

Risk Penalty Analysis

Case #9593

February 1, 1989

Atlantic B Com #220
S/2 Sec. 34, T31N, R10W
San Juan County, New Mexico

Risk Penalty

Geological Risk

Coal Stratigraphy and Thickness
Cleating/Fractures
Coal Characteristics

60%

Reservoir Risk

Sustained Deliverability
Dewatering
Reserve Recovery
Undefined Coal Producing Characteristics

50%

Economic Risk

Project - Gathering, Facilities, Water Disposal
Treating - Water, CO₂
Marketing - Testing, Demand, Mechanical Downtime

20%

Operations Risk

Completion Operations
Equipment Failures While Drilling
Formation Problems While Drilling

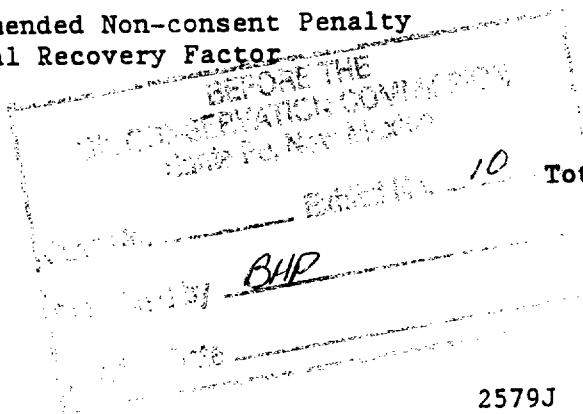
70%

Recommended Non-consent Penalty
Capital Recovery Factor

200%
100%

Total Recommended

300%



RISK PENALTY ANALYSIS

GALLEGOS CANYON UNIT #391 and #390
SECTION 23, T29N, R13W

RISK PENALTY

GEOLOGICAL RISK

Cleating/fractures	
Coal characteristics	40%

RESERVOIR RISK

Sustained deliverability	
Reserve Recovery	
Undefined coal producing characteristics	50%

ECONOMIC RISK

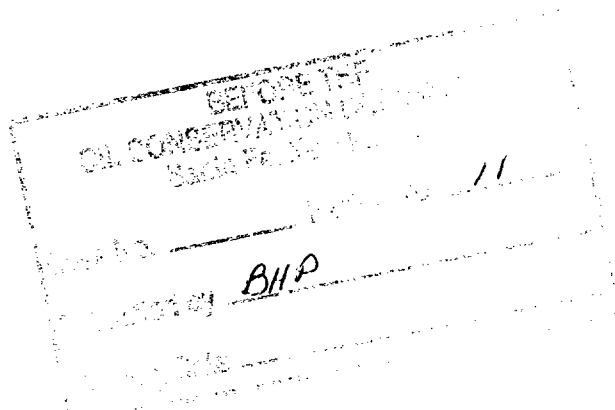
Marketing - price, demand	50%
---------------------------	-----

OPERATIONS RISK

Completion operations - mechanical	10%
------------------------------------	-----

Recommend Non-consent penalty	150%
Capital Recovery Factor	100%

Total Recommended	250%
-------------------	------



FRUITLAND COAL GAS PRODUCTION GALLEGO'S CANYON #377

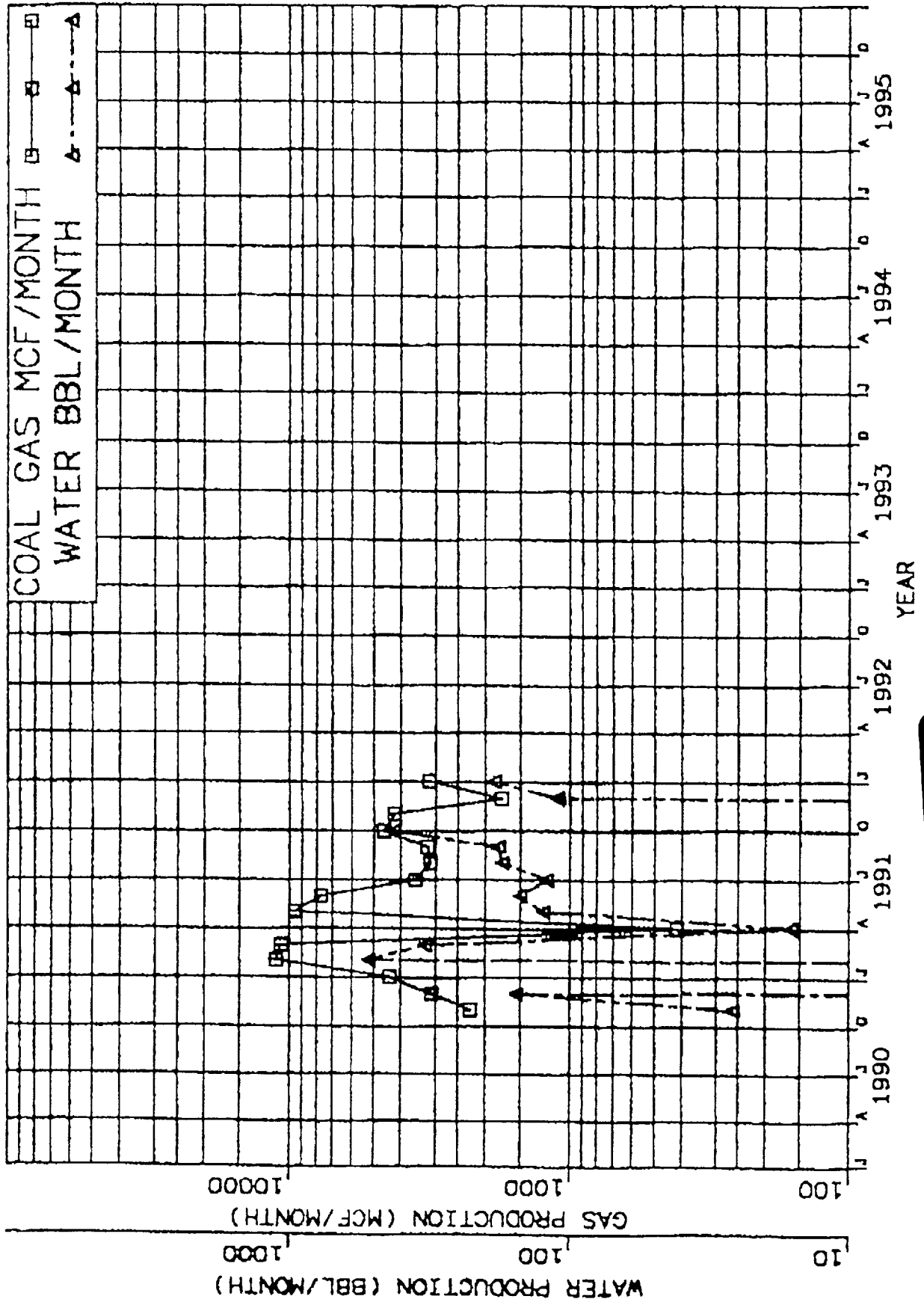
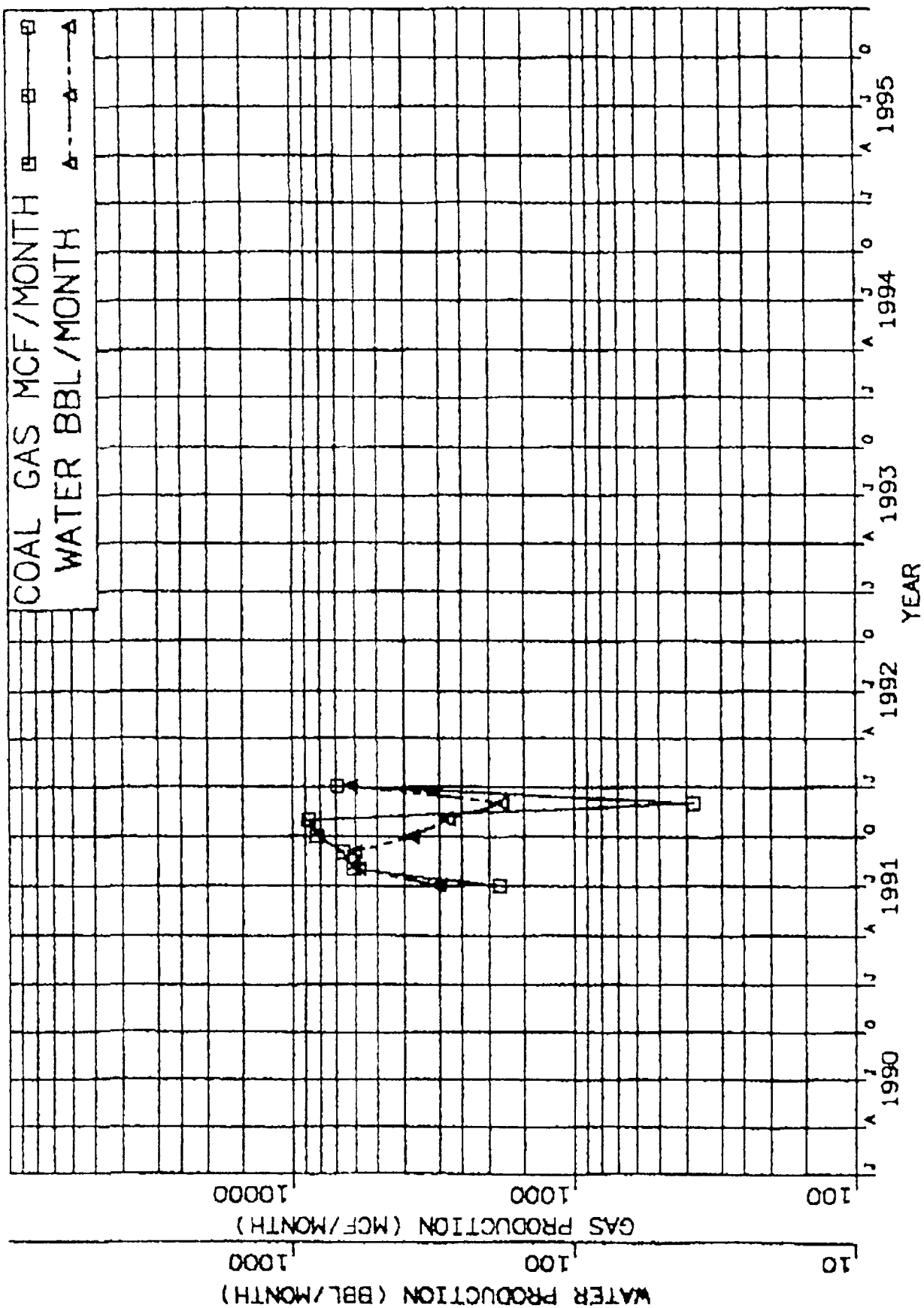
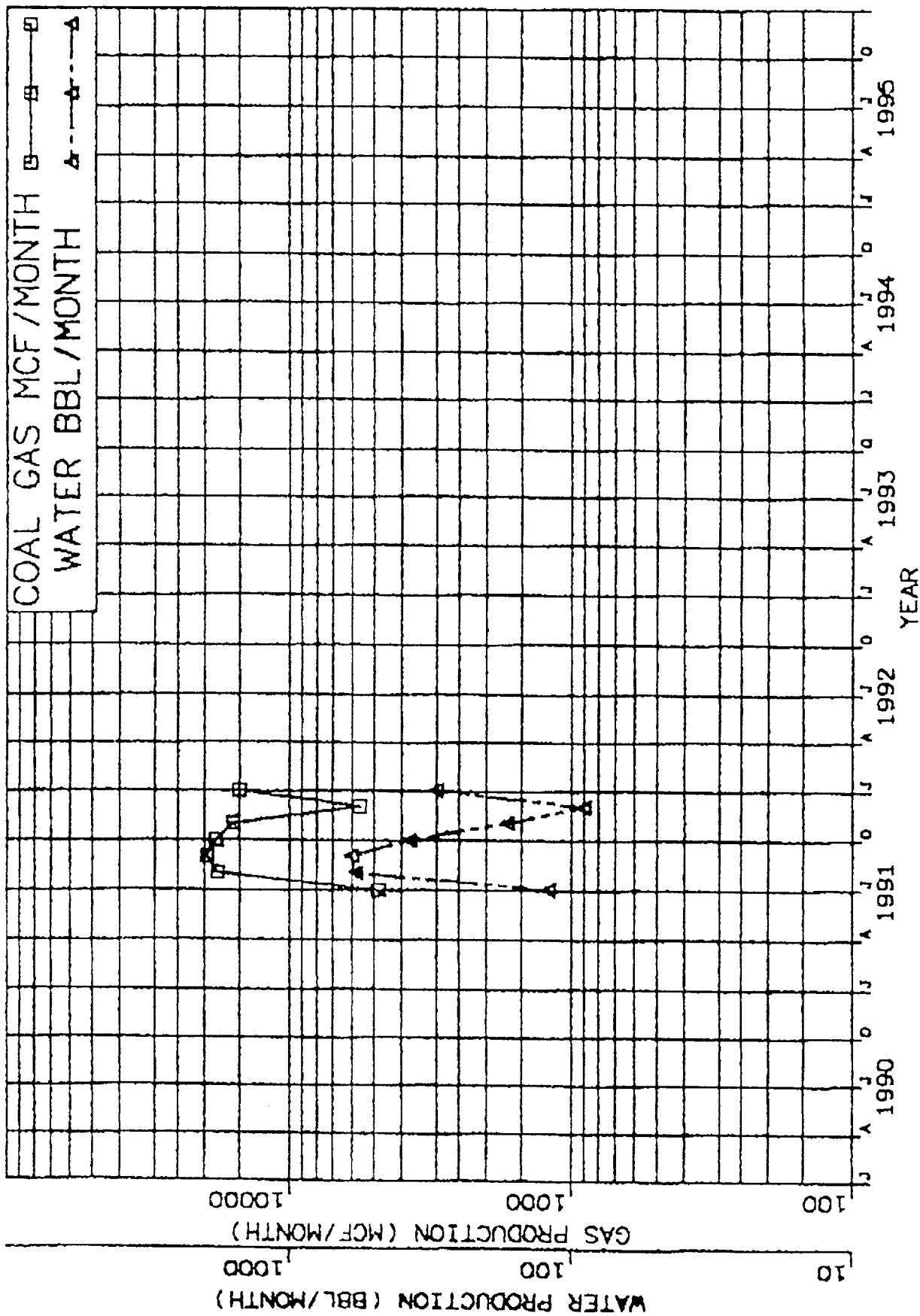


EXHIBIT
BHP
11A
FALCON-DALLAS, TX

FRUITLAND COAL GAS PRODUCTION GALLEGOS CANYON #387



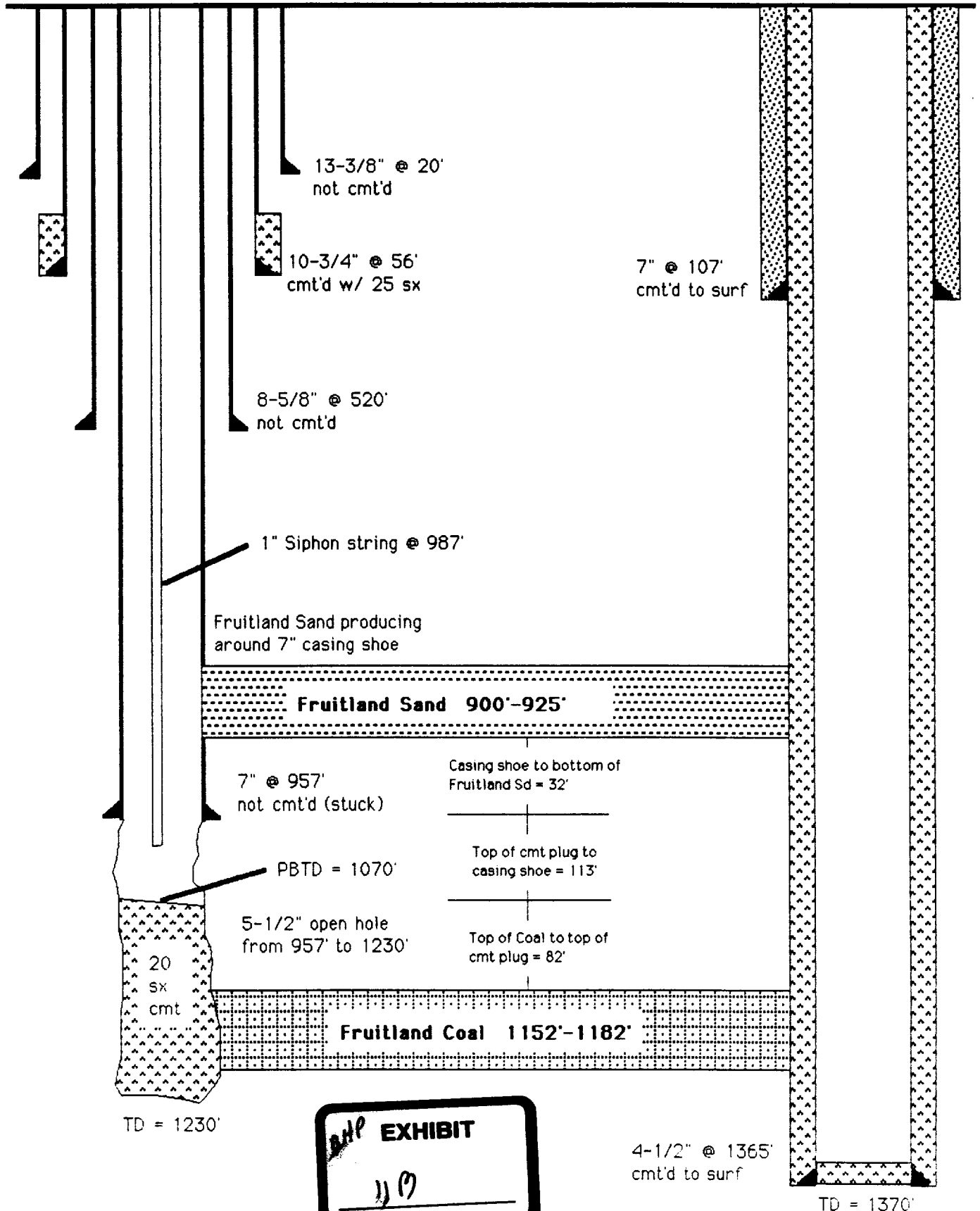
FRUITLAND COAL GAS PRODUCTION GALLECOS CANYON #389

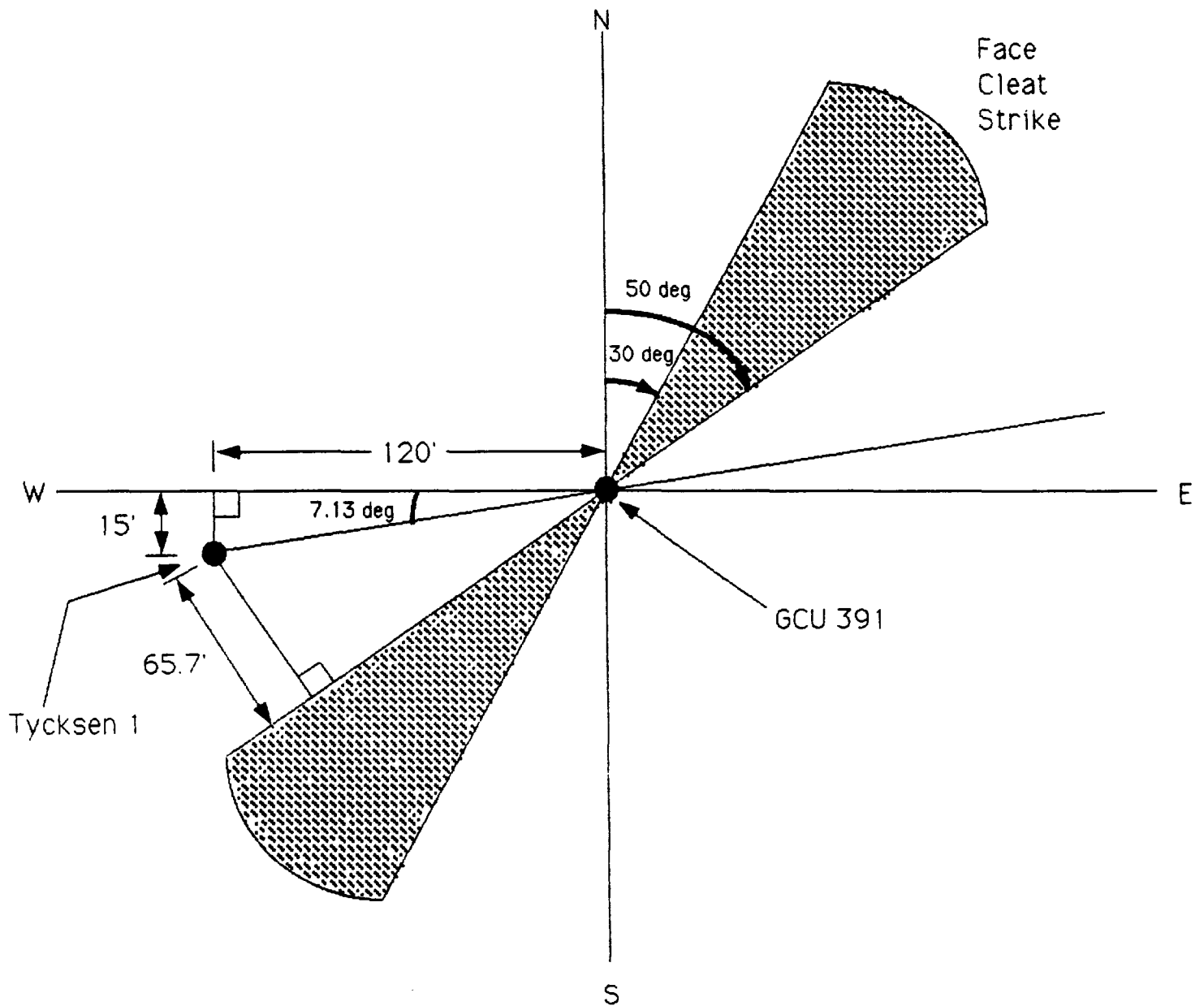


TYCKSEN #1

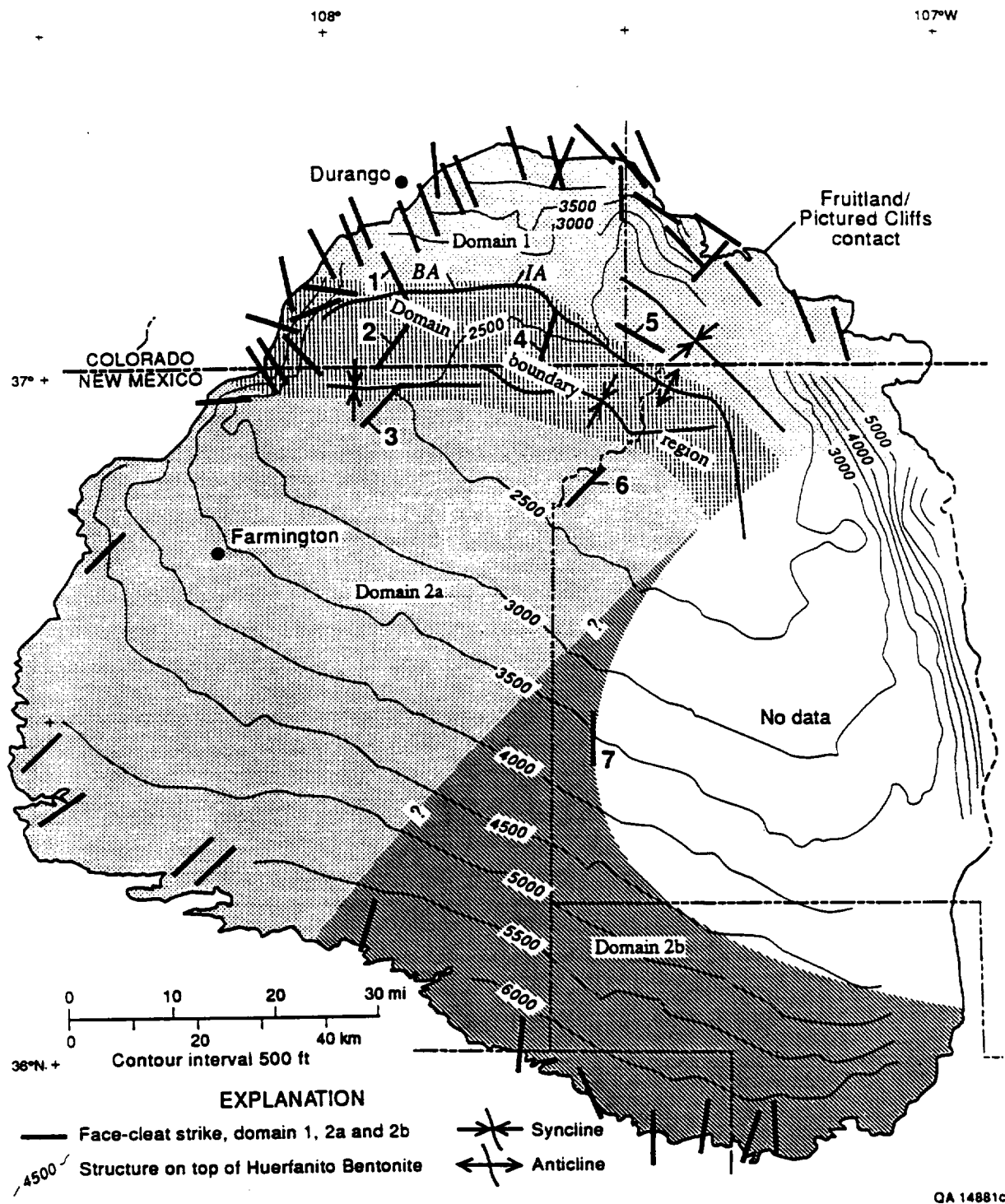
Distance between wells - 120'

GALLEGOS CANYON UNIT #391





BHP EXHIBIT
11C



Structure map of the San Juan Basin, contoured on the Huerfanito Bentonite, and predominant face-cleat strikes. Two domains of contrasting face-cleat strike are evident. The domains are separated by a gradational boundary near the Colorado-New Mexico state line.

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5257
CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 10/12/90

MAILEE
41956

LOCKE TAYLOR DRILLING COMPANY
PO BOX 1425
RIFLE, CO 81650-1425

METER NUMBER 74162 - TYCKSEN #1
OPERATOR 5677 - LOCKE TAYLOR DRLG CO

ANALYSIS DATE 99/99/99 TYPE CODE 2 - ACTUAL
SAMPLE DATE 9/13/90 H2S GRAINS 0289
EFFECTIVE DATE 10/01/90 LOCATION F - FARMINGTON
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.27	.000
H2S	.00	.000
N2	1.62	.000
METHANE	86.42	.000
ETHANE	6.41	1.715
PROPANE	2.15	.593
ISO-BUTANE	.44	.144
NORM-BUTANE	.51	.161
ISO-PENTANE	.31	.113
NORM-PENTANE	.24	.087
HEXANE PLUS	.83	.275
	100.00	3.088

SPECIFIC GRAVITY .668
MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1131
RATIO OF SPECIFIC HEATS .000
NO TEST SECURED FOR H2S CONTENT

12
BHP

ATTN: RED WALSH

BHP PETROLEUM COMPANY
P.O. BOX 977
FARMINGTON, N.M. 87401

GAS CHROMATOGRAPH ANALYSIS

MAC CUST/STAT : 6629030006
CUST STAT NO :
CUST STAT NAME: G.C.U. 377
FIELD : GALLEGOS CYN UNIT
COUNTY : SAN JUAN
STATE : NM

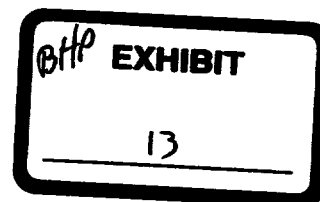
SAMPLING DATE : 11/30/90
SAMPLED BY : STEVE MAHLER
PRESSURE : 170
FLOW TEMP : N/A
ACCOUNT CODE : 0000-3200-01145NNNO1014

PRESSURE BASE : 15.025 DRY
SOURCE : MTR.RUN
ANALYZED BY : B.L.
DATE OF ANALYSIS : 12/01/90
RUN NUMBER : 1370-215

COMPONENT	CURRENT MOLE %	GPM @ 14.696 D
OXYGEN	0.00	0.000
CO2	0.70	0.000
NITROGEN	0.46	0.000
METHANE	98.59	0.000
ETHANE	0.25	0.067
PROPANE	0.00	0.000
I-BUTANE	0.00	0.000
N-BUTANE	0.00	0.000
I-PENTANE	0.00	0.000
N-PENTANE	0.00	0.000
HEXANES	0.00	0.000
HEPTANES +	0.00	0.000
HELIUM	N/A	
HYDROGEN	N/A	
H2S	N/A	
TOTAL	100.00	0.067

SPECIFIC GRAVITY		
GROSS BTU/CU. FT. @15.025 DRY	0.5640	1022.6
GROSS BTU/CU. FT. @15.025 SAT		1005.2
GROSS BTU/CU. FT. @14.730 DRY		1002.5
GROSS BTU/CU. FT. @14.730 SAT		985.1
GROSS BTU/CU. FT. @14.696 DRY		1000.2
GROSS BTU/CU. FT. @14.696 SAT		982.8

REMARKS :





WALSH ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping

204 N. Auburn
P. O. Drawer 419
Farmington, New Mexico 87408
(505) 327-4892

May 2, 1991

Mr. Richard T. C. Tully
Attorney At Law
111 Orchard Avenue
Farmington, New Mexico 87401

REF: Locke Taylor Drilling
N/2 Section 23-T29N-R13W

Dear Mr. Tully:

Enclosed you will find five (5) copies of report concerning the above-referred-to acreage.

The report was prepared on the basis of Locke Taylor Drilling having 100.0% Ownership of the Operating Rights in the acreage.

In a buy or sell situation the value of a property would be considered to be the net value of production estimated to occur in a time period of three (3) to five (5) years. A buyer would normally want to recover a purchase price in that time period.

The value of the natural gas to be produced from the Fruitland Coal is dependent upon Locke Taylor Drilling being able to utilize or not utilize the Sec. 107 Tax Credit.

The estimated value of natural gas, on a present worth basis, would be as follows:

With Section 107 Tax Credit -- \$423,486 to \$495,694

Without Section 107 Tax Credit -- \$222,748 to \$266,280

If you have any questions please do not hesitate to call upon me.

Very truly yours,

Ewell N. Walsh, P.E.
President

ENW:rr

Enclosure

BHP

14

NEW MEXICO OIL CONSERVATION COMMISSION WELL COMPLETION OR RECOMPLETION REPORT AND LOG

DATE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

Indicate Type of Lease
 State ☐ or ☒
 State Oil & Gas Lease No.

10. TYPE OF WELL
 a. TYPE OF COMPLETION
 OIL WELL ☐ GAS WELL ☒ BRV ☐ OTHER ☐
 NEW WELL ☐ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☒ DIPP. RESUR. ☐
 11. Name of Operator
BHP PETROLEUM (AMERICAS)
 12. Address of Operator
P.O. BOX 977 FARMINGTON NM 87499
 13. Location of Well

14. Unit Agreement Name
Gallegos Canyon Unit
 15. Well No.
340
 16. Field and Pool, or Allotment
N. PINON FRUITLAND SAND

UNIT LETTER **E** LOCATED **1370** FEET FROM THE **North** LINE AND **475** FEET FROM **West** LINE OF SEC. **24** TWP. **29N** RGE. **13W** NMPM

17. County
San Juan

15. Date Spudded **1-28-85** 16. Date T.D. Reached **1-31-85** 17. Date Compl. (Ready to Prod.) **9-8-89** 18. Elevations (D.F., R.R., RT, G.R., etc.) **GR 5335' KB 5343'** 19. Elev. Casinghead **5335'**
 20. Total Depth **1310** 21. Plug Back T.D. **1125'** 22. If Multiple Entry Tools **NO** 23. If Multiple Entry Tools **NONE**

24. Producing Interval(s), of this completion - Top, Bottom, Name
FRUITLAND SAND 917' - 934'

25. Type Electric and Other Logs Run
GR/CBL

26. Was Directional Survey Made
NO

OIL CONSERVATION DIV.
 SANTA FE

27. Was Well Cased
NO

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
7"	23	159	9 7/8"	242.8 ft ³ Class B w/2% CaCl ₂ & 1/4#/sx Floccle	-0-
4 1/2"	10.5	1310	6 1/4"	220 ft ³ 50-50 pozmix w/2% gel, 0.5% CFR-2 & 1/4#/sx Celloflake	-0-

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 3/8	837'	

31. Perforation Record (Interval, size and number)
917' - 934' 1JSPF 17 HOLES .40 DIA.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
917' - 934'	Frac'd w/ 23,000 gal 70.0 foam 33,500# 12-20 sand & 145,000 scf N ₂ @ 20bpm

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)	Well Status (Prod. or Shut-in)
-----	Flowing	Shut-in
Date of Test	Hours Tested	Choke Size
9-9-89	26	3/8"
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate
150	180	-----
Prod'n. For Test Period	Oil - Bbl.	Gas - MCF
-----	-0-	596
Water - Bbl.	Gas - Oil Ratio	
0	-0-	
Oil - Bbl.	Gas - MCF	Water - Bbl.
-0-	550	0
Oil Gravity - API (Corr.)		
-0-		

34. Disposition of Gas (Sold, used for fuel, vented, etc.)
Vented

Test Witnessed By
J.C. HARRIS

35. List of Attachments
NONE

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.
 Signed **FRED LOWERY** TITLE **OPERATIONS SUPT.** DATE **9-13-89**

Case No. **BHP**
 Submitted
 Received