

OIL CONSERVATION DIVISION  
RECEIVED

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5847 San Felipe Suite 3600  
Houston, Texas 77057  
Telephone: (713) 780-5000  
Fax (713) 780-5273  
Telex 9108813603

7-10-91  
D-Unit letter to the Rg



June 18, 1991

Department of Interior  
Bureau of Land Management  
P.O. Box 1449  
Santa Fe, NM 87501

Department of Interior  
Bureau of Land Management  
Office of District Engineer  
1235 LaPlata Highway  
Farmington, NM 87401

New Mexico State Land Office  
Oil & Gas Development  
P.O. Box 1148  
Santa Fe, NM 87501-1148

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

RE: **Ammended 1991 Plan of Development**  
Gallegos Canyon Unit  
Pictured Cliffs, Fruitland, and Farmington Formations  
San Juan County, New Mexico

Gentlemen:

As sub-operator of certain unit lands within the Gallegos Canyon Unit located in San Juan County, New Mexico, BHP Petroleum (Americas) Inc. submits for your review and approval the following Ammended 1991 Plan of Development.

In 1991, BHP Petroleum (Americas) proposes to drill 15 wells. Well number, location, and objective formation for these wells are summarized in Table I, and also are located on the attached land plat.

TABLE I  
1991 PROPOSED DRILLING WELLS

<u>Well No.</u>	<u>Location</u>	<u>Primary Objective</u>
398	SW Sec 19-T29N-R12W	Fruitland Coal
399	NE Sec 24-T29N-R13W	Fruitland Coal
400	NE Sec 26-T29N-R13W	Fruitland Coal
401	NE Sec 35-T29N-R13W	Fruitland Coal
402	NE Sec 36-T29N-R13W	Fruitland Coal
403	SW Sec 7-T28N-R12W	Fruitland Coal
404	SW Sec 8-T28N-R12W	Fruitland Coal

**Ammended 1991 Plan of Development  
Gallegos Canyon Unit  
Page 2**

**TABLE I (continued)  
1991 PROPOSED DRILLING WELLS**

<u>Well No.</u>	<u>Location</u>	<u>Primary Objective</u>
405	SW Sec 18-T28N-R12W	Fruitland Coal
518	SW Sec 25-T29N-R12W	Pictured Cliffs
519	SW Sec 21-T29N-R12W	Pictured Cliffs
520	SE Sec 22-T29N-R12W	Pictured Cliffs
521	SW Sec 36-T29N-R12W	Pictured Cliffs
522	NW Sec 22-T29N-R12W	Pictured Cliffs
523	NW Sec 35-T29N-R12W	Pictured Cliffs
524	SW Sec 19-T28N-R11W	Pictured Cliffs

Also, in 1991, BHP Petroleum (Americas) proposes to recomplete 10 of its exisiting wells to the Fruitland Coal. These wells have not yet been specifically identified; however, any of the wells listed in Table II could be a potential recompletion candidate.

**TABLE II  
1991 POTENTIAL RECOMPLETION CANDIDATES**

<u>Well No.</u>	<u>Location</u>	<u>Primary Objective</u>
1	SW Sec 19-T29N-R12W	Fruitland Coal
3	SW Sec 24-T28N-R12W	Fruitland Coal
4	NE Sec 34-T28N-R12W	Fruitland Coal
5	NE Sec 13-T28N-R13W	Fruitland Coal
6	SW Sec 22-T28N-R12W	Fruitland Coal
7	NE Sec 30-T28N-R12W	Fruitland Coal
9	SW Sec 32-T28N-R12W	Fruitland Coal
10	SW Sec 33-T28N-R12W	Fruitland Coal
11	SW Sec 34-T28N-R12W	Fruitland Coal
12	NE Sec 33-T28N-R12W	Fruitland Coal
13	SW Sec 27-T28N-R12W	Fruitland Coal
14	SW Sec 26-T28N-R12W	Fruitland Coal
15	SW Sec 25-T28N-R12W	Fruitland Coal
16	NE Sec 27-T28N-R12W	Fruitland Coal
17	NE Sec 28-T28N-R12W	Fruitland Coal
18	NE Sec 21-T28N-R12W	Fruitland Coal
19	NE Sec 20-T28N-R12W	Fruitland Coal
20	SW Sec 17-T28N-R12W	Fruitland Coal
22	NE Sec 18-T28N-R12W	Fruitland Coal
23	SW Sec 13-T28N-R13W	Fruitland Coal
24	SE Sec 34-T28N-R12W	Fruitland Coal
26	NE Sec 25-T29N-R13W	Fruitland Coal
30	SE Sec 33-T28N-R12W	Fruitland Coal
31	NW Sec 34-T28N-R12W	Fruitland Coal

**Ammended 1991 Plan of Development**  
**Gallegos Canyon Unit**  
**Page 3**

TABLE II (continued)  
1991 POTENTIAL RECOMPLETION CANDIDATES

<u>Well No.</u>	<u>Location</u>	<u>Primary Objective</u>
33	SW Sec 21-T28N-R12W	Fruitland Coal
34	SW Sec 28-T28N-R12W	Fruitland Coal
35	SW Sec 20-T28N-R12W	Fruitland Coal
36	NE Sec 19-T28N-R12W	Fruitland Coal
37	SW Sec 19-T28N-R12W	Fruitland Coal
38	NE Sec 24-T28N-R13W	Fruitland Coal
39	SW Sec 16-T28N-R12W	Fruitland Coal
40	NE Sec 29-T28N-R12W	Fruitland Coal
41	NE Sec 32-T28N-R12W	Fruitland Coal
42	SW Sec 12-T28N-R13W	Fruitland Coal
43	NE Sec 14-T28N-R13W	Fruitland Coal
45	SW Sec 29-T28N-R12W	Fruitland Coal
48	SW Sec 30-T28N-R12W	Fruitland Coal
49	NE Sec 31-T28N-R12W	Fruitland Coal
53	SW Sec 36-T28N-R12W	Fruitland Coal
55	NE Sec 35-T28N-R12W	Fruitland Coal
56	NW Sec 35-T28N-R12W	Fruitland Coal
57	SW Sec 35-T28N-R12W	Fruitland Coal
58	SE Sec 35-T28N-R12W	Fruitland Coal
59	SW Sec 31-T28N-R11W	Fruitland Coal
61	NE Sec 4-T27N-R12W	Fruitland Coal
62	NW Sec 4-T27N-R12W	Fruitland Coal
63	NE Sec 5-T27N-R12W	Fruitland Coal
64	SE Sec 4-T27N-R12W	Fruitland Coal
67	NE Sec 22-T28N-R12W	Fruitland Coal
72	NE Sec 36-T28N-R13W	Fruitland Coal
73	SW Sec 20-T29N-R12W	Fruitland Coal
74	SW Sec 29-T29N-R12W	Fruitland Coal
75	NW Sec 19-T29N-R12W	Fruitland Coal
76	SW Sec 23-T28N-R12W	Fruitland Coal
80	NE Sec 6-T27N-R12W	Fruitland Coal
267	NE Sec 23-T28N-R12W	Fruitland Coal
268	SE Sec 32-T28N-R12W	Fruitland Coal
269	SE Sec 18-T28N-R12W	Fruitland Coal
271	SE Sec 27-T28N-R12W	Fruitland Coal
272	NW Sec 33-T28N-R12W	Fruitland Coal
273	NW Sec 32-T28N-R12W	Fruitland Coal
274	SE Sec 20-T28N-R12W	Fruitland Coal
275	NW Sec 13-T28N-R13W	Fruitland Coal
276	SW Sec 25-T28N-R13W	Fruitland Coal
277	NW Sec 15-T28N-R12W	Fruitland Coal
278	SE Sec 17-T28N-R12W	Fruitland Coal
279	NW Sec 23-T28N-R12W	Fruitland Coal
280	SE Sec 24-T28N-R12W	Fruitland Coal
281	SW Sec 25-T28N-R12W	Fruitland Coal

**Ammended 1991 Plan of Development  
Gallegos Canyon Unit  
Page 4**

**TABLE II (continued)  
1991 POTENTIAL RECOMPLETION CANDIDATES**

<u>Well No.</u>	<u>Location</u>	<u>Primary Objective</u>
282	SE Sec 31-T28N-R12W	Fruitland Coal
283	NE Sec 29-T29N-R12W	Fruitland Coal
285	SW Sec 31-T29N-R12W	Fruitland Coal
288	NW Sec 19-T29N-R12W	Fruitland Coal
290	SE Sec 15-T28N-R12W	Fruitland Coal
289	SW Sec 8-T28N-R12W	Fruitland Coal
291	SE Sec 23-T28N-R12W	Fruitland Coal
293	NW Sec 32-T29N-R12W	Fruitland Coal
294	SE Sec 32-T29N-R12W	Fruitland Coal
295	SW Sec 10-T28N-R12W	Fruitland Coal
296	SW Sec 15-T28N-R12W	Fruitland Coal
297	NE Sec 15-T28N-R12W	Fruitland Coal
298	NW Sec 24-T28N-R12W	Fruitland Coal
299	NW Sec 31-T28N-R12W	Fruitland Coal
300	SE Sec 19-T29N-R12W	Fruitland Coal
301	SE Sec 20-T29N-R12W	Fruitland Coal
302	SE Sec 29-T29N-R12W	Fruitland Coal
303	NW Sec 33-T29N-R12W	Fruitland Coal
308	SE Sec 7-T28N-R12W	Fruitland Coal
310	SE Sec 9-T28N-R12W	Fruitland Coal
311	SW Sec 14-T28N-R12W	Fruitland Coal
312	NE Sec 16-T28N-R12W	Fruitland Coal
313	SE Sec 16-T28N-R12W	Fruitland Coal
314	NW Sec 17-T28N-R12W	Fruitland Coal
315	NW Sec 21-T28N-R12W	Fruitland Coal
316	SE Sec 21-T28N-R12W	Fruitland Coal
317	NW Sec 27-T28N-R12W	Fruitland Coal
318	SE Sec 28-T28N-R12W	Fruitland Coal
320	SE Sec 30-T28N-R12W	Fruitland Coal
321	SE Sec 12-T28N-R13W	Fruitland Coal
322	NE Sec 31-T29N-R12W	Fruitland Coal
323	SW Sec 32-T29N-R12W	Fruitland Coal
324	NE Sec 32-T29N-R12W	Fruitland Coal
331	NW Sec 29-T29N-R12W	Fruitland Coal
332	SE Sec 31-T29N-R12W	Fruitland Coal
333	NE Sec 33-T29N-R12W	Fruitland Coal
334	SW Sec 11-T28N-R12W	Fruitland Coal
335	SE Sec 14-T28N-R12W	Fruitland Coal
336	NE Sec 24-T28N-R12W	Fruitland Coal
337	SE Sec 26-T28N-R12W	Fruitland Coal
342	NW Sec 14-T28N-R12W	Fruitland Coal
343	NE Sec 26-T28N-R12W	Fruitland Coal
350	SE Sec 33-T29N-R12W	Fruitland Coal
352	NE Sec 14-T28N-R12W	Fruitland Coal

**Ammended 1991 Plan of Development  
Gallegos Canyon Unit  
Page 5**

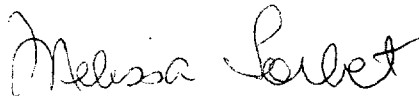
**TABLE II (continued)  
1991 POTENTIAL RECOMPLETION CANDIDATES**

<u>Well No.</u>	<u>Location</u>	<u>Primary Objective</u>
353	SE Sec 22-T28N-R12W	Fruitland Coal
354	SE Sec 29-T28N-R12W	Fruitland Coal
355	SW Sec 4-T27N-R12W	Fruitland Coal
364	NW Sec 25-T29N-R13W	Fruitland Coal
365	SE Sec 25-T29N-R13W	Fruitland Coal
367	NW Sec 31-T29N-R12W	Fruitland Coal
368	NW Sec 26-T28N-R12W	Fruitland Coal

We respectfully submit this Ammended Plan of Development and request your approval at your earliest possible convenience. Please provide both BHP Petroleum (Americas) and the Unit Operator, Amoco Production Company, notice of approval of this plan.

Very truly yours,

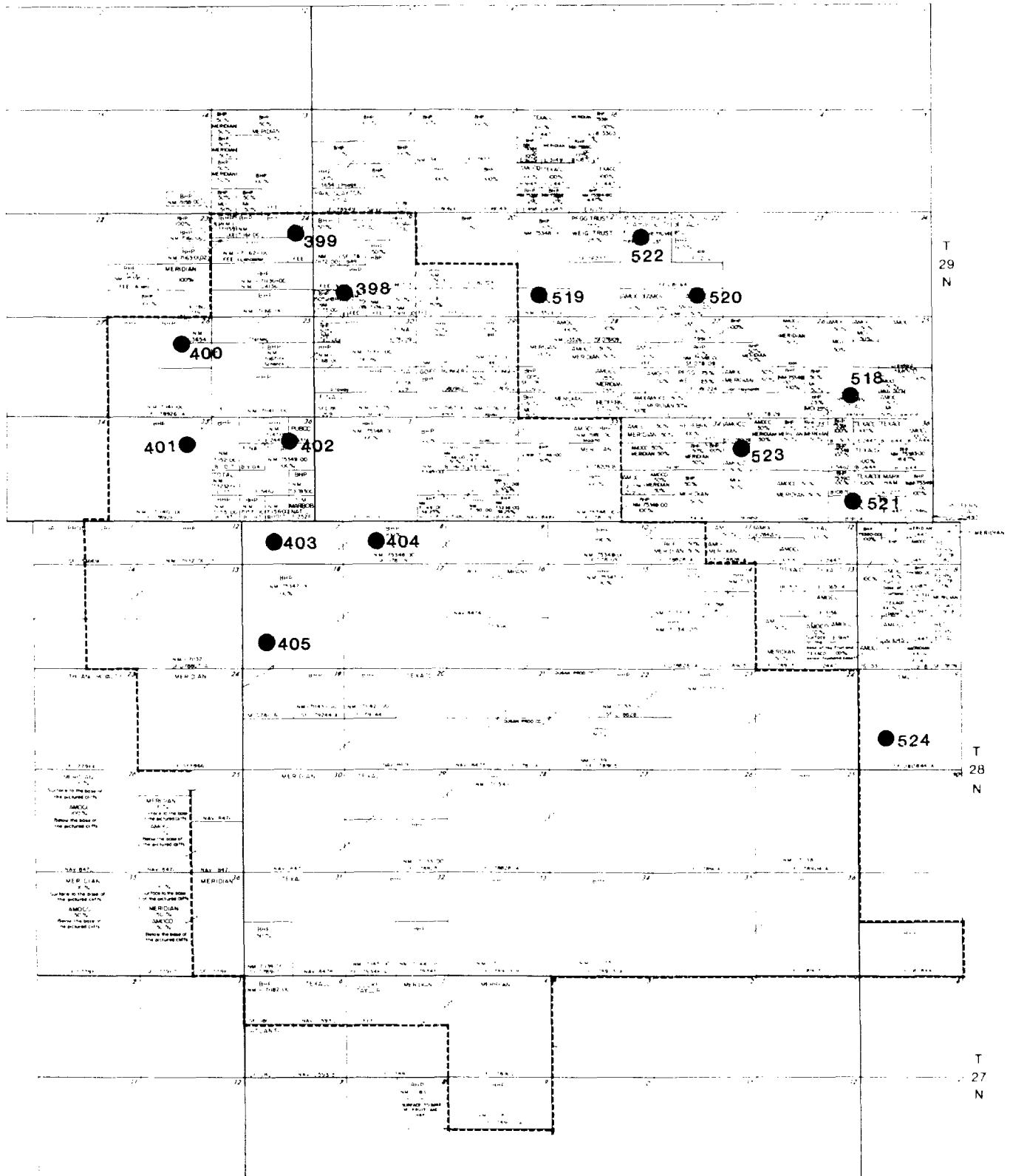
**BHP PETROLEUM (AMERICAS), INC.**




**Melissa Torbet  
Sr. Production Engineer**

R 13 W

R 12 W



	
GALLEGOS CANYON UNIT	
San Juan County, New Mexico	
LAND MAP	
Scale: 1" = 2000'	Sheet: 3041 & 1
Drawn by: J. H. HARRIS	Checked by: J. H. HARRIS
Approved by: J. H. HARRIS	Date: 1/1/19

OIL CONSERVATION DIVISION  
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019 FARMINGTON, N.M.

5847 San Felipe Suite 3600  
Houston, Texas 77057  
Telephone: (713) 780-5000  
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April 29, 1991



Department of Interior  
Bureau of Land Management  
P.O. Box 1449  
Santa Fe, NM 87501

Department of Interior  
Bureau of Land Management  
Office of District Engineer  
1235 LaPlata Highway  
Farmington, NM 87401

New Mexico State Land Office  
Oil & Gas Development  
P. O. Box 1148  
Santa Fe, NM 87501-1148

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

Re: 1990 Review of Operations  
1991 Plan of Development  
Gallegos Canyon Unit  
Pictured Cliffs, Fruitland, and Farmington Formations  
San Juan County, New Mexico

Gentlemen:

As a sub-operator of certain unit lands within the Gallegos Canyon Unit located in San Juan County, New Mexico, BHP Petroleum (Americas) Inc. (BHP P(A)) submits for your review and approval the following 1990 Review of Operations and the 1991 Plan of Development.

#### 1990 REVIEW OF OPERATIONS

For the BHP P(A) operated unit wells within the Gallegos Canyon Unit, the production of gas and water by reservoir for 1990, and on a cumulative basis to 12/31/90 is shown in Table I. A production curve for the summation of all unit wells is attached.

TABLE I  
1990 PRODUCTION AND CUMULATIVE PRODUCTION

Formation	1990 Production		Cumulative Production	
	Gas, MMCF	Water, BW	Gas, MMCF	Water, BW
Pictured Cliffs	5,283.744	271,790	93,028.242	3,238,221
Fruitland Sand	347.041	10,753	3,691.514	74,519
Farmington	2.077	0	59.076	80
Fruitland Coal	14.726	236	14.726	236

APPROVED

MAY 14 1991  
*[Signature]*  
AREA MANAGER

The development drilling program undertaken by BHP is summarized in Table II. BHP spudded 18 Fruitland Coal wells, and had two on production at year end (Nos. 377 and 378). In addition, BHP spudded 13 Pictured Cliffs wells in 1990, and is presently waiting on pipeline hookups for all 13 wells.

BHP recompleted one well in 1990, the GCU No. 28. This well, located in the NE NE Section 30-T29N-R12W, was perforated in the Fruitland Sand formation at 932'-950' and had an initial test rate of 600 MCFD and 0 BWPD.

### 1991 PLAN OF DEVELOPMENT

In 1991, BHP P(A) proposes to drill 13 wells and recomplete 10 existing wells. Well number, location, and objective formation for these wells are summarized in Table III and Table IV, and also shown on the attached plat. Well Nos. 387, 501, 503, 509, 510, and 512 proposed in the 1990 POD were deferred until 1991, and were all spudded in January, 1991.

TABLE III  
1991 PROPOSED DRILLING WELLS

<u>Well No.</u>	<u>Qtr. Secs.</u>	<u>Location</u>	<u>Primary Objective</u>
398	NE	Sec 19-29N-12W	Fruitland Coal
399	NE	Sec 24-29N-13W	Fruitland Coal
400	NE	Sec 26-29N-13W	Fruitland Coal
401	SW	Sec 19-29N-12W	Fruitland Coal
402	NE	Sec 36-29N-13W	Fruitland Coal
518	SW	Sec 25-29N-12W	Pictured Cliffs
519	SW	Sec 21-29N-12W	Pictured Cliffs
520	SW	Sec 35-29N-12W	Pictured Cliffs
521	SW	Sec 36-29N-12W	Pictured Cliffs
522	NW	Sec 12-28N-12W	Pictured Cliffs
523	NW	Sec 18-28N-11W	Pictured Cliffs
524	SW	Sec 19-28N-11W	Pictured Cliffs
525	SW	Sec 26-29N-12W	Pictured Cliffs

TABLE IV  
1991 PROPOSED RECOMPLETIONS

<u>Well No.</u>	<u>Location</u>	<u>Primary Objective</u>
To be decided	Various	Fruitland Coal

We respectfully submit this Plan of Development and request your approval at your earliest convenience. Please provide both BHP P(A) and the Unit Operator, Amoco Production Company, notice of approval of this plan.

Very truly yours,

BHP PETROLEUM (AMERICAS), INC.



Chris Camden  
Sr. Reservoir Engineer

CC:ejj



TABLE II  
1990 PROPOSED DRILLING WELLS

Perfs	Well No.	MCFD	BWPD	Location	Spud Date	Primary Objective	Completion Date
1114 - 1143	377	306	50	SE SW Sec. 24 29N-13W	01/03/90	Fruitland Coal	04/19/90
1494 - 1517'	378	211	1	NE SW Sec. 34 28N-12W	01/22/90	Fruitland Coal	06/30/90
1511 - 1534'	381	176	8	SE NE Sec. 20 29N-12W	04/09/90	Fruitland Coal	06/04/90
1214 - 1244'	382	536	52	SE SW Sec. 13 29N-13W	04/19/90	Fruitland Coal	11/26/90
1506 - 1530'	383	161	80	NW NE Sec. 18 29N-12W	03/21/90	Fruitland Coal	05/24/90
1329 - 1359'	384	221	11	SW SW Sec. 21 29N-12W	04/04/90	Fruitland Coal	05/25/90
1458 - 1492'	385	360	103	SW SW Sec. 17 29N-12W	03/24/90	Fruitland Coal	05/25/90
1373 - 1397'	386	243	40	NE NE Sec. 13 29N-13W	10/03/90	Fruitland Coal	11/15/90
1394 - 1424'	387	139	27	SW SW Sec. 18 29N-12W	01/13/91	Fruitland Coal	03/08/91
1590 - 1614'	388	50	17	SW NE Sec. 17 29N-12W	09/14/90	Fruitland Coal	11/17/90
1568 - 1603'	389	827	20	SW NE Sec. 21 29N-12W	11/05/90	Fruitland Coal	12/03/90
Not perf'd	390	Not tested yet		SE SW Sec. 23 29N-13W	12/19/90	Fruitland Coal	In progress
Not perf'd	391	Not tested yet		NE NE Sec. 23 29N-13W	12/12/90	Fruitland Coal	In progress
1545 - 1597'	392	10	5	SW SW Sec. 26 29N-13W	09/20/90	Fruitland Coal	11/30/90
1474 - 1507'	393	513	67	SE SW Sec. 25 29N-13W	09/24/90	Fruitland Coal	11/30/90
1399 - 1416'	394	160	10	SE SW Sec. 30 29N-12W	11/01/90	Fruitland Coal	02/01/91
1150 - 1176'	395	700	4	NW NE Sec. 30 29N-12W	10/25/90	Fruitland Coal	01/14/91
1587 - 1606'	396	119	33	NE SW Sec. 35 29N-13W	12/27/90	Fruitland Coal	03/20/91
1268 - 1284'	397	195	3	NE SW Sec. 36 29N-13W	10/29/90	Fruitland Coal	02/14/91
1310 - 1325'	500	600	160	NE NW Sec. 13 29N-13W	11/23/90	Pictured Cliffs	01/07/91
1305 - 1335'	501	653	120	NW SE Sec. 13 29N-13W	01/11/91	Pictured Cliffs	02/21/91
1429 - 1444'	502	372	127	SW NW Sec. 18 29N-12W	11/18/90	Pictured Cliffs	01/18/91
1445 - 1466'	503	300	50	SW SE Sec. 18 29N-12W	01/17/91	Pictured Cliffs	02/25/91
1573 - 1590'	504	195	30	NE NW Sec. 17 29N-12W	09/09/90	Pictured Cliffs	11/13/90
1662 - 1675'	505	366	61	NE SE Sec. 17 29N-12W	11/09/90	Pictured Cliffs	12/13/90
1576 - 1604'	506	1138	27	NW SW Sec. 16 29N-12W	11/13/90	Pictured Cliffs	01/02/91
1368 - 1380'	507	347	120	NW NW Sec. 20 29N-12W	10/22/90	Pictured Cliffs	11/21/90
1553 - 1566'	508	416	42	NW NW Sec. 21 29N-12W	09/29/90	Pictured Cliffs	11/21/90
1273 - 1289'	509	142	58	NE NW Sec. 28 29N-12W	01/06/91	Pictured Cliffs	02/19/91
1317 - 1350'	510	134	41	NW NE Sec. 28 29N-12W	01/22/91	Pictured Cliffs	03/05/91
1468 - 1490'	511	771	42	NW NW Sec. 26 29N-12W	11/26/90	Pictured Cliffs	02/24/91
1406 - 1442'	512	617	50	NW SE Sec. 26 29N-12W	01/02/91	Pictured Cliffs	02/21/91
1310 - 1320'	513	600	40	SE NE Sec. 34 29N-12W	10/08/90	Pictured Cliffs	12/09/90
1352 - 1364'	514	91	93	SW SE Sec. 34 29N-12W	10/12/90	Pictured Cliffs	12/12/90
1346 - 1385'	515	1291	276	SE NE Sec. 35 29N-12W	10/16/90	Pictured Cliffs	12/13/90
1388 - 1406'	516	605	80	NW SW Sec. 7 28N-11W	12/05/90	Pictured Cliffs	01/25/91
1548 - 1594'	517	1200	42	SE NE Sec. 18 28N-11W	11/30/90	Pictured Cliffs	02/27/91



OPERATOR BHP PETROLEUM

OL

COUNTY SAN JUAN

FIELD GALLEGOS CANYON

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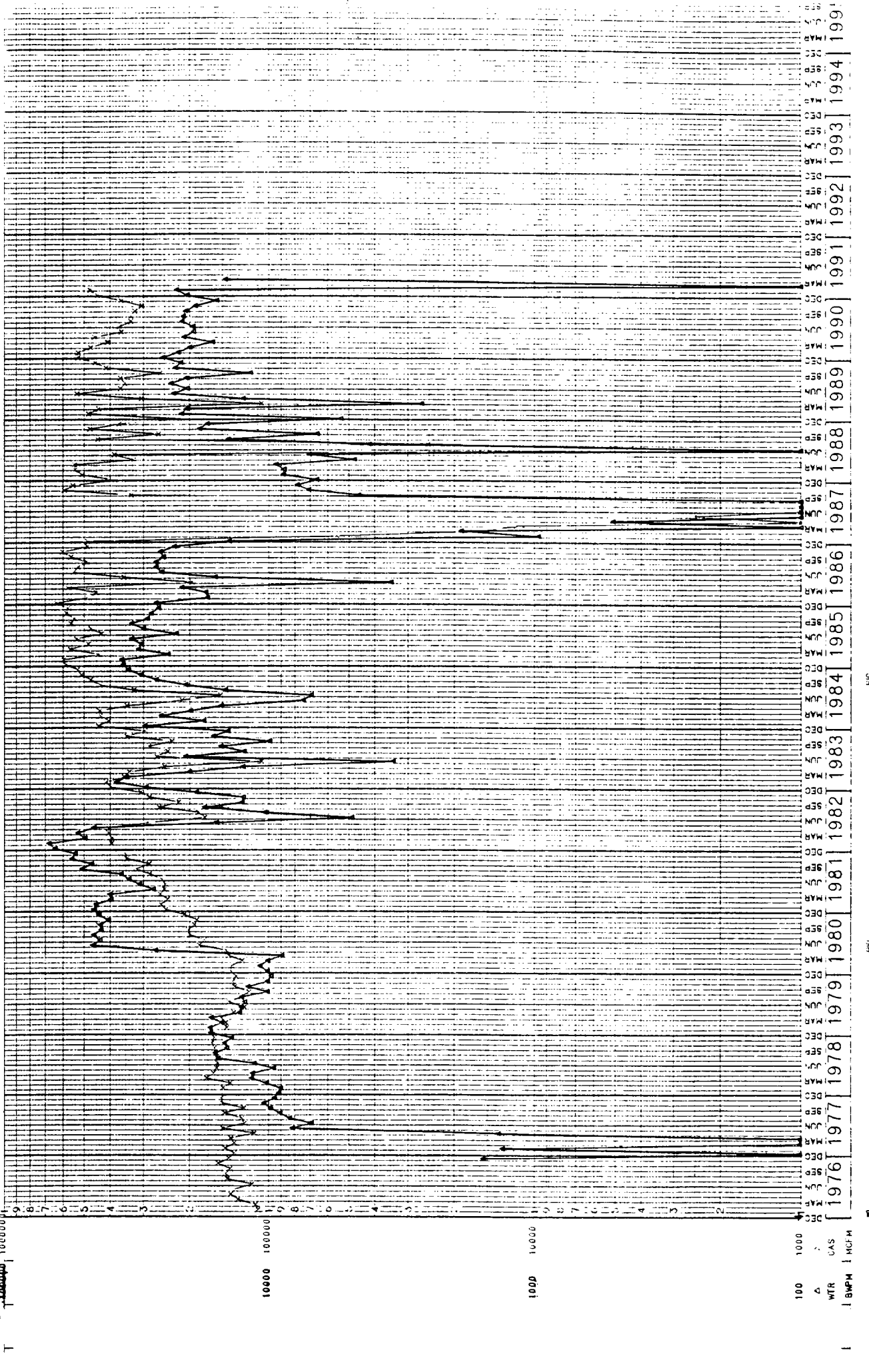
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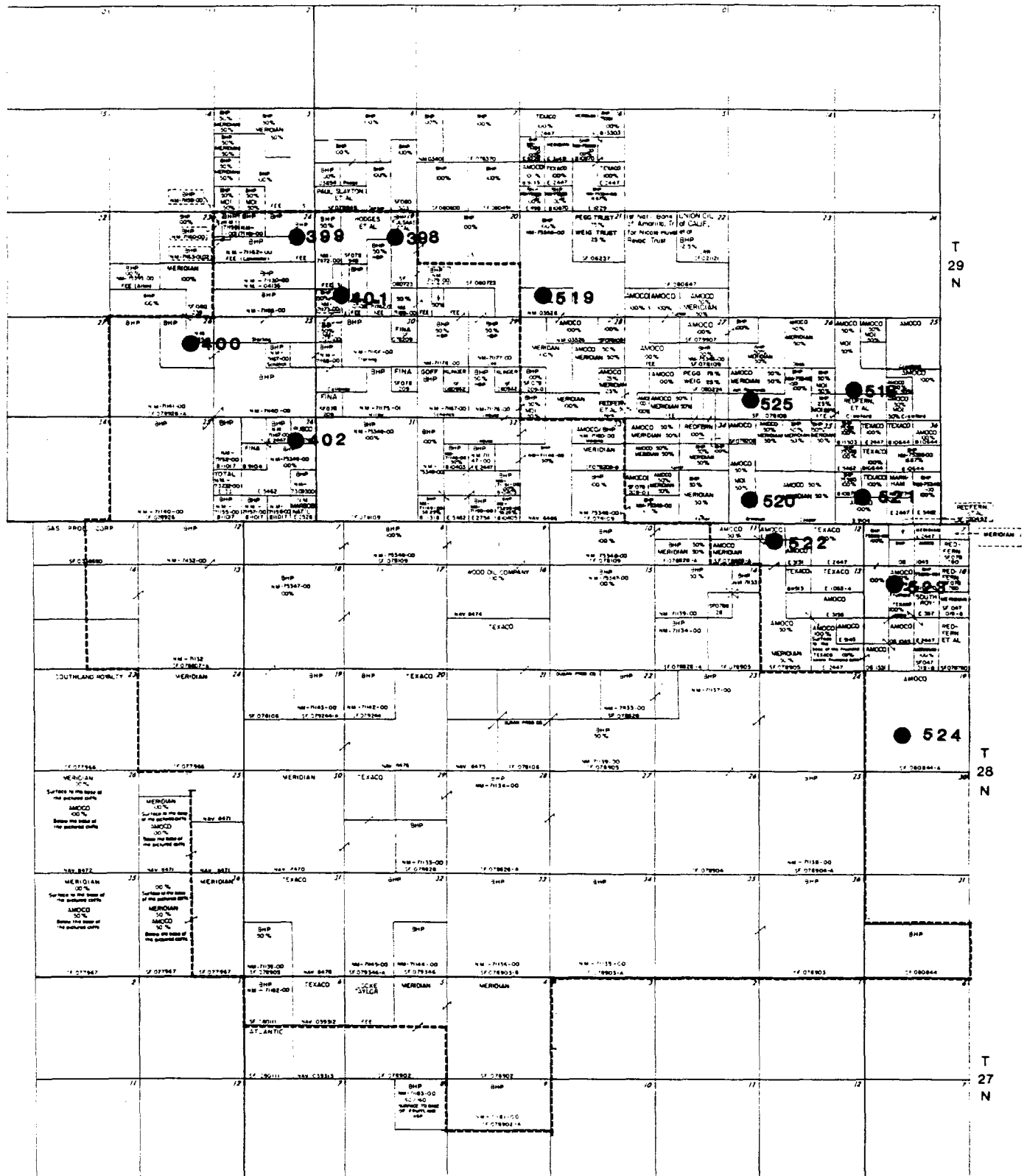
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**BHP**  
Petroleum

**GALLEGOS CANYON UNIT**  
San Juan County, New Mexico

**LAND MAP**

Scale: 1" = 2000'

Map No. 3041 A-1



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

**February 28, 1991**

BRUCE KING  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

**BHP Petroleum  
5847 San Felipe  
Suite 3600  
Houston, Texas 77057**

**Attention: Donald Reinhardt**

**Re: Fruitland Participating Area Application  
for Gallegos Canyon Unit Well No. 340  
Gallegos Canyon Unit  
San Juan County, New Mexico**

**Gentlemen:**

**The above-referenced submittal has been approved by the New Mexico Oil Conservation Division effective this date. Such approval is contingent upon like approval by the New Mexico Commissioner of Public Lands and the Bureau of Land Management.**

**Sincerely,**

  
**ROY E. JOHNSON,  
Senior Petroleum Geologist**

**REJ/dr**

**cc: Commissioner of Public Lands  
Bureau of Land Management**

February 8, 1991



**BHP**  
**Petroleum**  
(Americas) Inc

United States Department of Interior  
Bureau of Land Management  
Farmington Resource Area  
1235 LaPlata Highway  
Farmington, NM 87401

State of New Mexico  
Commissioner of Public Lands  
P. O. Box 1148  
Santa Fe, NM 87504

✓State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
State Land Office Building  
Santa Fe, NM 87504

Re: Fruitland Participating Area Application  
for Gallegos Canyon Unit Well #340  
Gallegos Canyon Unit  
San Juan County, NM

2-13-91  
D-Unit letter  
Terry

Gentlemen:

BHP Petroleum (Americas) Inc., as Unit Sub-Operator, requests your approval in accordance with Section 10 of the Gallegos Canyon Unit Agreement of the selection of lands indicated on the attached land map, Exhibit "1", to constitute the Initial Fruitland Participating Area "F". The Gallegos Canyon Unit Well #340 located 1370 feet from the north line and 475 feet from the west line of Section 24-T29N, R13W, San Juan County, New Mexico, was drilled to a total depth of 1310 feet and was completed in the Pictured Cliffs formation on March 2, 1985. The well was subsequently recompleted in the Fruitland sandstone formation on September 9, 1989. Following the recompletion, the subject well was connected for production on November 1, 1989.

The attached Exhibit "2" describes the lands and leases within the proposed area and the percentage of the total participating area attributable to each. The attached as Exhibit "3" contains the engineering data to demonstrate that the subject well is capable of producing unitized substances in paying quantities.

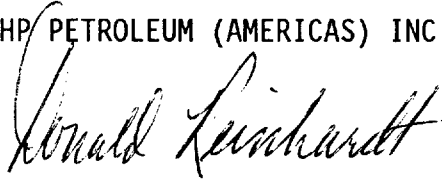
The effective date of the proposed participating area is October 1, 1989.

Gallegos Canyon Unit No. 340 Well  
Page 2  
February 8, 1991

Your approval of this application as submitted is hereby requested. Two (2) copies of the application are enclosed for BLM. Should you need more information, please advise.

Very truly yours,

BHP PETROLEUM (AMERICAS) INC.

A handwritten signature in cursive script, reading "Donald Reinhardt".

Donald Reinhardt  
Senior Landman  
Inland Business Unit

DR:CFL

Enclosures

cc: Amoco Production Company  
P. O. Box 800  
Denver, CO 80201  
ATTN: Michael Cuba

5847 San Felipe Suite 3600  
Houston, Texas 77057  
Telephone: (713) 780-5000  
FAX (713) 780-5273  
Telex 9108813603

January 17, 1991

United States Department of Interior  
Bureau of Land Management  
Farmington Resource Area  
1235 LaPlata Highway  
Farmington, NM 87401

State of New Mexico  
Commissioner of Public Lands  
P. O. Box 1148  
Santa Fe, NM 87504

✓ State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, NM 87504

Re: Application for Approval of Determination  
of Status of Well  
Gallegos Canyon Unit No. 331 Well  
Gallegos Canyon Unit  
San Juan County, NM

Gentlemen:

Pursuant to the provisions of Section 10 of the Unit Agreement for the development and operation of the Gallegos Canyon Unit Area, San Juan County, New Mexico, dated November 1, 1950, BHP Petroleum (Americas) Inc., on behalf of itself, as Sub-Operator of Gallegos Canyon Unit as to those certain depth from the surface down to the base of the Pictured Cliffs formation, and the other owners of working interest in oil and gas leases covering lands within the Gallegos Canyon Unit Area, hereby submits for your approval a determination that the Gallegos Canyon Unit No. 331 is capable of production in paying quantities and that the present Fruitland "E" participating area in which the Gallegos Canyon Unit #331 is located is warranted.

The subject well, located 1875 feet south of the north line and 640 feet east of the west line of Section 29, Township 29 North, Range 12 West, San Juan County, New Mexico, was drilled to a depth of 1350 feet and was completed on November 12, 1983 in the Pictured Cliffs formation. The well was dually completed on July 6, 1988 in the Fruitland sandstone formation. The top of the Fruitland sandstone formation pay was encountered at 982 feet. The recompletion procedure for Well No. 331 is described in the attached summary. A flow test conducted on July 4, 1988 indicated a flow rate of 230 MCFD. The Fruitland sandstone production from Well No. 331 was connected to El Paso Natural Gas Company's pipeline on June 12, 1989.



1-23-91  
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Thx  
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Gallegos Canyon Unit No. 331 Well  
Page 2  
January 17, 1991

The recompletion of Well No. 331 was paid for by those certain working interest owners (or their successors in interest) who also paid for the drilling the well to the Pictured Cliffs formation.

The applicant respectfully requests that each of you approve the determination that the subject well is capable of producing in paying quantities and that the Fruitland "E" participating area as presently established is warranted.

Very truly yours,

BHP PETROLEUM (AMERICAS) INC.



Donald Reinhardt  
Senior Landman  
Inland Business Unit

DR:CFL

Enclosure

cc: Amoco Production Company  
P. O. Box 800  
Denver, CO 80201  
ATTN: Michael Cuba

Gallegos Canyon Unit  
Fruitland Participating  
Area Working Interest Owners



**GALLEGOS CANYON UNIT NO. 331  
NE SW NW SECTION 29-T29N-R12W  
SAN JUAN COUNTY, NEW MEXICO  
UNIT PAY ANALYSIS**

The Gallegos Canyon Unit No. 331 was spudded on November 29, 1983, and drilled to a total depth of 1350' on December 4, 1983. 7-5/8" 26.40<sup>#</sup>/ft surface casing was set at 137' and cemented to surface with 75 sacks Class "B" cement. 4-1/2" 10.50<sup>#</sup>/ft production casing was set at 1338' and cemented to surface with 200 sacks 50-50 pozmix.

**COMPLETION**

The well was initially completed in the Pictured Cliffs formation, perfs 1,199'-1,204' and 1,193'-1,197' with 1 JSPF. The formation was then fractured w/22,000 gals of 70 Q foam and 30,000 lbs 10-20 sand. The well was turned to the sales line on June 8, 1984.

On July 6, 1988, perfs were added in the Fruitland formation, perfs 936'-948' w/1 JSPF, and the interval was fractured w/118,000 SCF N<sub>2</sub> and 6,760 gal, and 21,000 lbs 12-20 sand. The Fruitland was tested at a rate of 230 MCFD w/68psi flowing casing pressure. First sales occurred on June 12, 1989.

**CONCLUSION**

Using the economic parameters in the following tables, the well will payout in 1.3 years. Therefore, it is concluded that the Gallegos Canyon No. 331 Fruitland formation is productive in paying quantities according to the unit agreement and should be classified as a paying well.

**TABLE I**

**GALLEGOS CANYON UNIT NO. 331  
DATA AND ASSUMPTIONS  
UNIT PAY ANALYSIS**

1. Net Pay - 12 ft.
2. Average Porosity - 17.5%
3. Average Water Saturation - 32.5%
4. Well Spacing - 160 acres
5. Reservoir Temperature - 80°F
6. Measured Initial BHP - 369 psig
7. Line Pressure - 115 psig
8. Calculated Flowing BHP - 120 psig
9. Gas Price - \$1.10/mcf
10. Operating Costs - \$875/month
11. Taxes - 11.5%
12. Discount Rate - 11.5%
13. Royalty - 13.2%
14. Well Cost - \$26,900
15. Gas Gravity - 0.5768
16. Stabilized Test Flow Rate - 230 MCFD
17. Gross Recoverable Gas - 135.0 MMCF

**TABLE II**

**GALLEGOS CANYON UNIT NO. 331  
ECONOMICS SUMMARY  
UNIT PAY ANALYSIS**

<u>ITEM</u>	<u>YEAR 1</u>	<u>YEAR 2</u>
Average Production Rate (MCFD)	154	104
Yearly Production (MCF)	56,135	37,884
BHP Net Yearly Production (MCF)	14,879	10,042
BHP Net Value (\$)	16,367	12,239
BHP Net Investment (\$)	8,205	-----
Net Income Taxes (\$)	3,532	1,864
Net Severance Taxes (\$)	2,275	1,701
Net Operating Expenses (\$)	3,110	3,351
Net Cash Flow (\$)	-755	5,323
Cumulative Net Present Value (\$)	-1,087	3,434

As can be seen, payout occurs between the first and second years of production.

# GALLEGOS CANYON UNIT No. 331 MONTHLY GAS PRODUCTION

