY ALLOW-ABLE GM	LENGTH OF TEST HOURS 24	Completion ☐			GAS - OIL RATIO CU.FT./BBL 111,357	
		U	S	T						R	WATER BBL'S.	GRAV. OIL BBL'S.		GAS M.C.F.
	D	29	26N	4W						1/2	65.1	14	1559	

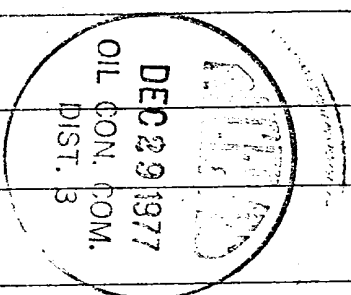
No well will be assigned an allowable greater than the amount of oil produced on the official test.

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

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

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

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



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

[Signature]
(Signature)

Agent _____
(Title)

12-28-77
(Date)

APPLICATION OF JEROME P. McHUGH
FOR DOWNHOLE COMMINGLING OF
Jicarilla #5 Well, Rio Arriba
County, New Mexico

Case No. 6146

Exhibit No. 10