

HIXON DEVELOPMENT COMPANY

P. O. BOX 2810  
FARMINGTON, NEW MEXICO 87401

August 9, 1983

Mr. Joe D. Ramey, Director  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Subject: Request for Administrative Approval  
Downhole Commingling  
A.P. Hixon #1  
1850' FNL, 880' FWL, Sec.21, T25N,R11W  
San Juan County, New Mexico  
Lease No. N00-C-14-20-5242

RECEIVED  
AUG 16 1983  
OIL CON. DIV.  
DIST. 3

Dear Mr. Ramey:

The subject well was recently drilled as a marginally productive Basin Dakota and Bisti Lower Gallup oil well. The well is a farmout to Hixon Development Company from Tenneco Oil & Gas Company. We respectfully request administrative approval to downhole commingle the two zones in this well. If administrative approval is not possible, we then request an earliest possible hearing date. This is necessary because this well's lease is expiring October 19, 1983.

The well is located on a Navajo Allotted lease and does not have a shut in well delay rental provision. We will be in jeopardy of losing the well's Dakota proration unit if production is not established across the lease expiration date.

The Dakota zone in this well tested 4 BOPD, 28 BWPD, 218 MCFD on 6/3/83. The 218 MCFD producing rate does not satisfy gas pipeline hookup requirements of 400 MCFD. Consequently the only way this production can be salvaged is through downhole commingling.

As a precedent for this request, the following Bisti Field area Gallup-Dakota wells have been approved for commingling: Merry May #1 (24-24N-9W); 1-E Big Eight (8-24N-9N) and July Jubilee #1 (3C-24N-9W).

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Page 2

Enclosed for your review is information pertaining to Rule 303  
Section C. Please give this request your earliest consideration.

Very truly yours,

Hixon Development Company

by *Aldrich L. Kuchera*  
Aldrich L. Kuchera  
Executive Vice President

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AUG 16 1983  
**OIL CON. DIV.**  
**DIST. 3**

attachements

ALK:jjja

Rule 303-C Downhole Commingling Data  
A.P. Hixon Well No. 1  
SW/4 NW/4 Section 21, T25N, R11W  
San Juan County, New Mexico

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OIL CON. DIV. I  
DIST. 3

1.-(a) (1) Daily oil production

<u>Zone</u>	<u>Perfs</u>	<u>BOPD</u>	<u>Date</u>
Dakota	5880'-94'	4	6-3-83
Gallup	4976'-92'	13	7-27-83

NOTE: The well is shut in waiting on a gas pipeline hookup.

(2) Both the Gallup and Dakota Zones will require artificial lift.

(3) Well tests showed production as follows:

<u>Zone</u>	<u>Date</u>	<u>BOPD</u>	<u>BWPD</u>	<u>MCFD</u>	<u>GOR</u>
Gallup	7/27/83	13	8	124	9,538
Dakota	6/03/83	4	28	218	54,500

NOTE: The Dakota was fraced w/ 444 bbl 2% KCL water. Only 236 bbl of load fluid were recovered by 6/3/83. The 28 BWPD is expected to decrease to less than 10 BWPD after all frac fluid is recovered.

(4) Both the Gallup and Dakota produced water salinity are comparable and compatible with chlorides in the range of 29,000 ppm. Combining these two fluids will not result in formation damage.

(5) The total value of the crude oil will not be reduced by commingling. The oil gravity of the two crudes is in the range of 39 and 42 API. Both crudes will receive the same oil price.

(6) Ownership of both zones is common as follows:

	<u>WI</u>
Hixon et al	0.875
Tenneco Oil & Gas	0.125

Allotted Indian land royalty on both oil and gas is 16-2/3%.

- (7) Commingling is not expected to jeopardize the efficiency of present or future secondary recovery operations. This area has been waterflooded in the past.

- 1.-(b)
  - (1) The Dakota "B" zone is not commercial if produced through a separate tubing string. Our Gas Purchase Agreement with the Gas Company of New Mexico specifies 400 MCFD production against a 400 psi line pressure. In the absence of commingling the Dakota Zone will be plugged and abandoned and this resource will be lost.
  - (2) The measured 72 hour Dakota shut in bottom hole pressure (mid-perf) is 770 psia. The Gallup measured bottom hole (mid perf) pressure is 339 psia producing and 648 psia shut in after 72 hours. No significant zone crossflow is expected.
  - (3) Both zones produce comparable salinity fluids. Formation damage is not anticipated.
  - (4) Both the Dakota and Gallup fluids are compatible on the basis of comparable water analysis.
  - (5) Both zones have common ownerships and royalty.
  - (6) The lower Dakota zone pressure is higher than the upper Gallup pressure (770 psia vs. 648 psia).
- 2.
  - (a) Hixon Development Company  
P.O. Box 2810  
Farmington, NM 87499
  - (b) Navajo Lease- N00-C-14-20-5242  
A.P. Hixon #1  
1850' FNL, 880' FWL, Sec. 21-25N-12W  
San Juan County, New Mexico  
Pools- Basin Dakota  
Bisti Lower Gallup

- (c) Plat attached. Ownership map attached. Note: This and all offset acreage is owned/assigned to Hixon Development Company and by Tenneco. A copy of this application is being sent to Tenneco Oil & Gas Company.
- (d) Current production test of the Gallup is per the attached Form C-116. The Dakota zone was shut in temporarily plugged back 6/6/83. The Dakota tested 4 BOPD, 28 BWPD, 218 MCFD on 6/3/83.
- (e) Attached are completion reports showing completion information. The Gallup zone was IP'd at 56 BOPD, 28 BWPD, 20 MCFD on 7/14/83. After two weeks of pumping the well tested 13 BOPD, 8 BWPD, 124 MCFD on 7/27/83. The latter test appears to be stabilized production.
- (f) Measured bottom hole pressure (6/6/83) of the Dakota is 770 psia. Measured Gallup BHP on 8/10/83 is 648 psia.
- (g) The Dakota produces 0.7 specific gravity natural gas, a green paraffin based oil (40 API) and produced water. The produced water is comparable in salinity ion/cation components to the Gallup produced water. The Gallup produces comparable paraffin based oil and gravity natural gas.
- (h) Production Value  
Commingled is as follows:

		<u>\$/Day</u>
(17BOPD)(\$29.60/BO)	=	503.20
(342 MCFD)(\$2.00/MCF)	=	<u>684.00</u>
Commingled daily revenue		\$1187.20
		<u>          </u>
		<u>          </u>

Production value without commingling will be based on the Gallup only because the Dakota will be plugged and abandoned.

(13 BOPD)(\$29.60/BO) = 384.80

(124 MCFD)(\$2.00/MCF) = 248.00

Non-commingled daily revenue \$632.80

- (i) Production will be allocated on the basis of current well testing and calculated reserves. Attached is a computer printout showing the projected ratio of oil and gas production for the two zones. Production will be allocated as a ratio of oil and gas produced by both zones taking into consideration differential declining reserves.

The first year's production will be allocated as follows:

Dakota Gas = Total Gas Produced x 218/342

Gallup Gas = Total Gas Produced x 124/342

Dakota Oil = Total Oil Produced x 4/17

Gallup Oil = Total Oil Produced x 13/17

- (j) Tenneco Oil Company is the owner of the well's lease. Offset leases are per the attached map and are owned/assigned to Tenneco and Hixon Development Company. Tenneco has been notified of this commingling request in writing.

256989

WELL NAME A. P. HIXON NO. 1

LOCATION 1850' FNL, 880' FWL SECTION 21 T 25N R 11W

COUNTY San Juan STATE New Mexico

GLE 6505'

RBM 6519'

DF 6517'

KB 14'

**SURFACE CASING**

Hole size: 12-1/4"

Casing: 8-5/8" 24# J-55

Casing set @ 437'

**FORMATION TOPS**

Pictured Cliffs	<u>1318'</u>
Lewis	<u>1520'</u>
Cliffhouse	<u>1668'</u>
Point Lookout	<u>3809'</u>
Mancos	<u>3972'</u>
Upper Gallup	<u>4870'</u>
Lower Gallup	<u>4960'</u>
Greenhorn	<u>5706'</u>
Dakota "B"	<u>5859'</u>

**CEMENT TOP**2102'**PERFORATIONS**

Gallup 4976'-92'

Dakota 5880'-94'

PBD 5993' KB**PRODUCTION CASING**

Hole size: 7-7/8"

Casing: 5-1/2" 15.5# 8rd ST&C K-55

Casing set @ 6026' 700 sacks

TD 6028'

2-3/8" tubing with rod pump assembly

**WELL HISTORY**

Spud date: 5/3/83

Original owner: \_\_\_\_\_

IP \_\_\_\_\_ BOPD \_\_\_\_\_ BWPD \_\_\_\_\_

GOR \_\_\_\_\_ MCF \_\_\_\_\_

Completion treatment: \_\_\_\_\_

**CURRENT DATA**

Pumping Unit \_\_\_\_\_

Tubing 4876' 2-3/8" 4.7#

Pump size \_\_\_\_\_

Rod string \_\_\_\_\_

Remarks \_\_\_\_\_

**RECEIVED**

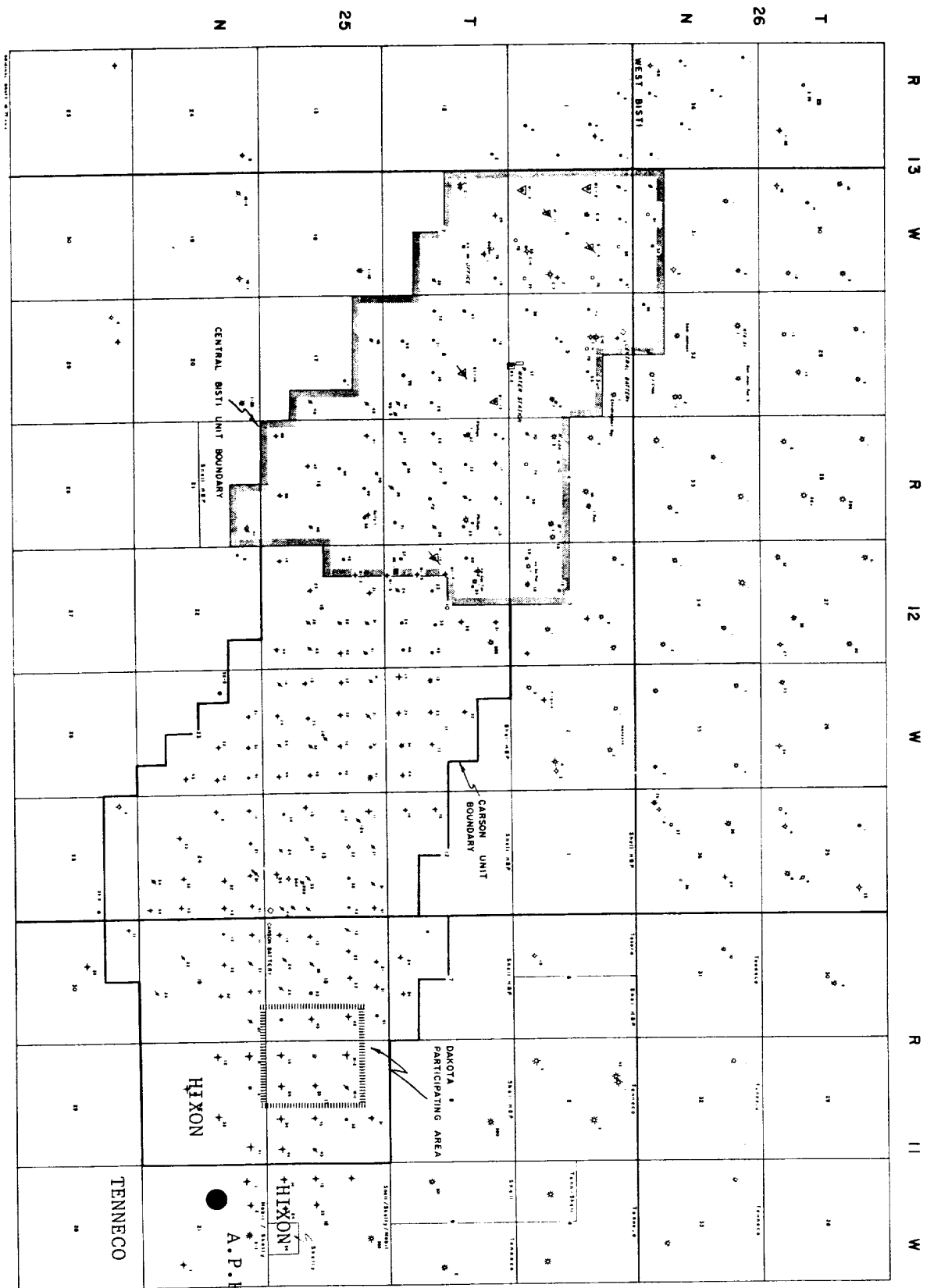
AUG 3 1983

**OIL CON. DIV.**

**DIST. 3**

CIBP @ 5260'PBD 5993'

# OFFSET OWNERSHIP MAP



HIXON DEVELOPMENT COMPANY  
CENTRAL BISTI-CARSON UNIT AREA

San Juan County, New Mexico

Scale in Feet

Map of 1/200, 0.000, 1/200, 1/200, 1/200

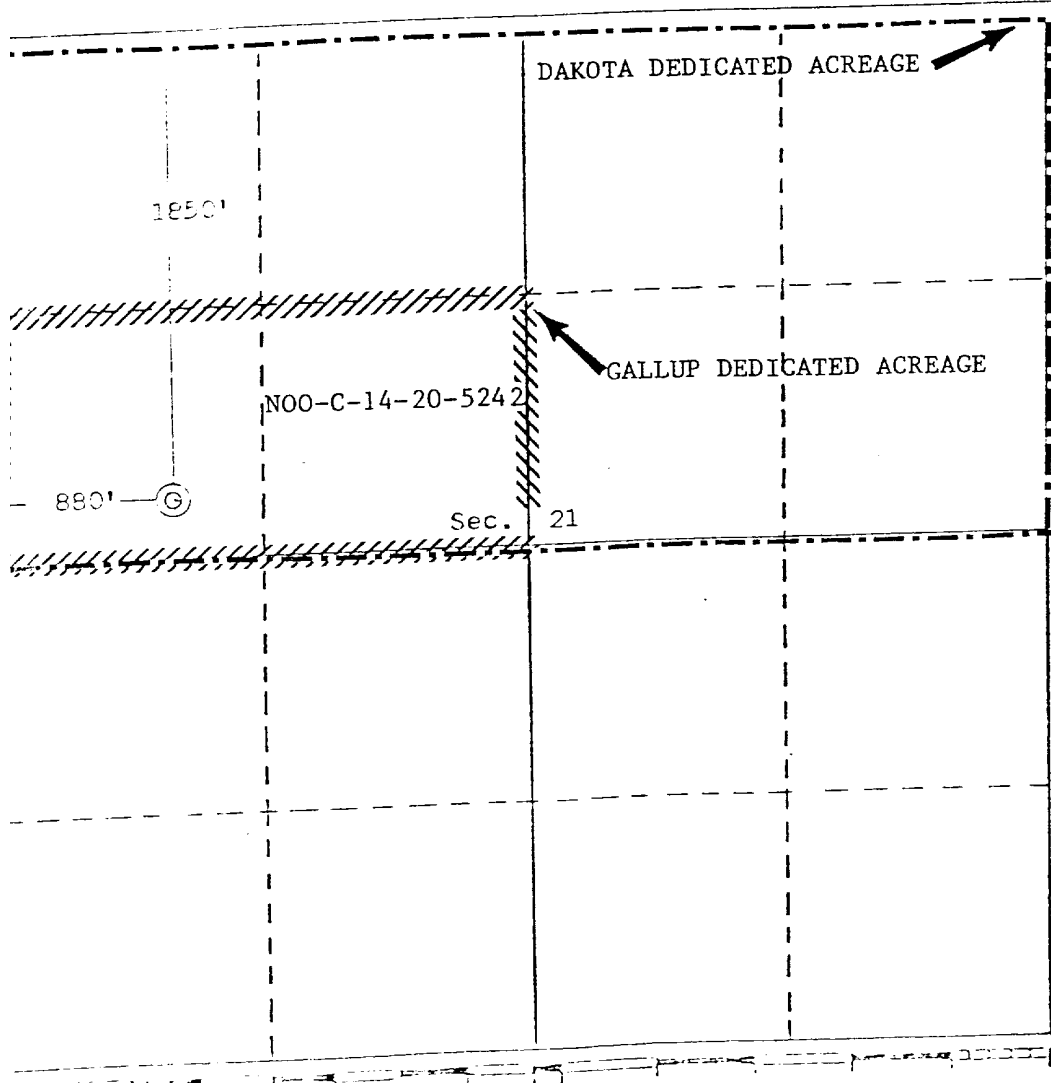
Map of 1/200, 0.000, 1/200, 1/200, 1/200



Hixon Development Company		Lease		A. P. Hixon	
Section	21	Township	25 North	Range	11 West
County		San Juan			
Oil Lease Location of Well:					
850'	feet from the	North	line and	880'	feet from the West
505'	Producing Formation	Pool			Dedicated Acreage:
Lower Gallup		Bisti Lower Gallup			80 Acres

**REC'D**  
**AUG 3 - 1983**  
**OIL CON. DIV.**  
**DIST. 3**

1. (Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
  2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
  3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?
- ☐ Yes ☐ No If answer is "yes," type of consolidation Dakota being consolidated
- If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)
- No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.



<b>CERTIFICATION</b>	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
Name	Aldrich L. Kuchera
Position	Petroleum Engineer
Company	Hixon Development Company
Date	March 4, 1983
Date Surveyed	March 3, 1983
Registered Professional Engineer and/or Land Surveyor	
Certificate No.	5979
Edgar L. Risenhoover, L.S.	

## C116

Revised 1-1-65

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 allowable 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 is 0.60.

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

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

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

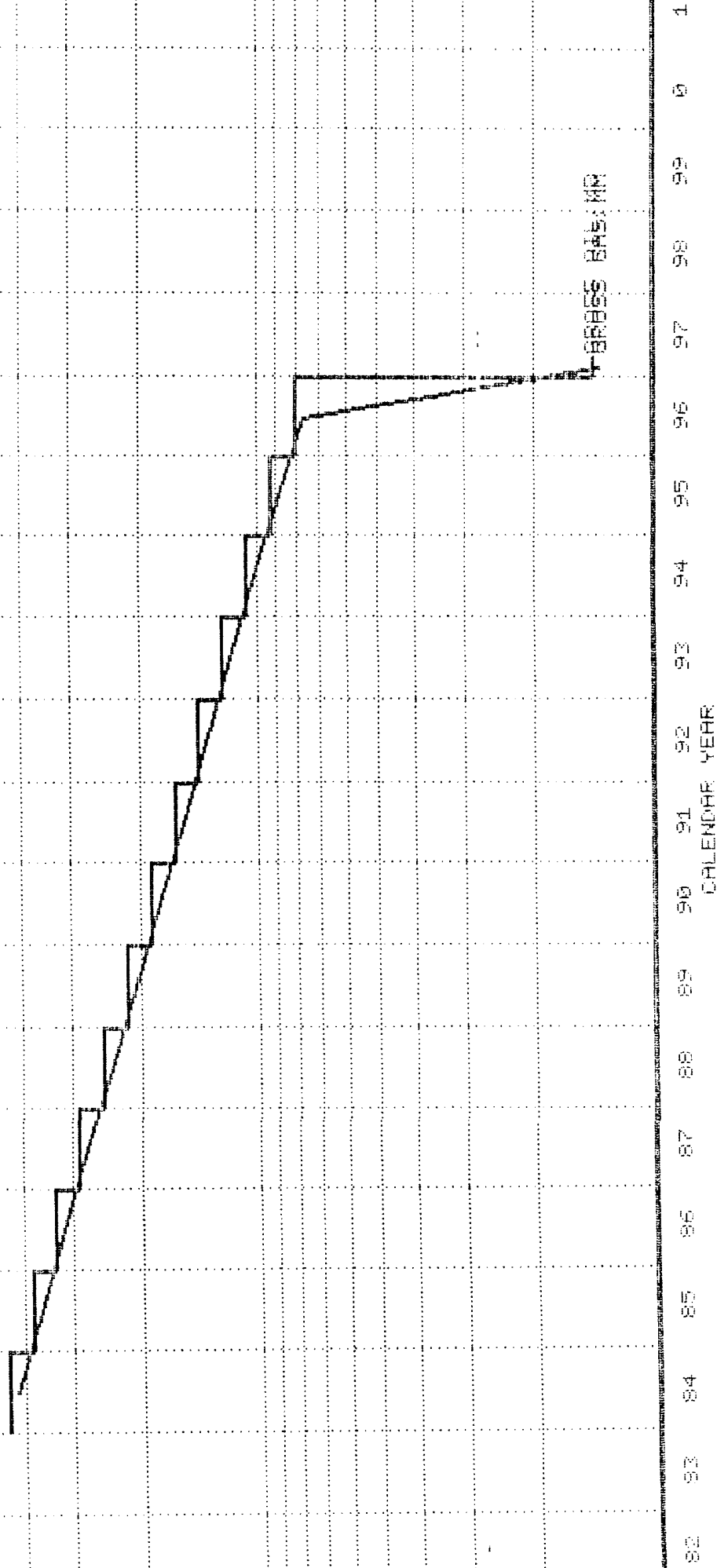
*Petroleum Engineer*  
(Signature)

7/29/83

BIST1 LOWER GALLUP

GREAT2-PROJECTED-TOTALS

LIFE	15.2
OIL, MB	28.3
GAS, MMCF	270.0



DATE : 08/11/83  
TIME : 16:08CDT  
FILE : GALLUP  
FILE : SETDATA

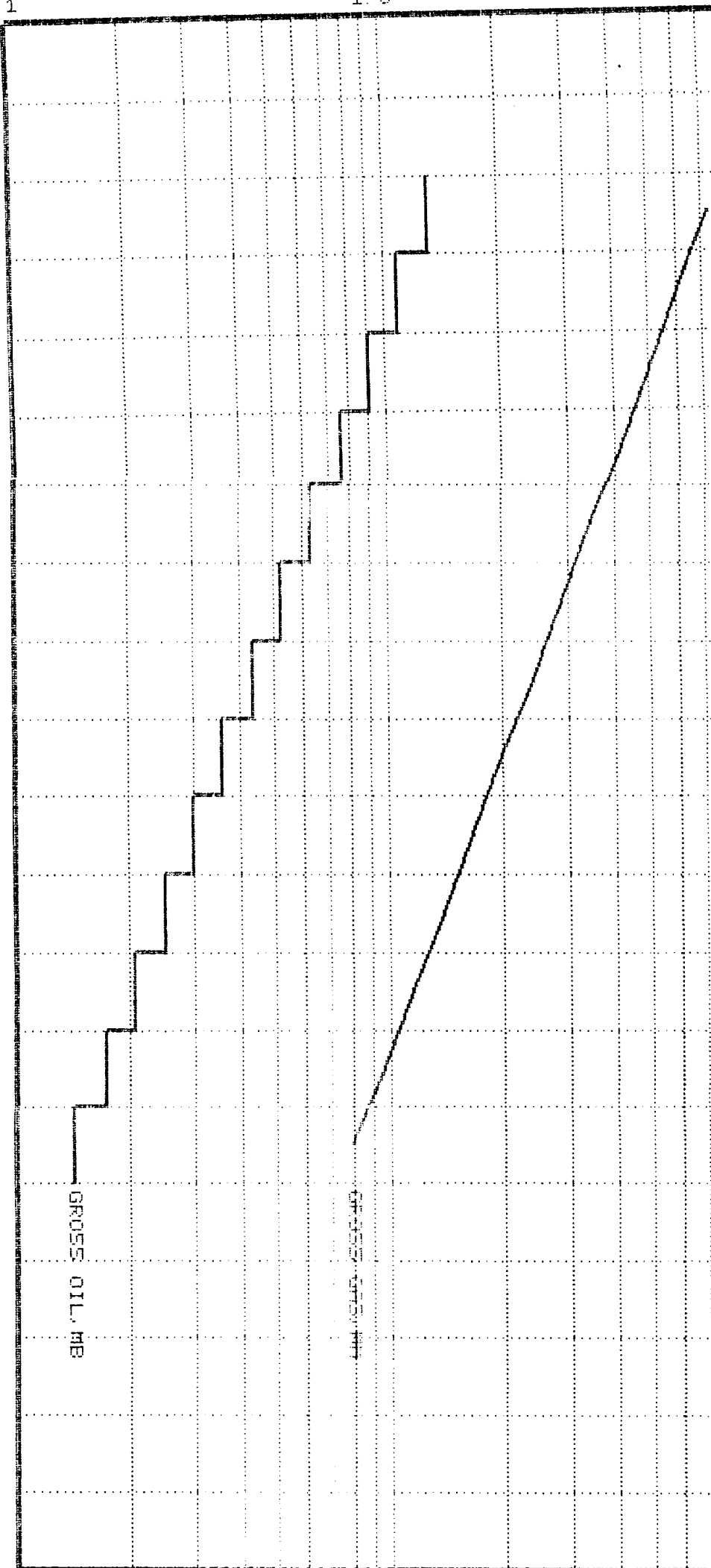
GROSS, MM 1  
OIL, MB 0.1

10  
1.0

100  
10 0

82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 0 1

CALENDAR YEAR



BASIN DAKOTA

GREEN12, PROJECTED, 101915

LIFE 45.0  
OIL, MB 2.1  
GROSS, MMCF 395.0

DATE : 08/11/83  
TIME : 16.0800T  
FILE : DAKOTA  
FILE : CFTDATA