

CASE NO.

6349

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
State Land Office Building  
Santa Fe, New Mexico  
11 October 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of Consolidated Oil ) CASE  
and Gas, Inc. for downhole com- ) 6349  
mingling, Rio Arriba County, New )  
Mexico. )

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.  
Legal Counsel for the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87501

For the Applicant: W. Thomas Kellahin, Esq.  
KELLAHIN & FOX  
500 Don Gaspar  
Santa Fe, New Mexico 87501

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I N D E X

CHARLES PARHAM

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1 MR. STAMETS: We'll call next Case 6349.

2 MS. TESCHENDORF: Case 6349. Application of  
3 Consolidated Oil and Gas, Inc. for downhole commingling,  
4 Rio Arriba County, New Mexico.

5 MR. STAMETS: Call for appearances in this  
6 case.

7 MR. KELLAHN: Tom Kellahn of Kellahn and  
8 Fox, Santa Fe, New Mexico, appearing on behalf of the  
9 applicant, and I have one witness.

10 MR. STAMETS: I'd like to have the witness  
11 stand and be sworn, please, at this time.

12 (Witness sworn.)

13  
14 CHARLES PARHAM  
15 being called as a witness and having been duly sworn upon  
16 his oath, testified as follows, to-wit:

17  
18 DIRECT EXAMINATION

19 BY MR. KELLAHN:

20 Q Would you please state your name, by whom  
21 you are employed, and in what capacity?

22 A. My name is Charles Parham. I am employed by  
23 Consolidated Oil and Gas out of Denver, Colorado, as a  
24 Senior Production Engineer.

25 Q Mr. Parham, have you previously testified

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1 before the Oil Conservation Division, and had your qualifi-  
2 cations as an expert witness accepted?

3 A. No, I have not.

4 Q. Would you state for the Examiner where you  
5 obtained your degree and in what field?

6 A. I have a BS degree from the University of  
7 New Mexico in chemical engineering.

8 Q. What year did you obtain that degree?

9 A. 1971.

10 Q. Subsequent to graduation where have you been  
11 employed and in what capacity?

12 A. I worked for approximately six years for  
13 Gulf Oil Corporation, throughout south Louisiana, as a --  
14 in various capacities of production and drilling engineer,  
15 and one year with Davis Oil in south Louisiana, as division  
16 engineer, and since April of this year I've been with Con-  
17 solidated Oil and Gas in my present capacity.

18 Q. In your present capacity, Mr. Parham, have  
19 you made a study of and are you familiar with the facts  
20 surrounding this particular application?

21 A. Yes, I have, and I am familiar with that.

22 MR. KELLAHIN: We tender Mr. Parham as an ex-  
23 pert witness.

24 MR. STAMETS: The witness is considered quali-  
25 fied.

1 Q (Mr. Kellahin continuing.) Would you refer  
2 to what we've marked as Exhibit Number One, identify it  
3 and tell me what Consolidated Oil and Gas is seeking to  
4 accomplish.

5 A Okay. This is a location plat of our Hoyt  
6 1-5, which is in Section 5 of Township 26 North, Range 4  
7 West, Rio Arriba County.

8 In this case we seek to approval for down-  
9 hole commingling in the Gallup and Basin Dakota Formations.  
10 This well is presently completed as a dual.

11 Q I'll show you Exhibit Two and have you identify  
12 that.

13 A This exhibit is a present completion schematic  
14 of the well. It shows the perforations to the Dakota at  
15 8280 to 8452. This is a gross interval. And the Gallup  
16 perfs from 7712 to 7779; this is also a gross interval.

17 It has been completed in a 5-1/2 inch liner  
18 with the top at 4220 and the bottom at 8522.

19 Q If the Division grants your application for  
20 downhole commingling. how will you recomplete the well?

21 A Well, initial attempt would be made. of course.  
22 to pull both strings of tubing. Previous experience has  
23 shown in -- well, since both of these zones have been sand/  
24 water frac'd and there is sand production historically back  
25 from the fracs after initial completion, this sand tends to

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1 stack up on top of the packer and around the tubing.

2 Initial attempt would be made to pull the  
3 tubing from the packer. If this was unsuccessful, we  
4 would, of course, have to cut the long string tubing and  
5 would hope to leave that packer in place rather than at-  
6 tempt extensive fishing operations, which could result.

7 Q What if any experience have you had with re-  
8 gards to difficulties encountered with Gallup-Dakota dual  
9 completions that have been sand fractured?

10 A Insofar -- well, what problems have we en-  
11 countered insofar as what?

12 Q All right. I want you to explain what --  
13 what if any experience you've had with Gallup-Dakota dual  
14 completions, the later life of those dual completions in  
15 which the wells have been sand fractured, that would cause  
16 you to request to downhole commingle in the subject well.

17 A Well, of course, during the life of these  
18 wells the production has fallen off. We will get to the  
19 production history later on, but the primary reason here  
20 in requesting the commingling, I should think, is the  
21 mechanical aspects of attempting to pull this packer and  
22 recompleting it as a dual. Fishing operations could be  
23 quite extensive in trying to recover this packer and rerun  
24 a packer, to in essence isolate these two zones.

25 Q I show you what I've marked as Exhibit Number

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1 Three and ask you to identify this.

2 A. Okay. This was a Form 9-331 filed with the  
3 United States Geological Survey in which we requested their  
4 approval to downhole commingle this well, and this copy  
5 is an approved copy. They have approved it subject to, of  
6 course, approval of the New Mexico Oil Conservation Com-  
7 mission.

8 This well, by the way, is on Federal land in  
9 the Jicarilla Apache.

10 Q I show you Exhibit Four and ask you to identify  
11 that.

12 A. Okay. This is a tabulation of projected  
13 ultimate reserves. Of course, if you would refer to the  
14 next two exhibits, also, this -- we'll have to take all  
15 three of these in here to give you the whole picture.

16 The next two exhibits following this one are  
17 plots of bottom hole pressure over Z, the compressability  
18 factor, plotted against cumulative production, for the  
19 Gallup and the Basin Dakota Zones. These projections we  
20 have found have proved quite satisfactory in projecting  
21 reserves in this area.

22 By using this technique and projecting to a  
23 50 psig abandonment pressure, we have established ultimate  
24 reserves in the Gallup as 4,800,000 Mcf and in the Dakota  
25 as 2,600 000 Mcf.

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1 Back on this -- the first exhibit here, cumu-  
2 lative reserves as of 7-1-78, the Gallup had produced  
3 3,546,130 Mcf; the Dakota, 1,472,842 Mcf. The difference  
4 between the projected ultimate recovery and the cumulative  
5 shows that the Gallup has remaining reserves of 1,242,870  
6 Mcf; the Dakota, 1,127,158 Mcf, which combined total re-  
7 serves remaining for the two zones of 2,380,028 Mcf, and  
8 the percentage figures here are based on these projected  
9 remaining reserves. The Gallup percentage remaining re-  
10 serves, 52.7 percent; the Dakota, 47.3, and this in essence  
11 is what we propose as an allocation for the gas produced  
12 should this well be commingled.

13 Q What recommendations do you have to the Examiner  
14 with regards to the allocation of oil between the two  
15 zones?

16 A Okay. My initial thoughts on this were to  
17 take the cumulative gas production figures from each zone  
18 and the cumulative oil production figures and to establish  
19 a cumulative GOR. This being necessitated because although  
20 oil is produced into the tanks out there in the field, and  
21 rather than hang a monthly established figure, the oil is  
22 not -- is trucked so that each monthly production is not  
23 necessarily what the well has produced in that month but  
24 only when the tanks are near capacity do they haul the oil,  
25 so that, you know, a monthly figure going back and trying

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1 to base it on something like that would be irrelevant.

2 And in previous correspondence with Mr. Ken-  
3 drick in Aztec, he further took my GOR figures and deter-  
4 mined a figure -- and this is taking the ratio, for example,  
5 with the Gallup I had established a GOR of 101,500 to 1,  
6 so taking a ratio of a million cubic feet and this GOR of  
7 101,500 cubic feet per barrel, would give us 9.85 barrels  
8 of oil produced from the Gallup per million cubic feet and  
9 a like -- a similar calculation for the Dakota, and taking  
10 these figures we have come up with a percentage figure  
11 for the oil rather than using a -- allocating the gas and  
12 then using a GOR, but rather to take the total oil sold  
13 and use a percentage figure.

14 Q What are those percentages?

15 A 38.5 percent of the oil for the Gallup Zone  
16 and 61.5 percent for the Dakota Zone.

17 Q I show you what I've marked as Exhibit Number  
18 Seven and ask you to identify it.

19 A Okay. This is a copy of the most recent  
20 packer leakage test in the well, which in essence is being  
21 presented here to give us an idea of the present shutin  
22 pressure of the well. The three-day shutin pressure for  
23 the Gallup Zone, which on here is indicated as the upper  
24 completion, is 425, and the lower completion, the Dakota,  
25 595.

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1 Q Okay. I show you Exhibits Eight and Nine and  
2 ask you to identify those.

3 A These are the latest deliverability tests  
4 from each of the two zones. First, all this work is -- was  
5 done prior to our establishment that we did have a sub-  
6 surface problem.

7 For the Gallup -- this also gives us an indi-  
8 cation of present shutin pressures and the capabilities of  
9 the two zones.

10 Q In your opinion, Mr. Parham, will the pressure  
11 differentials between the Gallup and Dakota Zones be low  
12 enough that there will not be migration between the two  
13 zones?

14 A I feel that in view of the fact that both  
15 zones have been derleted considerably from their initial  
16 capacities, the differential in pressure and the ability  
17 to draw both of these wells down, I believe line pressures  
18 run somewhere in the neighborhood of, well, depending on  
19 demand, anywhere from 220 to 300 pounds, and I do not feel  
20 that migration between the two zones would be a problem  
21 in this well.

22 Q Mr. Parham, what is the status of ownership  
23 between the two zones?

24 A The royalty interests and working interests  
25 are the same for both zones.

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1 Q Were Exhibits One through Nine compiled under  
2 your direction or prepared by you directly?

3 A Yes, they were.

4 Q In your opinion, Mr. Parham, will the approval  
5 of this application be in the best interests of conserva-  
6 tion, the prevention of waste, and the protection of cor-  
7 relative rights?

8 A Yes.

9 MR. KELLAHIN: We move the introduction of  
10 Exhibits One through Nine.

11 MR. STAMETS: These exhibits will be admitted.

12  
13 CROSS EXAMINATION

14 BY MR. STAMETS:

15 Q Now, Mr. Parham, you indicated the ownership  
16 is the same throughout. Is the dedication different for  
17 the two zones?

18 A The dedication --

19 Q Is the B.S. Mesa on 160-acre spacing and the  
20 Dakota on 320?

21 A Yes, sir, it certainly is.

22 Q But even considering that, since there's no  
23 difference in ownership there would be no problem with  
24 the allocation of production to the owners?

25 A No, sir. I don't feel that there would be.

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1 Q Now I'm not certain if you told me why you  
2 wanted this downhole commingling.

3 A In the early part of this year, of course,  
4 the Gallup Zone began logging off, would not sustain pro-  
5 duction, and of course, shut it in for a period of time,  
6 and allow the pressures to build up, and essentially  
7 force fluids back into the formation. We could open it  
8 up and establish production from the Gallup Zone for a  
9 short period of time.

10 This indicated to us that we had a tubing  
11 leak in the Dakota Zone; since the Dakota Zone has histor-  
12 ically produced more fluids, we felt like we had communi-  
13 cation. The fluid being dropped out in the Dakota Zone,  
14 and in essence logging up the Gallup in the -- over a  
15 short period of time.

16 This, of course, is the only indication that  
17 we have of communication problems, but I think it is sig-  
18 nificant indication.

19 Q Have you determined the location of that  
20 tubing leak?

21 A No, sir, we have not attempted any operations  
22 at present to locate the leak.

23 Q Will you be replacing the Dakota tubing or  
24 the production tubing?

25 A Yes, sir. Of course, the Gallup was completed

1 with an inch and a quarter string. We would pull that out  
2 and rerun an inch and a half string in the commingled well.

3 Q So that will take care of the tubing leak?

4 A Yes, sir.

5 MR. STAMETS: Any other questions of the  
6 witness? Mr. Kendrick?

7 MR. KENDRICK: Mr. Parham, you gave me credit  
8 for doing the calculations on one of your exhibits. Do  
9 you agree with them?

10 A Yes, sir, I certainly do.

11 MR. KENDRICK: All right.

12 MR. STAMETS: Are there any other questions  
13 of the witness? He may be excused.

14 Anything further in this case?

15 We'll take the case under advisement.

16 (Hearing concluded.)  
17  
18  
19  
20  
21  
22  
23  
24  
25

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REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a court reporter, DO HEREBY  
CERTIFY that the foregoing and attached Transcript of  
Hearing before the Oil Conservation Division was reported  
by me; that the said transcript is a full, true, and correct  
record of the hearing, prepared by me to the best of my  
ability, knowledge, and skill, from my notes taken at the  
time of the hearing.

*Sally W. Boyd C.S.R.*  
Sally W. Boyd, C.S.R.

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 6348  
heard by me on 10-11 1978.  
*Richard L. Hunt*, Examiner  
Oil Conservation Division



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

JERRY APODACA  
GOVERNOR

NICK FRANKLIN  
SECRETARY

October 25, 1978

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STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-2434

Mr. Tom Kellahin  
Kellahin & Fox  
Attorneys at Law  
Post Office Box 1769  
Santa Fe, New Mexico

Re: CASE NO. 6349  
ORDER NO. 7-5839

Applicant:

Consolidated Oil & Gas, Inc.

Dear Sir:

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

Yours very truly,

  
JOE D. RAMEY  
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x  
Artesia OCC x  
Aztec OCC x

Other \_\_\_\_\_  
\_\_\_\_\_



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 6349  
Order No. R-5839

APPLICATION OF CONSOLIDATED OIL  
& GAS, INC. FOR DOWNHOLE COMMINGLING,  
RIO ARriba COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 11, 1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 20th day of October, 1978, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Consolidated Oil & Gas, Inc., is the owner and operator of the Hoyt Well No. 1, located in Unit H of Section 5, Township 26 North, Range 4 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant seeks authority to commingle B. S. Mesa-Gallup and Basin-Dakota production within the wellbore of the above-described well.
- (4) That from the B. S. Mesa-Gallup zone, the subject well is capable of low marginal production only.
- (5) That from the Basin-Dakota zone, the subject well is capable of low marginal production only.

-2-

Case No. 6349  
Order No. R-5839

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 53 percent and 39 percent of the commingled gas and oil production, respectively, should be allocated to the B. S. Mesa-Gallup zone, and 47 percent and 61 percent of the commingled gas and oil production, respectively, to the Basin-Dakota zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Consolidated Oil & Gas, Inc., is hereby authorized to commingle B. S. Mesa-Gallup and Basin-Dakota production within the wellbore of the Hoyt Well No. 1, located in Unit H of Section 5, Township 26 North, Range 4 West, NMPM, Rio Arriba County, New Mexico.

(2) That 53 percent and 39 percent of the commingled gas and oil production, respectively, shall be allocated to the B. S. Mesa-Gallup zone and 47 percent and 61 percent of the commingled gas and oil production, respectively, shall be allocated to the Basin-Dakota zone.

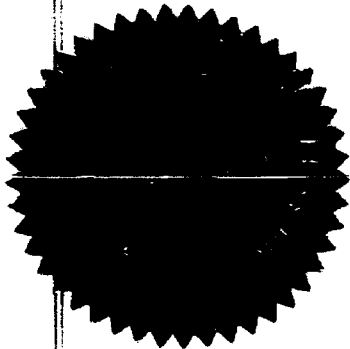
(3) That the operator of the subject well shall immediately notify the Division's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

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

-3-

Case No. 6349  
Order No. R-5839

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.



S E A L

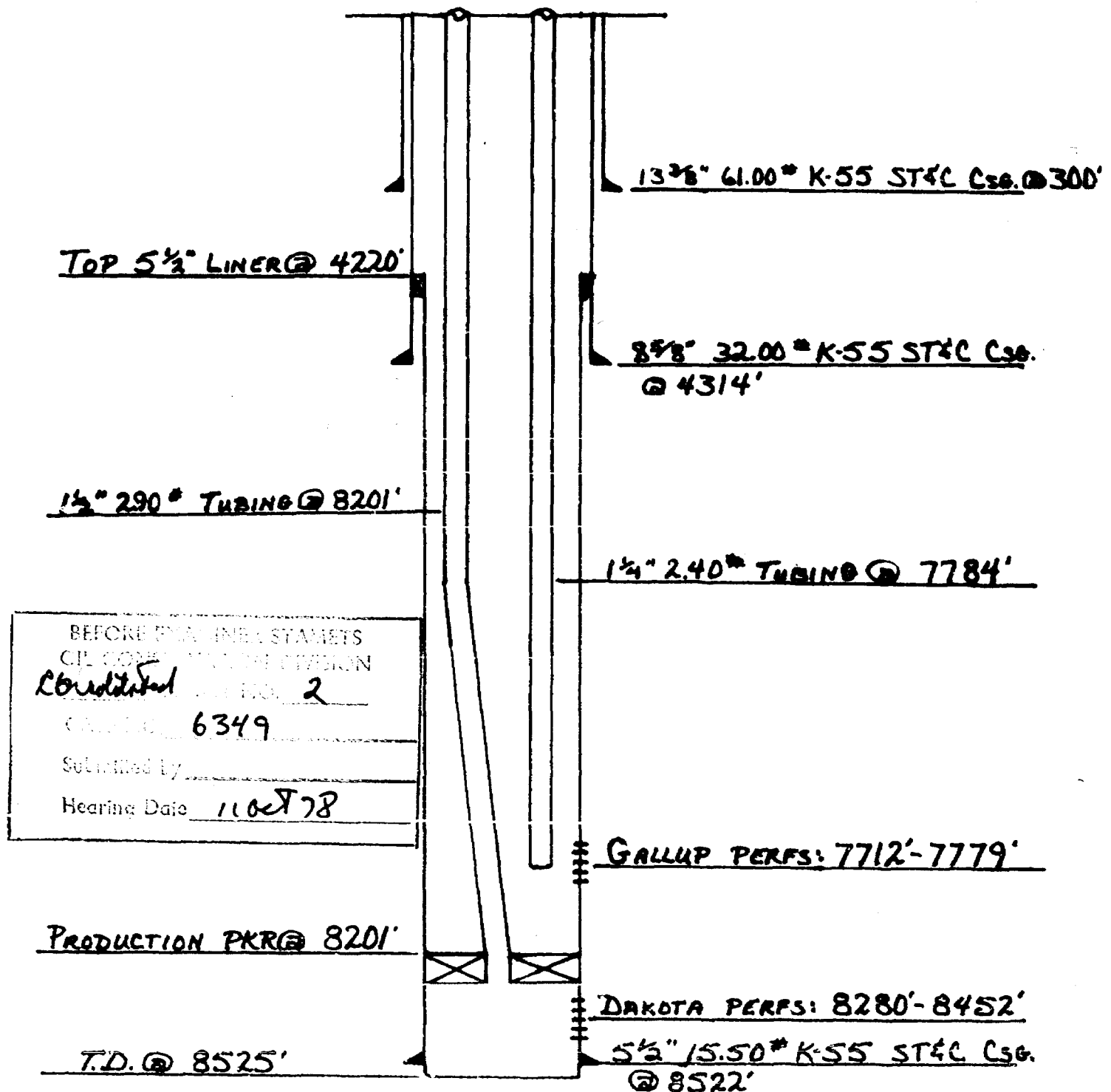
STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Joe D. Ramey*  
JOE D. RAMEY,  
Director

dr/



PRESENT COMPLETION SCHEMATIC  
HOYT No. 1-5  
CONSOLIDATED OIL & GAS, INC.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEYSUBMIT IN TRIPLICATE  
(Other instructions on re-  
verse side)Form approved,  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

Contract 119

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Hoyt

9. WELL NO.

1-5

10. FIELD AND POOL, OR WILDCAT  
B.S. Mesa Gallup/  
Basin Dakota11. SEC., T., R., M., OR BLK. AND  
SURVEY OR AREA

Sec 5, T26N, R4W, NMPM

12. COUNTY OR PARISH 13. STATE

Rio Arriba New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS  
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

Consolidated Oil &amp; Gas, Inc.

3. ADDRESS OF OPERATOR

80295

1860 Lincoln Street, Lincoln Tower Bldg., Denver CO

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.  
See also space 17 below.)  
At surface

1720' S of N line, 850' W of E line

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

7299' RKB

## 16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

## NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETS

ABANDON\*

CHANGE PLANS

Downhole Commingle

☐☐☐☐☒

## SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

☐☐☐☐(NOTE: Report results of multiple completion on Well  
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Consolidated Oil & Gas, Inc. proposes to downhole commingle production from the B.S. Mesa Gallup and Basin Dakota formations in subject well. Royalty and working interest owners are the same in both zones. Allocation of gas production will be 52.7 % to the B.S. Mesa Gallup and 47.3 % to the Basin Dakota based on an engineering estimate of remaining reserves from July 1, 1978 to an abandonment pressure of 50 psig. These reserves have been determined by plotting BHP/Z vs. cumulative gas production. Oil will be allocated based on a GOR derived from cumulative production figures of each zone as of July 1, 1978. The GOR for the Gallup zone will be 101,500:1 and for the Dakota zone will be 63,400:1.

APPROVED

SEP 22 1978

CARL A. BARRICK  
ACTING DISTRICT ENGINEER

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

NMOCC order Number

DATE September 18, 1978

(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED

SEP 21 1978

U. S. GEOLOGICAL SURVEY  
DURANGO, COLO.

\*See Instructions on Reverse Side

TABLE 1

Remaining reserves to 50 psig abandonment pressure as of July 1, 1978 (Mcf).

	<u>Gallup</u>	<u>Dakota</u>	<u>Total</u>
Ultimate	4,800,000	2,600,000	
Cum. 7-1-78	3,546,130	1,472,842	
Remaining reserves	1,242,870	1,127,158	2,380,028
% remaining reserves	52.7	47.3	100.

GOR Determination: Cumulative figures as of July 1, 1978.

	<u>Gallup</u>	<u>Dakota</u>
Cum. Gas Prod. (Mcf)	<u>3,546,130</u>	<u>1,472,842</u>
Cum Oil Prod. (STB)	34,937	23,244
GOR	101,500:1	63,400:1

Oil Determination: Based on GOR Figures from above.

Gallup: 101500 cu ft/ Bbl is 9.85 Bbl/ MMCF

Dakota: 63400 cu ft/ Bbl is 15.77 Bbl/ MMCF

TOTALS 25.62 Bbl/ 2 MMCF

GALLUP 38.5% of oil

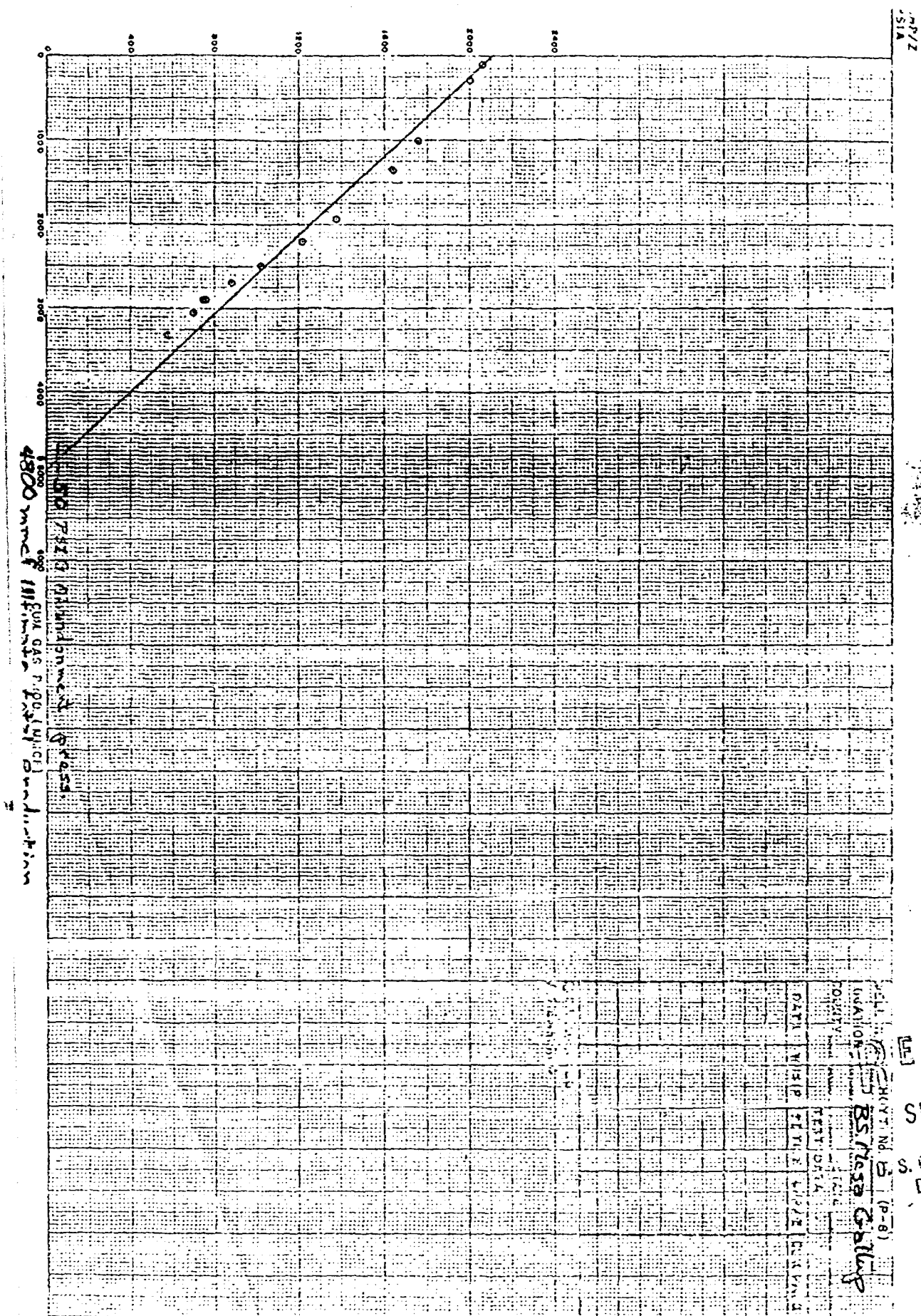
DAKOTA 61.5% of oil

Consolidated	4
6349	
11 Oct 78	

RECEIVED  
SEP 21 1978  
U. S. GEOLOGICAL SURVEY  
DENVER, COLO.

FIVE

S. GEOLOGICAL SURVEY  
DURANGO, COLO.

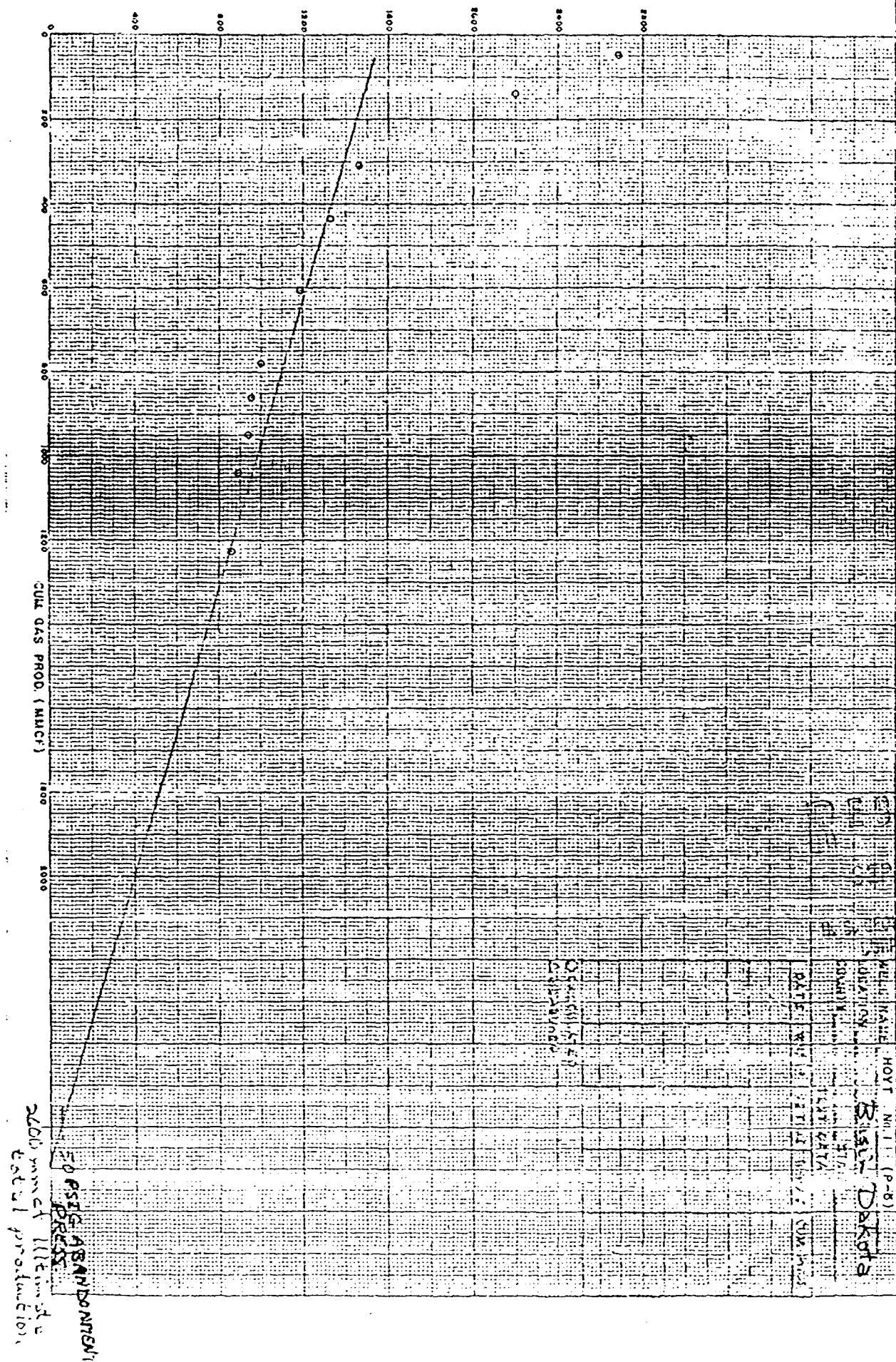




**FIVE**

21 1978

ZOOLOGICAL SURVEY  
SANGRE DE TORO, COLO.



NEW MEXICO OIL CONSERVATION COMMISSION  
NORTHWEST NEW MEXICO PACKED-LEAKAGE TEST

NEW MEXICO OIL CONSERVATION COMMISSION

NORTHWEST NEW MEXICO PACKED-LEAKAGE TEST

Operator Consolidated Oil & Gas Inc. Lease Hoyt (CD)  
Location  
of Well: Unit H Sec. 5 Twp. 26 Rge. 4 County RA

	Name of Reservoir or Pool	Type of Prod. (Oil or Gas)	Method of Prod. (Flow or Art. Lift)	Press. Bottom (Tb. or Gg.)
Upper Completion	GL	Gas	Flow	Tb.
Lower Completion	DK	Gas	Flow	Tb.

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in 8-21-77	Length of time shut-in 3 days	SI press. psig 425	Stabilized? (Yes or No)
Lower Compl	Hour, date Shut-in 8-21-77	Length of time shut-in 3 days	SI press. psig 595	Stabilized? (Yes or No)

FLOW TEST NO. 1

Commenced at (hour, date)* 8-24-77		Zone producing (Upper or Lower):			
Time (hour, date)	Lapsed time since*	Pressure		Prod. Zone Temp.	Remarks
		Upper Compl.	Lower Compl.		
8-22-77	1 day	411	560		
8-23-77	2 days	420	581		
8-24-77	3 days	425	595		
8-25-77	1 day	428	262		Lower zone flow
8-26-77	2 days	430	251		

Production rate during test

Oil: \_\_\_\_\_ BOPD based on \_\_\_\_\_ Bbls. in \_\_\_\_\_ Hrs. \_\_\_\_\_ Grav. \_\_\_\_\_ GOR  
Gas: 265 MCFPD; Tested thru (Orifice or Meter): \_\_\_\_\_ Meter

MID-TEST SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Lower Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)

FLOW TEST NO. 2

Commenced at (hour, date)**		Zone producing (Upper or Lower):			
Time (hour, date)	Lapsed time since **	Pressure		Prod. Zone Temp.	Remarks
		Upper Compl.	Lower Compl.		

Production rate during test

Oil: \_\_\_\_\_ BOPD based on \_\_\_\_\_ Bbls. in \_\_\_\_\_ Hrs. \_\_\_\_\_ Grav. \_\_\_\_\_ GOR  
Gas: \_\_\_\_\_ MCFPD; Tested thru (Orifice or Meter): \_\_\_\_\_

REMARKS: \_\_\_\_\_

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

Approved: \_\_\_\_\_ 19\_\_\_\_\_  
New Mexico Oil Conservation Commission

By \_\_\_\_\_

Title \_\_\_\_\_

Operator Consolidated Oil & Gas Inc.

By Veryl Moore

Title Production Foreman

Date \_\_\_\_\_

**NEW MEXICO OIL CONSERVATION COMMISSION**  
**WELL DELIVERABILITY TEST REPORT FOR 19 77**

Form CI 22-A  
 Revised 1-1-66

POOL NAME Basin	POOL SLOPE n = .75	FORMATION Dakota	COUNTY Rio Arriba
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73806

COMPANY Consolidated Oil & Gas Company			WELL NAME AND NUMBER Hoyt #1 (DK)		
UNIT LETTER H	SECTION 5	TOWNSHIP 26	RANGE 4	PURCHASING PIPELINE Northwest Pipeline	
CASING O.D. - INCHES 5.500	CASING I.D. - INCHES 4.950	KEY AT DEPTH - FEET 8522	TUBING O.D. - INCHES 1.990	TUBING I.D. - INCHES 1.610	TOP - TUBING PERF. - FEET 8280
GAS PAY ZONE FROM 8280 TO 8452		WELL PRODUCING THRU CASING TUBING XX		GAS GRAVITY .722	GRAVITY X LENGTH 5978
DATE OF FLOW TEST FROM May 19 TO May 27			DATE SHUT-IN PRESSURE MEASURED June 3, 1977		

**PRESSURE DATA - ALL PRESSURES IN PSIA**

(a) Flowing Casing Pressure (DWt)	(b) Flowing Tubing Pressure (DWt)	(c) Flowing Meter Pressure (DWt)	(d) Flow Chart Static Reading	(e) Meter Error (Item c - Item d)	(f) Friction Loss (a - c) or (b - c)	(g) Average Meter Pressure (Integr.)
	269	268	265	3	1	267
(h) Corrected Meter Pressure (g + e)	(i) Avg. Wellhead Press. $P_t = (h + f)$	(j) Shut-in Casing Pressure (DWt)	(k) Shut-in Tubing Pressure (DWt)	(l) $P_c$ = Higher value of (j) or (k)	(m) Del. Pressure $P_d = \frac{50}{298} \% P_c$	(n) Separator or Dehydrator Pr. (DWt) for critical flow only
270	271		596	596		

**FLOW RATE CORRECTION (METER ERROR)**

Integrated Volume - MCF/D 266	Quotient of $\frac{\text{Item c}}{\text{Item d}}$ 1.0113	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$ 1.0056	Corrected Volume Q = 268 MCF/D
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**WORKING PRESSURE CALCULATION**

$(1 - e^{-x})$ .353	$(F_c Q_m)^2 (1000)$ 19459	$R^2 = (1 - e^{-x}) (F_c Q_m)^2 (1000)$ 6869	$P_t^2$ 73441	$P_w^2 = P_t^2 + R^2$ 80310	$P_w = \sqrt{P_w^2}$ 283
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**DELIVERABILITY CALCULATION**

$Q = Q \left[ \frac{P_c^2 - P_w^2}{P_c^2 - P_t^2} \right]^n$	268	$\left[ \frac{266412}{274906} \right]^n$	$.9691$	$.9161$	262 MCF/D
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REMARKS:

**SUMMARY**

Item n	270	Test
$P_c$	596	Psia
Q	268	MCF/D
$P_w$	283	Psia
$P_d$	298	Psia
D	262	MCF/D

Company Consolidated Oil & Gas Inc.  
 By Caryl Moore  
 Title Production Foreman  
 Witnessed By \_\_\_\_\_  
 Company \_\_\_\_\_

BJB/ms

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL DELIVERABILITY TEST REPORT FOR 19 **77**

Form CI22-A  
Revised 1-1-66

POOL NAME B.S. Mesa	POOL SLOPE n = .75	FORMATION Gallup	COUNTY Rio Arriba
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73805

COMPANY Consolidated Oil & Gas			WELL NAME AND NUMBER Hoyt #1 G1		
UNIT LETTER H	SECTION 5	TOWNSHIP 26	RANGE 4	PURCHASING PIPELINE Northwest Pipeline Corp.	
CASING O.D. - INCHES 5.500	CASING I.D. - INCHES 4.950	SET AT DEPTH - FEET 8522	TUBING O.D. - INCHES 1.990	TUBING I.D. - INCHES 1.610	TOP - TUBING DEPTH - FEET 7772
GAS PAY ZONE FROM 7712 TO 7779		WELL PRODUCING THRU CASING TUBING XX		GAS GRAVITY .712	GRAVITY & LENGTH 5534
DATE OF FLOW TEST FROM Nov. 8 TO Nov. 16			DATE SHUT-IN PRESSURE MEASURED June 3, 1977		

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWI) 358	(b) Flowing Tubing Pressure (DWI) 285	(c) Flowing Meter Pressure (DWI) 283	(d) Flow Chart Static Reading 282	(e) Meter Error (Item c - Item d) 1	(f) Friction Loss (a - c) or (b - c) 2	(g) Average Meter Pressure (Integr.) 268
(h) Corrected Meter Pressure (g + e) 269	(i) Avg. Wellhead Press. $P_t = (h + f)$ 271	(j) Shut-in Casing Pressure (DWI) 441	(k) Shut-in Tubing Pressure (DWI) 441	(l) $P_c$ = higher value of (j) or (k) 441	(m) Del. Pressure $P_d = \frac{80}{353} \% P_c$	(n) Separator or Dehydrator Pr. (DWI) for critical flow only

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D 334	Quotient of $\frac{\text{Item c}}{\text{Item d}}$ 1.0036	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$ 1.0018	Corrected Volume Q = 335 MCF/D
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WORKING PRESSURE CALCULATION

$(1 - e^{-s})$ .331	$(F_c Q_m)^2 (1000)$ 30405	$R^2 = (1 - e^{-s}) (F_c Q_m)^2 (1000)$ 10064	$P_t^2$ 73441	$P_w^2 = P_t^2 + R^2$ 83505	$P_w = \sqrt{P_w^2}$ 289
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DELIVERABILITY CALCULATION

$D = Q \left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = 335 \left[ \frac{69872}{110976} \right]^n \left( .6296 \right)^n = .7068 = 237 \text{ MCF/D}$
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REMARKS:

SUMMARY

Item h	269	Psia
$P_c$	441	Psia
Q	335	MCF/D
$P_w$	289	Psia
$P_d$	353	Psia
D	237	MCF/D

Company Consolidated Oil & Gas  
By Veryl Moore  
Title Production Foreman  
Witnessed By \_\_\_\_\_  
Company \_\_\_\_\_

jh

Dockets Nos. 34-78 and 35-78 are tentatively set for hearing on October 25 and November 8, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 11, 1978

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- CASE 6338: Application of Charles C. Loveless for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the South line and 1980 feet from the East line of Section 23, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, the E/2 of said Section 23 to be dedicated to the well.
- CASE 6040: (Reopened and Readvertised)
- In the matter of Case 6040 being reopened pursuant to the provisions of Order No. R-5552 which order created the North Teague-Devonian Pool, Lea County, New Mexico, with a special gas-oil ratio limitation of 4000 to 1. All interested parties may appear and show cause why the limiting gas-oil ratio for said pool should not revert to 2000 to 1.
- CASE 6339: Application of Amoco Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the S/2 of Section 22, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6321: (Continued and Readvertised)
- Application of Texas Oil & Gas Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Shugart State Com. Well No. 1 to be drilled 714 feet from the South line and 2062 feet from the West line of Section 16, Township 18 South, Range 31 East, Eddy County, New Mexico, the W/2 of said Section 16 to be dedicated to the well.
- CASE 6320: (Continued and Readvertised)
- Application of Texas Oil & Gas Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Coquina Federal Com Well No. 1 to be drilled 710 feet from the North line and 2330 feet from the West line of Section 32, Township 18 South, Range 27 East, Eddy County, New Mexico, the W/2 of said Section 32 to be dedicated to the well.
- CASE 6340: Application of Supron Energy Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Strawn production in the wellbore of its Shelby Federal Well No. 1 located in the NE/4 of Section 13, Township 22 South, Range 24 East, Eddy County, New Mexico.
- CASE 6341: Application of Supron Energy Corporation for dual completions and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the dual completion of its Jicarilla A Well No. 8 located in the NW/4 of Section 23; its Jicarilla E Well No. 7 located in the SE/4 of Section 15; and its Jicarilla E Well No. 8 located in the NW/4 of Section 15, all in Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Mesaverde formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbores of said wells.
- CASE 6342: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla J Well No. 10 located in the SE/4 of Section 26, Township 26 North, Range 5 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Tootie and Dakota production in the wellbore of said well.
- CASE 6343: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla H Well No. 8 located in the SE/4 of Section 11, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbore of said well.

- CASE 6344: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla F Well No. 1 located in the SW/4 of Section 27, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Mesaverde and Dakota production in the wellbore of said well.
- CASE 6345: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gallup and Dakota production in the wellbore of its Jicarilla H Well No. 7 located in the SW/4 of Section 19, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.
- CASE 6346: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Chacra production in the wellbore of its Jicarilla K Well No. 14 located in the SE/4 of Section 11, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.
- CASE 6347: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Chacra and Dakota production in the wellbore of its Jicarilla K Well No. 17 located in the SW/4 of Section 12, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.
- CASE 6348: Application of Supron Energy Corporation for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Mesaverde and Dakota production in the wellbore of its Starr Well No. 3 located in the NE/4 of Section 5, Township 26 North, Range 8 West, San Juan County, New Mexico.
- CASE 6349: Application of Consolidated Oil & Gas, Inc. for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of B.S. Mesa-Gallup and Basin-Dakota production in the wellbore of its Hoyt Well No. 1-5 located in Unit H of Section 5, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.
- CASE 6350: Application of Petro-Lewis Corporation for an unorthodox well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of the unorthodox location in the Mesaverde formation for its Florance Well No. 7 located 2028 feet from the North line and 1040 feet from the West line of Section 4, Township 25 North, Range 3 West, Tapacito Field, Rio Arriba County, New Mexico, the NW/4 of said Section 4 to be dedicated to the well.
- CASE 6351: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 16, Township 19 South, Range 29 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6352: Application of Southland Royalty Company for three dual completions, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Decker Well No. 2A located in Unit I of Section 26, Township 32 North, Range 12 West, and its Grenier "A" Well No. 1A in Unit C of Section 26, Township 30 North, Range 10 West, to produce gas from the Blanco-Pictured Cliffs and the Blanco Mesaverde pools and its Patterson "B" Com Well No. 1R in Unit C of Section 2, Township 31 North, Range 12 West, to produce gas from the Aztec-Pictured Cliffs and Blanco Mesaverde pools, all in San Juan County, New Mexico, with separation of the zones in each of the above wells to be achieved by means of a polished bore receptacle and mandrel.
- CASE 6353: Application of Union Texas Petroleum for two unorthodox well locations, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox locations of its Milnesand Unit Well No. 241 to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 to be drilled 1310 feet from the North and West lines of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico.
- CASE 6354: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending vertical and horizontal limits of certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico:
- (a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Bone Springs production and designated as the Ross Draw-Bone Springs Gas Pool. The discovery well is D. B. Baxter Ross Draw Unit Well No. 5 located in Unit K of Section 27, Township 26 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 26 SOUTH, RANGE 30 EAST, NMPM  
Section 27: SW/4

(b) CREATE a new pool in Chaves County, New Mexico, classified as a gas pool for Atoka production and designated as the South Sand Ranch-Atoka Gas Pool. The discovery well is Depco, Inc. Beall Federal Well No. 1 located in Unit G of Section 17, Township 11 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 11 SOUTH, RANGE 30 EAST, NMPM  
Section 17: E/2

(c) EXTEND the Angell Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 27 EAST, NMPM  
Section 25: All  
Section 36: N/2

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM  
Section 1: E/2

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

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM  
Section 16: N/2  
Section 17: NE/4

(e) EXTEND the Buckeye-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM  
Section 3: W/2

(f) EXTEND the East Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM  
Section 5: E/2

(g) EXTEND the East Chisum-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 28 EAST, NMPM  
Section 9: NW/4 SE/4  
Section 10: W/2 SW/4  
Section 21: NE/4 NW/4

(h) EXTEND the vertical limits of the Comanche Stateline-Yates Pool in Lea County, New Mexico, to include the Tansill formation and redesignate said Comanche Stateline-Yates Pool as the Comanche Stateline Tansill-Yates Pool.

(i) EXTEND the Corbin-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM  
Section 35: NW/4

(j) EXTEND the Crooked Creek-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 24 EAST, NMPM  
Section 16: N/2

(k) EXTEND the South Empire-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM  
Section 25: S/2

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM  
Section 30: N/2

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM  
Section 15: N/2

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM  
Section 7: S/2  
Section 18: All

- (l) EXTEND the West Four Mile Draw-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 26 EAST, NMPM  
Section 6: S/2

- (m) EXTEND the Gladiola-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM  
Section 5: NW/4

- (n) EXTEND the Herradura Bend-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM  
Section 31: W/2 E/2  
Section 32: NE/4 NE/4

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM  
Section 5: W/2 NW/4

- (o) EXTEND the Hume-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM  
Section 5: S/2  
Section 8: E/2

- (p) EXTEND the Indian Flats-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM  
Section 35: S/2 SW/4

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM  
Section 2: N/2 NW/4

- (q) EXTEND the South Kemnitz-Upper Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM  
Section 33: SW/4

- (r) EXTEND the Kennedy Farms-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 26 EAST, NMPM  
Section 33: E/2

- (s) EXTEND the East Lusk-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM  
Section 16: NE/4

- (t) EXTEND the Many Gates-Morrow Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 30 EAST, NMPM  
Section 31: All

- (u) EXTEND the North Mescalero-Cisco Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM  
Section 11: NW/4

- (v) EXTEND the Millman-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM  
Section 18: All

- (w) EXTEND the Monument-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM  
Section 21: NE/4

- (x) EXTEND the South Peterson-Fusselman Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM  
Section 31: E/2



- (y) EXTEND the Quail Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM  
Section 16: S/2

- (z) EXTEND the Red Lake-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM  
Section 19: E/2  
Section 20: W/2

- (aa) EXTEND the Sand Dunes-Cherry Canyon Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM  
Section 23: E/2 SE/4 and NW/4 SE/4

- (bb) EXTEND the Sand Ranch-Atoka Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 29 EAST, NMPM  
Section 23: N/2

- (cc) EXTEND the North Shugart-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM  
Section 21: W/2

- (dd) EXTEND the North Shugart-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM  
Section 21: W/2

- (ee) EXTEND the Tomahawk-San Andres Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 32 EAST, NMPM  
Section 30: NE/4  
Section 31: SE/4  
Section 32: NW/4

- (ff) EXTEND the Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM  
Section 6: NW/4

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM  
Section 31: SW/4

- (gg) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM  
Section 25: W/2

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM  
Section 29: N/2  
Section 31: S/2

- (hh) EXTEND the Twin Lakes-San Andres Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM  
Section 25: S/2 SW/4

TOWNSHIP 9 SOUTH, RANGE 28 EAST, NMPM  
Section 1: SW/4 NE/4, NW/4 SE/4, SW/4 NW/4 and NW/4 SW/4

- (ii) EXTEND the Vacuum Grayburg-San Andres Pool in Lea County, New Mexico, to include therein:

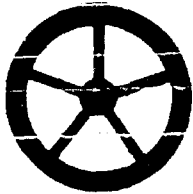
TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM  
Section 19: NW/4

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 18, 1978

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- ALLOWABLE:
- (1) Consideration of the allowable production of gas for November, 1978, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.
  - (2) Consideration of the allowable production of gas for November, 1978, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.



LINCOLN TOWER BUILDING  
1800 LINCOLN STREET  
DENVER, COLORADO 80205  
(303) 861-5232

## *Consolidated Oil & Gas, Inc.*

SEP 21 1978

September 18, 1978

Case 6349

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention: J. D. Ramey,  
Sec'y.-Director

Re: Application to Commingle  
Hoyt 1-5  
Section 5, T26N, R4W  
Rio Arriba County, New Mexico

Dear Mr. Ramey:

Consolidated Oil & Gas, Inc., hereby requests a hearing to consider the above referenced application to commingle the B. S. Mesa Gallup and Basin Dakota zones in this well. The well is currently dually completed in these two zones as granted by order No. MC-1468.

Downhole communications of the Gallup and Dakota zones was discovered earlier in the year, apparently resulting from a hole or holes in the Dakota tubing string. Therefore, corrective action is necessitated for compliance with Rule 112-A and the above referenced order authorizing this dual completion.

Past operations to remedy a communications problem in a well with a lengthy production history has found the long string tubing sanded in above the production packer due to production of frac sand from the upper completion. Therefore, retrieval of the long string tubing and recompletion of a dual well in compliance with the provisions of Rule 112-A is often a lengthy and costly procedure and economically unjustified in the latter stage of a well's production life. There is no evidence to suspect this well to be different in this aspect, since both zones were sand-frac'd during initial completion operations.

Consolidated Oil & Gas, Inc., thus proposes to downhole commingle the Dakota and Gallup zones by running a freepoint determination on the Dakota production tubing, cutting the tubing above the freepoint and recompleting the well with a single string of production tubing per the attached completion schematic. Production from both zones will then be produced through this single tubing string.

The N/2 of Section 5, Township 26 North, Range 4 West, on which this well is located, is covered by our Jicarilla Apache Tribal Contract No. 119. In addition, the working interests are the same for both the Gallup and Dakota zones. Therefore, the correlative rights of both interests are protected regardless of how the production is divided.

Due to several factors i.e., allowables, changing demand and changing line pressures, production performance is disrupted and invalidates the use of production decline curves for reserve determination. Therefore, Consolidated proposes to use one of the more acceptable engineering methods of assigning reserves in this well; that is, the plotting of a well's static bottomhole pressure, corrected for compressibility versus the well's cumulative production. Plotting of these points should result in a straight line on linear coordinate paper if the reservoir is allowed to build to its absolute static condition and the proper compressibility (Z) factor is used. This we have done for both the Gallup and Dakota zones in the Hoyt No. 1 using the yearly wellhead shut-in pressures reported to the New Mexico Oil Conservation Commission, corrected for compressibility at bottom hole conditions.

As can be seen on Attachments No. 1 and No. 2, projecting both zones to an economic limit of 50 psig abandonment pressure yields projected ultimate production of 4800 Mmcf for the Gallup and 2600 Mmcf for the Dakota, or 52.7% and 47.3% respectively, of the total remaining reserves. (See table No. 1)

The oil from each zone we propose to allocate based on a GOR derived from cumulative oil and gas production figures as of 7-1-78, (See Table No. 1). Based on these figures, we suggest a GOR of 101,500:1 for the Gallup and 63,400:1 for the Dakota. Since there is no means of accurately measuring oil production in the field, we must rely on gauge figures when the oil is trucked from the location. Due to costs, trucking is necessarily scheduled to coincide with full tanks rather than the end of a month's producing period; therefore, GOR's based on a month's or even a year's production do not give a truly representative GOR. Thus, it is our conclusion that the GOR we suggest is the most nearly accurate and is therefore adequate for allocation of produced oil.

Assuming the production rates for the Gallup and Dakota zones could be restored to their 1977 daily average of 180 McfD and 220 McfD respectively, repair of the tubing and recompletion of the well as a dual could be paid out in a reasonable length of time i.e., assuming no problems are encountered in the workover. Consolidated, however, feels the workover expense to correct the communications problem is an unnecessary allocation of resources for both Consolidated and the public. We base this position on the fact that both royalty and working interest owners will be protected and production from both zones can be adequately allocated. We therefore request approval to downhole commingle production from the Gallup and Dakota zones in our Hoyt No. 1-5 well and allocate all future production 52.7% to the Gallup with a GOR of 101,500:1 and 47.3% to the Dakota with a COR of 63,400:1 based on the previously described projection.

Very truly yours,

CONSOLIDATED OIL & GAS, INC.



C. M. Parham  
Senior Production Engineer

CMP:sm  
Enclosures

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEYSUBMIT IN TRIPPLICATE  
(Other Instructions on re-  
verse side)Form approved  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

Contract 119

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Hoyt

9. WELL NO.

1-5

10. FIELD AND POOL, OR WILDCAT  
B.S. Mesa Gallup/  
Basin Dakota11. SEC. T., R., M., OR BLK. AND  
SURVEY OR AREA

Sec 5, T26N, R4W, NMPM

12. COUNTY OR PARISH 13. STATE

Rio Arriba New Mexico

1. OIL  
WELL ☐ GAS  
WELL ☒ OTHER

2. NAME OF OPERATOR

Consolidated Oil &amp; Gas, Inc.

3. ADDRESS OF OPERATOR

80295

1860 Lincoln Street, Lincoln Tower Bldg., Denver CO

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*

See also space 17 below.)

At surface

1720' S of N line, 850' W of E line

14. PERMIT NO.

15. ELEVATIONS (Show whether DP, RT, GR, etc.)

7299' RKB

16.

## Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

## NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

Downhole Commingle

☒

## SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

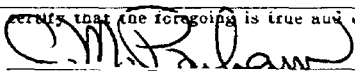
(NOTE: Report results of multiple completion on Well  
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Consolidated Oil & Gas, Inc. proposes to downhole commingle production from the B.S. Mesa Gallup and Basin Dakota formations in subject well. Royalty and working interest owners are the same in both zones. Allocation of gas production will be 52.7 % to the B.S. Mesa Gallup and 47.3 % to the Basin Dakota based on an engineering estimate of remaining reserves from July 1, 1978 to an abandonment pressure of 50 psig. These reserves have been determined by plotting BHP/Z vs. cumulative gas production. Oil will be allocated based on a GOR derived from cumulative production figures of each zone as of July 1, 1978. The GOR for the Gallup zone will be 101,500:1 and for the Dakota zone will be 63,400:1.

18. I hereby certify that the foregoing is true and correct

SIGNED



TITLE Senior Prod. Engr.

DATE September 18, 1978

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

\*See Instructions on Reverse Side

### Instructions

**General:** This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 17:** Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

TABLE 1

Remaining reserves to 50 psig abandonment pressure as of July 1, 1978 (Mcf).

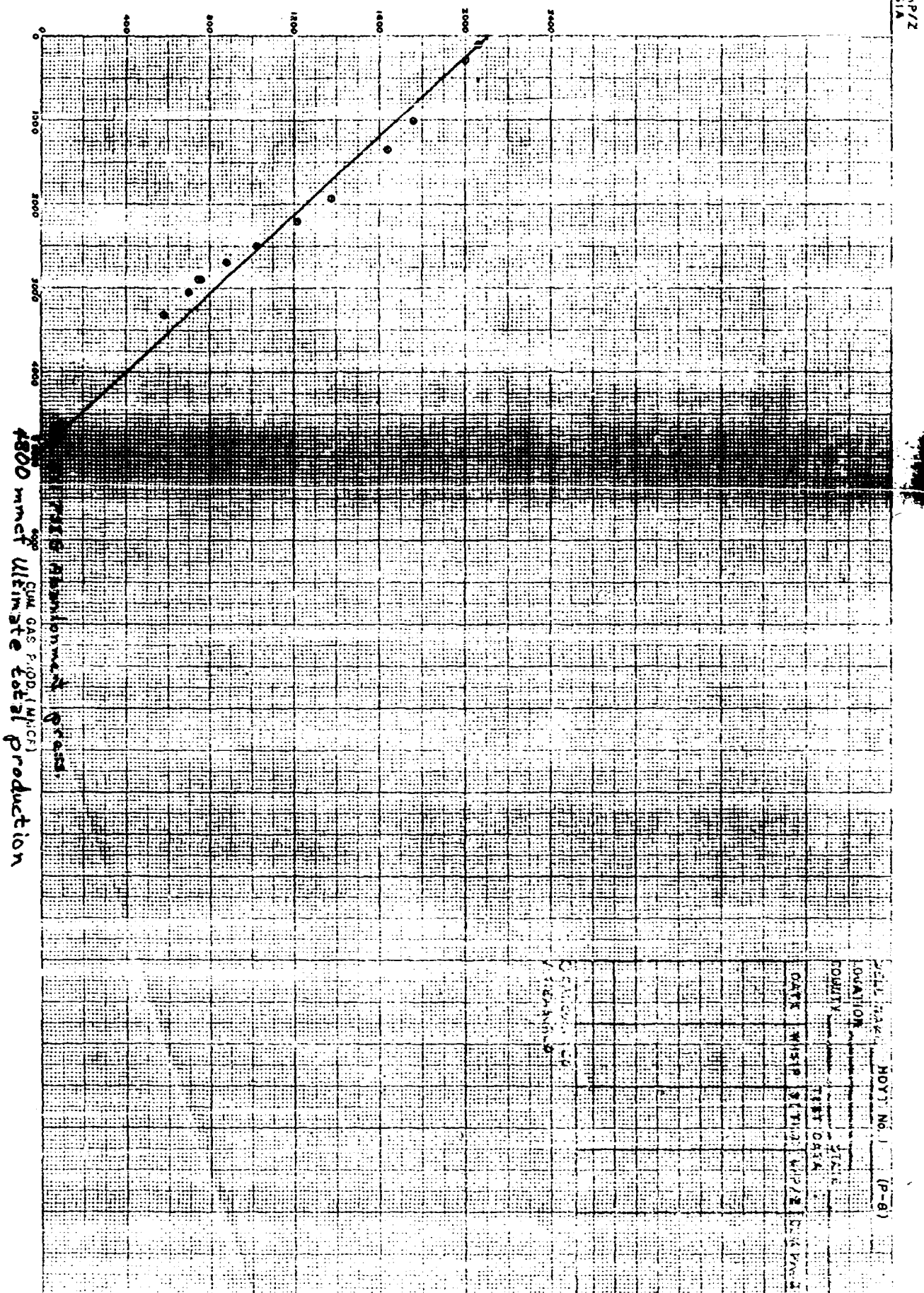
	<u>Gallup</u>	<u>Dakota</u>	<u>Total</u>
Ultimate	4,800,000	2,600,000	
Cum. 7-1-78	3,546,130	1,472,842	
Remaining reserves	1,242,870	1,127,158	2,380,028
% remaining reserves	52.7	47.3	100.

GOR Determination: Cumulative figures as of July 1, 1978.

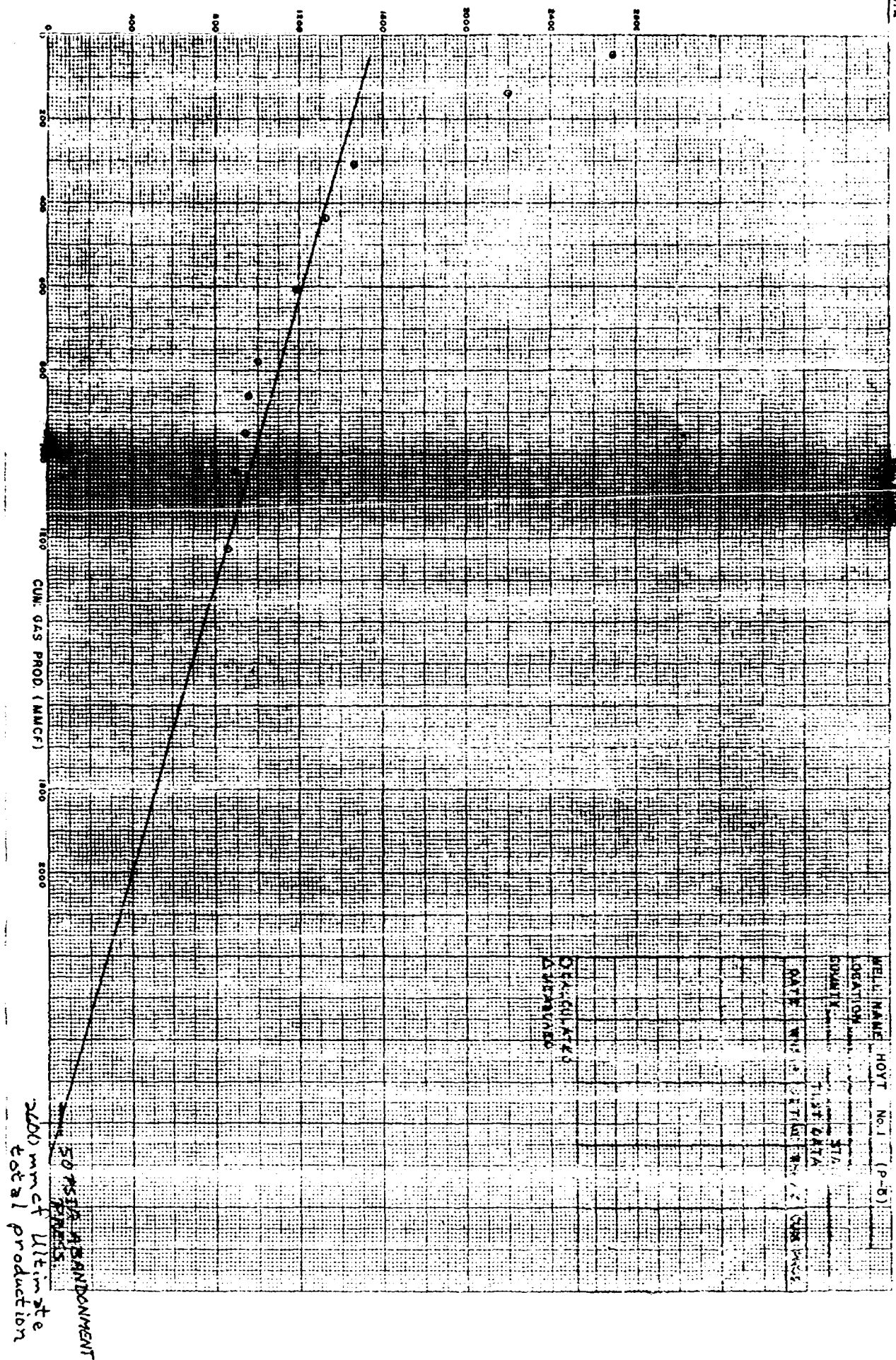
	<u>Gallup</u>	<u>Dakota</u>
Cum. Gas Prod. (Mcf)	<u>3,546,130</u>	<u>1,472,842</u>
Cum Oil Prod. (STB)	34,937	23,244
GOR	101,500:1	63,400:1



# ATTACHMENT NO. 1



51A



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 6349  
Order No. R-5839

APPLICATION OF CONSOLIDATED OIL & GAS, INC.  
FOR DOWNHOLE COMMINGLING, RIO ARRIBA  
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 11  
19 78, at Santa Fe, New Mexico, before Examiner Richard L.  
Stamets.

NOW, on this \_\_\_\_\_ day of October, 19 78, the  
Division Director, 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 Division has jurisdiction of this cause and the  
subject matter thereof.

(2) That the applicant, Consolidated Oil & Gas, Inc., is  
the owner and operator of the Hoyt Well No. 1,  
located in Unit H of Section 5, Township 26 North,  
Range 4 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle  
P.S. Mesa-Gallup and Basin-Dakota production  
within the wellbore of the above-described well.

(4) That from the B. S. Mesa-Gallup zone, the subject well is capable of low marginal production only.

(5) That from the Basin-Dakota zone, the subject well is capable of low marginal production only.

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 53 percent and percent of the commingled gas and oil production, respectively, production should be allocated to the B.S. Mesa-Gallup zone, and 47 percent and 61 percent of the commingled gas and oil production, respectively, production to the Basin-Dakota zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Consolidated Oil & Gas, Inc., is hereby authorized to commingle B.S. Mesa-Gallup and Basin-Dakota production within the wellbore of the Hoyt Well No. 1411, located in Unit H of Section 5, Township 26 North, Range 4 West, NMPM, Rio Arriba County, New Mexico.

(2) That the applicant shall consult with the Supervisor of the AZTEC District Office of the Division and determine an allocation formula for the allocation of production to each zone in each of the subject wells.

(3) That <sup>53 percent and 39</sup>~~53 percent and 39~~ percent of the commingled ~~gas and oil~~<sup>gas and oil</sup> production, shall be allocated to the B. S. Mesa-Gallup zone and <sup>47 percent and 61</sup>~~47 percent and 61~~ percent of the commingled ~~gas and oil~~<sup>gas and oil</sup> production shall be allocated to the Basin-Dakota zone.

(3) That the operator of the subject well shall immediately notify the Division's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

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

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

Exhibits 1 through 3  
Complete Set

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Exhibits 1 through 9  
Complete Set

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