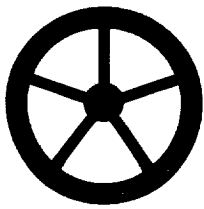


Application to  
Downs & Co. Commingle

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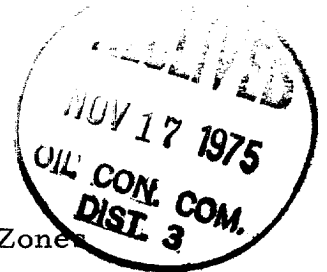
# *Consolidated Oil & Gas, Inc.*

LINCOLN TOWER BUILDING  
1860 LINCOLN STREET  
DENVER, COLORADO 80203  
(303) 255-1751

November 11, 1975

New Mexico Oil Conservation Commission  
State Land Office Building  
Santa Fe, New Mexico 87501

Re: Application to Commingle  
Pictured Cliff and Dakota Zones  
Tribal C 10-7  
Tapacito Pictured Cliff Field  
Basin Dakota Field  
SE/4 Sec. 7-T26N-R3W  
Rio Arriba County, New Mexico



Gentlemen:

Consolidated Oil & Gas, Inc. hereby makes application for a hearing, at the earliest possible date, to commingle the Pictured Cliff and Dakota zones in the Tribal C 10-7 well located in the SE/4, Sec. 7-T26N-R3W, Rio Arriba County, New Mexico.

In support of this application we are sending to you a copy of our request to the U. S. Geological Survey for permission to commingle which outlines our position and method of allocation. Also enclosed is a copy of the U. S. Geological Survey's approval dated October 29, 1975, with their approval subject to the New Mexico Oil Conservation Commission's approval. It is our understanding the U. S. Geological Survey has already forwarded to you several copies of our request to them after they had reviewed and approved our request.

Yours very truly,

CONSOLIDATED OIL & GAS, INC.

Floyd E. Ellison, Jr.  
Area Production Manager

FEE:lt  
Enclosures



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.  
6. LEASE DESIGNATION AND SERIAL NO.

Contract 97

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 <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		7. UNIT AGREEMENT NAME	
2. NAME OF OPERATOR Consolidated Oil & Gas, Inc.		8. FARM OR LEASE NAME Tribal C	
3. ADDRESS OF OPERATOR 1860 Lincoln Street, Denver, Colorado 80203		9. WELL NO. 10-7	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1750' FSL & 1450' FEL Section 7-T26N-R3W		10. FIELD AND FOOT, OR WILDCAT Tapacito PC & Basin Dakota	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 7-T26N-R3W	
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 6905 KB	12. COUNTY OR PARISH Rio Arriba	13. STATE New Mexico

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	Commingle <input checked="" type="checkbox"/>

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input type="checkbox"/>	

(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. requests permission to commingle production from the Pictured Cliff and Dakota formations in subject well. Royalty and working interest owners are the same in both zones. Allocation of gas production would be 39.8% to the Pictured Cliff and 60.2% to the Dakota based on an engineering estimate of remaining reserves from August 1, 1975 to an abandonment pressure of 50 psig determined by plotting BHP/Z vs. cumulative gas. All produced oil would be credited to the Dakota since the Pictured Cliff has not produced any oil in the past.



RECEIVED  
OCT 28 1975

U. S. GEOLOGICAL SURVEY  
DURANGO, COLO.

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

SIGNED Ray E. Ellison TITLE Area Production Manager DATE Oct. 21, 1975

(This space for Federal or State office use)

APPROVED BY JERRY W. LONG  
CONDITIONS OF APPROVAL IF ANY

OCT 29 1975

JERRY W. LONG  
DISTRICT ENGINEER

TITLE

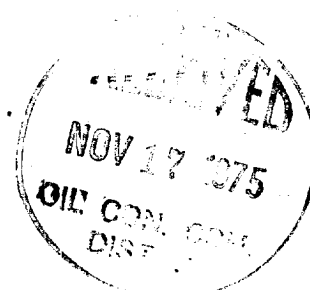
DATE

APPROVED SUBJECT TO  
NEW MEXICO OIL CONS. COM. APPROVAL  
\*See Instructions on Reverse Side

*[Signature]*

October 20, 1975

U. S. Department of the Interior  
Geological Survey  
Box 1809  
Durango, Colorado 81301



Re: Request to Commingle  
Pictured Cliff and Dakota Zones  
Tribal C 10-7  
Tapacito Pictured Cliff Field  
Basin Dakota Field  
SE/4 Sec. 7-T26N-R3W  
Rio Arriba County, New Mexico

Gentlemen:

Consolidated Oil & Gas, Inc. is requesting permission to commingle the Pictured Cliff and Dakota Zones in the Tribal C 10-7 well and to allocate gas production 39.8% and 60.2% respectively, based on an evaluation of reserves remaining from August 1, 1975 to an abandonment pressure of 50 psig. All oil production would be credited to the Dakota.

Downhole communications of the Pictured Cliff and Dakota zones recently occurred caused by a hole in the Dakota production tubing opposite the Pictured Cliff perforations. Corrective action is, therefore, necessary either by repairing the hole in the tubing, setting a blanking plug in the Dakota tubing below the hole to block off production from the Dakota, or by obtaining permission to commingle the two zones and allocate production.

We anticipate the Dakota tubing to be sanded in above the permanent packer with frac sand based upon our experience with similarly completed wells in the area. Repair of the hole will require moving in a workover unit, killing both zones, freepointing and cutting off the tubing above the sand, electronically inspecting the tubing for additional potential holes, running a tubing patch and/or washing over and recovering the tubing stub, and returning the well to production as a dual producer. The estimated cost to repair

the situation by running a tubing patch is \$17,600 if no problems are encountered, whereas, correcting the problem by washing over and recovering the tubing stub would add an estimated \$6,000 to the cost - again assuming no problems are encountered. As the Dakota zone has not produced much gas since 1971 due to problems with the Dakota tubing loading up with fluid (4902 Mcf - 1972, zero - 1973, 3526 Mcf - 1974, and 7841 Mcf for 7 months of 1975), it is extremely doubtful that Consolidated would choose to repair the hole in the tubing if commingling is not approved. With little to no chance of a payout from a zone which would load up and produce little gas, we would, instead, set a blanking plug in the Dakota tubing below the hole to effectively isolate the two zones as required by law and produce as a single zone Pictured Cliff well.

The E/2 of Sec. 7-T26N-R3W is covered by one base lease from the Jicarilla Apache Tribe. Since the working interest owners in the Pictured Cliff and Dakota zones are the same and the royalty interest is the same, both royalty and working interests are protected no matter how the production is divided. Thus, from a practical standpoint, the only valid reason for division of production is to properly allocate the production to both zones for bookkeeping purposes. This allocation, we feel, can be done in the following manner.

When production decline curves can not be used with any degree of accuracy due to allowables, changing line pressure, etc., disrupting production performance -- as is the case for the Tribal C 10-7 well, one of the more acceptable engineering methods to determine gas reserves is to plot a well's static bottomhole pressure, corrected for compressibility, against the well's cumulative production. Plotting of these points should result in a straight line on 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 Pictured Cliff and Dakota zones in the Tribal C 10-7 using the yearly wellhead shut-in pressures reported to the New Mexico Oil Conservation Commission corrected for compressibility to bottomhole conditions with the aid of a Garrett Computing Systems program. As Graphs I and II demonstrate, a good straight line fit can be made to both the Pictured Cliff points and the Dakota points when certain explainable anomalous points are excluded. Using the line fits shown on Graphs I and II and projecting to an abandonment economic limit of 50 psig, the projected ultimate production for the Pictured Cliff is 720,000 Mcf and the projected ultimate production

U. S. Geological Survey  
October 20, 1975  
Page 3

for the Dakota is 600,000 Mcf. Based on these projections, the remaining reserves from August 1, 1975 for the Pictured Cliff are 149,128 Mcf and 225,145 Mcf for the Dakota, or 39.8% and 60.2%, respectively, of the total remaining reserves (See attached Table I.)

Although the allocation percentages from the graphs may appear to be giving the Dakota zone more than its fair share based on recent production history, we feel the percentage may be a reasonable indication of how the well will produce when commingled. Until fluid began loading off the Dakota zone in 1971, both zones had similar cumulatives and deliverabilities. By commingling the well and producing both zones up the tubing, the additional Pictured Cliff gas will increase the producing COR similar to gas lifting and keep the fluid unloaded off the Dakota. This should allow the Dakota to produce at a higher rate than the Pictured Cliff as it attempts to make up for low production over the last four years. The increased producing capability of the well from commingling is illustrated by the eight-day average 6/9-16/75 when the Pictured Cliff produced 150 Mcf per day against 171# line pressure, whereas after communications occurred, an eight-day average 8/9-16/75 showed 175 Mcf per day up the tubing, keeping the Dakota unloaded, against a 192# line pressure. The production rate difference would have been considerably more had the line pressures been the same.

We feel commingling is in the best interest of everyone concerned since the common royalty and working interest ownership protects everyone concerned and gas and oil from the Dakota, which would otherwise be left unrecovered, can be produced with help from the Pictured Cliff. We, therefore, request approval to commingle production from the Pictured Cliff and Dakota zones in the Tribal C 10-7 and allocate 39.8% of the gas production to the Pictured Cliff zone and 60.2% of the gas and all oil production to the Dakota zone.

Yours very truly,

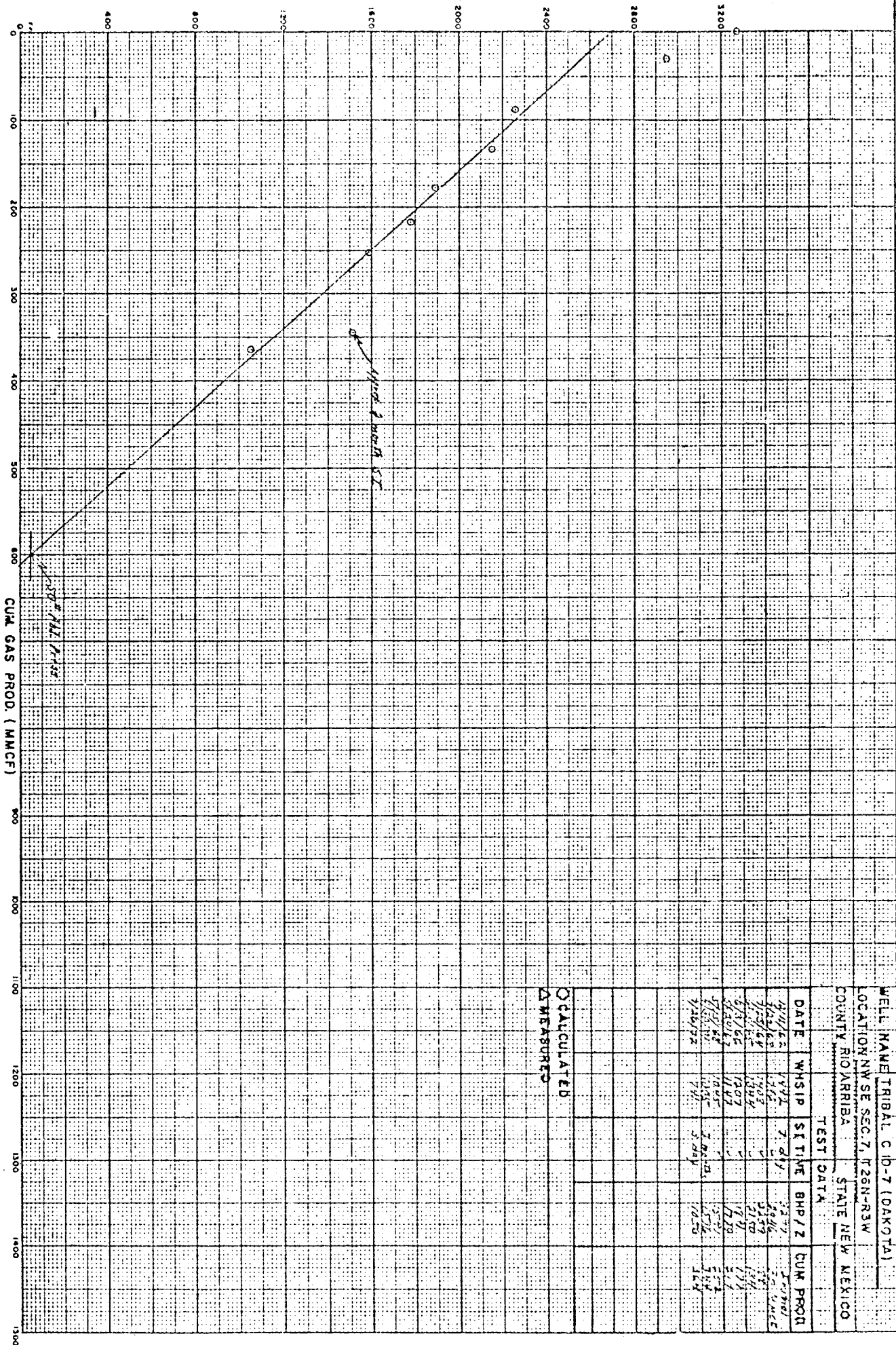
CONSOLIDATED OIL & GAS, INC.

Floyd E. Ellison, Jr.  
Area Production Manager

FEE:lt  
Attachments







WELL NAME TRIBAL C ID-7 (OAKOTA)				
LOCATION NW SE SEC. 7, T26N-R3W				
COUNTY RIO ARriba STATE NEW MEXICO				
TEST DATA				
DATE	WHSIP	ST TIME	BHP/Z	CUM PROD
1/11/62	14.5	7.81	23.7	1.000
1/23/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000
2/1/62	14.5	7.81	23.7	1.000

Calculated  
Measured

Graph II

TABLE I

TRIBAL C 10-7

Remaining Gas Reserves to 50# Abandonment Pressure  
as of August 1, 1975

	<u>Pictured Cliff</u>	<u>Dakota</u>	<u>Total</u>
Ultimate	720,000	600,000	
Cum. 8/1/75	<u>570,872</u>	<u>374,855</u>	
Remaining Reserves	149,128	225,145	374,273
% Remaining Reserves	39.8%	60.2%	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE\*  
(Other Instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

Contract 97

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Tribal C

9. WELL NO.

10-7

10. FIELD AND POOL, OR WILDCAT

Tapacito PC & Basin Dakota

11. SEC., T., R., M., OR BLK. AND  
SURVEY OR AREA

Sec. 7-T26N-R3W

12. COUNTY OR PARISH

Rio Arriba

13. STATE

New Mexico

1. OIL ☐ GAS ☒ OTHER ☐  
WELL WELL

2. NAME OF OPERATOR

Consolidated Oil & Gas, Inc.

3. ADDRESS OF OPERATOR

1860 Lincoln Street, Denver, Colorado 80203

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

At surface

1750' FSL & 1450' FEL Section 7-T26N-R3W

14. PERMIT NO.

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

6905 KB

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

Commingle

X

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.)\*

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RECEIVED

OCT 28 1975

U. S. GEOLOGICAL SURVEY  
DURANGO, COLO.

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

SIGNED

*Thayer E. Ellison*

TITLE Area Production Manager

DATE Oct. 21, 1975

(This space for Federal or State office use)

TITLE

DATE

APPROVED

OCT 20 1975

JERRY W. LONG  
DISTRICT ENGINEER

\*See Instructions on Reverse Side

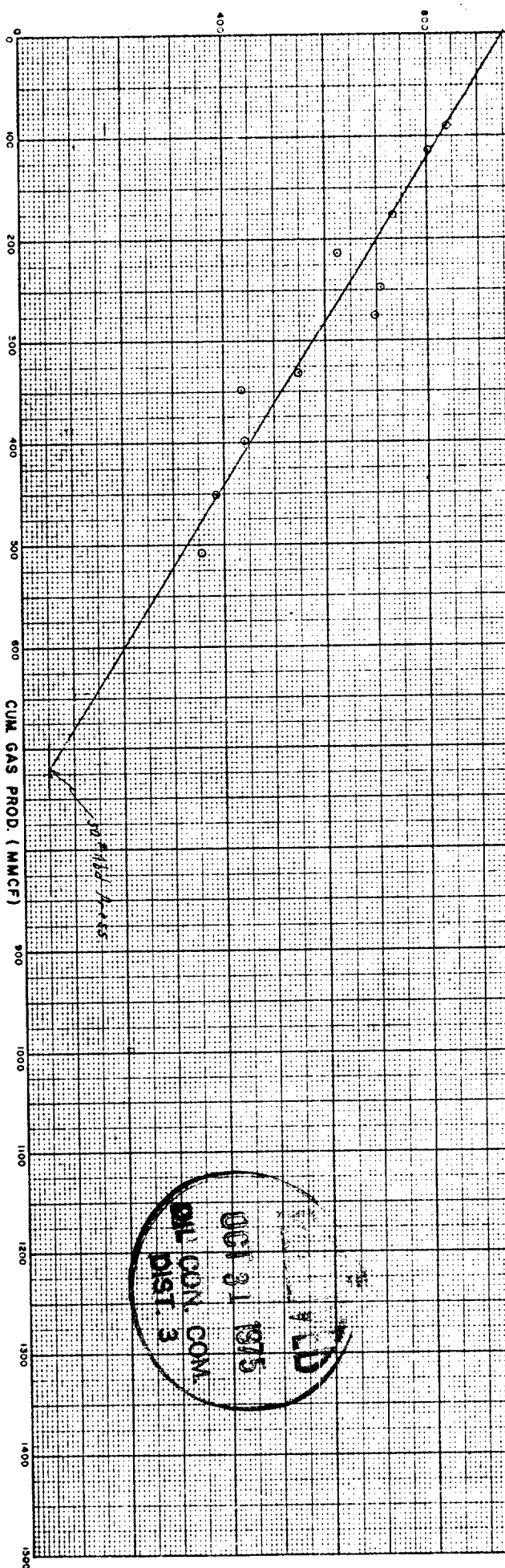
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OCT 28 1975

U. S. GEOLOGICAL SURVEY  
DURANGO, COLO.

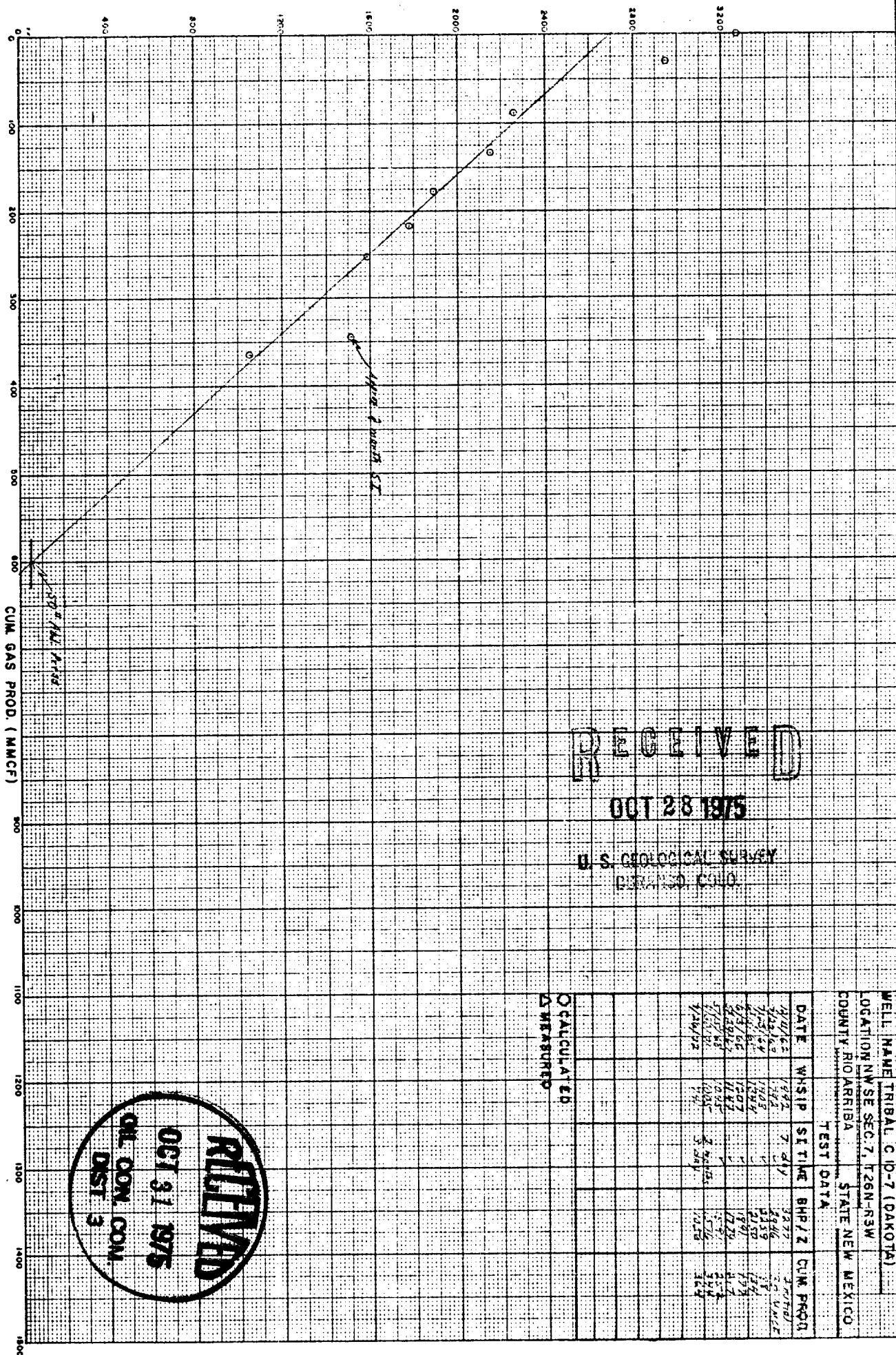
WELL NAME	TRIBAL Q 10-7 (PICTURED SLUFFS)			
LOCATION	NW SE SEC 7 T6N - R3W			
COUNTY	RIO ARriba			
STATE	NEW MEXICO			
TEST DATA				
DATE	WSP	SET TIME	RMP/Z	CUM PROD
3/31/74	908	7:04	16.2	1.957
11/26/74	764		18.1	3.846
7/23/74	658		8.9	.91
1/23/74	4.35	8:04	8.0	1.4
4/27/74	584	7:04	7.1	2.14
5/28/74	570		6.26	2.76
5/25/74	568		7.09	3.42
5/24/74	557		5.41	3.72
3/24/74	453		5.43	3.2
4/18/74	362		4.93	3.2
5/2/74	369		4.40	3.97
5/3/74	328		3.87	4.09
5/17/74	303		3.52	5.08

OCALCULATED  
MEASURED



UG-31 1975  
CON. CONT.  
DIST. 3

Graph I



Graph II

TABLE I  
TRIBAL C 10-7

Remaining Gas Reserves to 50# Abandonment Pressure  
as of August 1, 1975

	<u>Pictured Cliff</u>	<u>Dakota</u>	<u>Total</u>
Ultimate	720,000	600,000	
Cum. 8/1/75	<u>570,872</u>	<u>374,855</u>	
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DURANGO, COLO.

