

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-101
Revised October 18, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address. BHP Petroleum (Americas) Inc. P. O. Box 977 Farmington, New Mexico 87499		² OGRID Number 2217
³ API Number 30 - 045 - 29308		⁴ Well No. 530
⁵ Property Code 2038	⁶ Property Name Gallegos Canyon Unit	

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	18	28N	11W		790	North	1785	West	San Juan

⁸ Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
⁹ Proposed Pool 1 West Kutz Pictured Cliffs					¹⁰ Proposed Pool 2				

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 5462 '
¹⁶ Multiple N	¹⁷ Proposed Depth 1560 '	¹⁸ Formation Pictured Cliffs	¹⁹ Contractor NA	²⁰ Spud Date As soon as approved

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
8.750 "	7.000 "	20	200 '	50	surface
6.250 "	4.500 "	10.5	1560 '	220	surface

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.
BHP Petroleum (Americas) Inc. proposes to spud in the Nacimiento Formation. Will drill an 8 3/4 inch hole to 200 feet. Run and cement surface casing with cement returns to surface. WOC 12 hours. Pressure test casing and BOPE to 600 psig for 15 minutes. Drill a 6 1/4 inch hole to a TD of 1560 feet using fresh water mud. No abnormal pressure or poisonous gas is anticipated. Adequate weight material will be on location to control any unforeseen flows from the Farmington sands. Run logs at TD. Run and cement production casing with cement returns to surface. WOC 12 hours. Move out drilling rig and move in completion unit. Pressure test casing to 2500 psig prior to perforating. Run cased hole correlation logs. Perforate Pictured Cliffs and stimulate with a fresh water based gel or foam system.

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
Signature: *J. C. Harris*

Printed name: J. C. Harris

Title: Operations Superintendent

Date:
Phone: 505 - 327-1639

OIL CONSERVATION DIVISION

Approved by: *Edward Bush*

Title: DEPUTY OIL & GAS INSPECTOR, DIST. #3

Approval Date: NOV 27 1995 Expiration Date: NOV 27 1996

Conditions of Approval :
Attached ☐

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994

Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-29308	² Pool Code 79680	³ Pool Name West Kutz Pictured Cliffs
⁴ Property Code 2038	⁵ Property Name GALLEGOS CANYON UNIT	⁶ Well Number 530
⁷ OGRID No. 2217	⁸ Operator Name BHP PETROLEUM (AMERICAS) INC.	⁹ Elevation 5462

¹⁰ Surface Location

UL or lot no. C	Section 18	Township 28 N	Range 11 W	Lot Idn	Feet from the 790	North/South line North	Feet from the 1785	East/West line West	County San Juan
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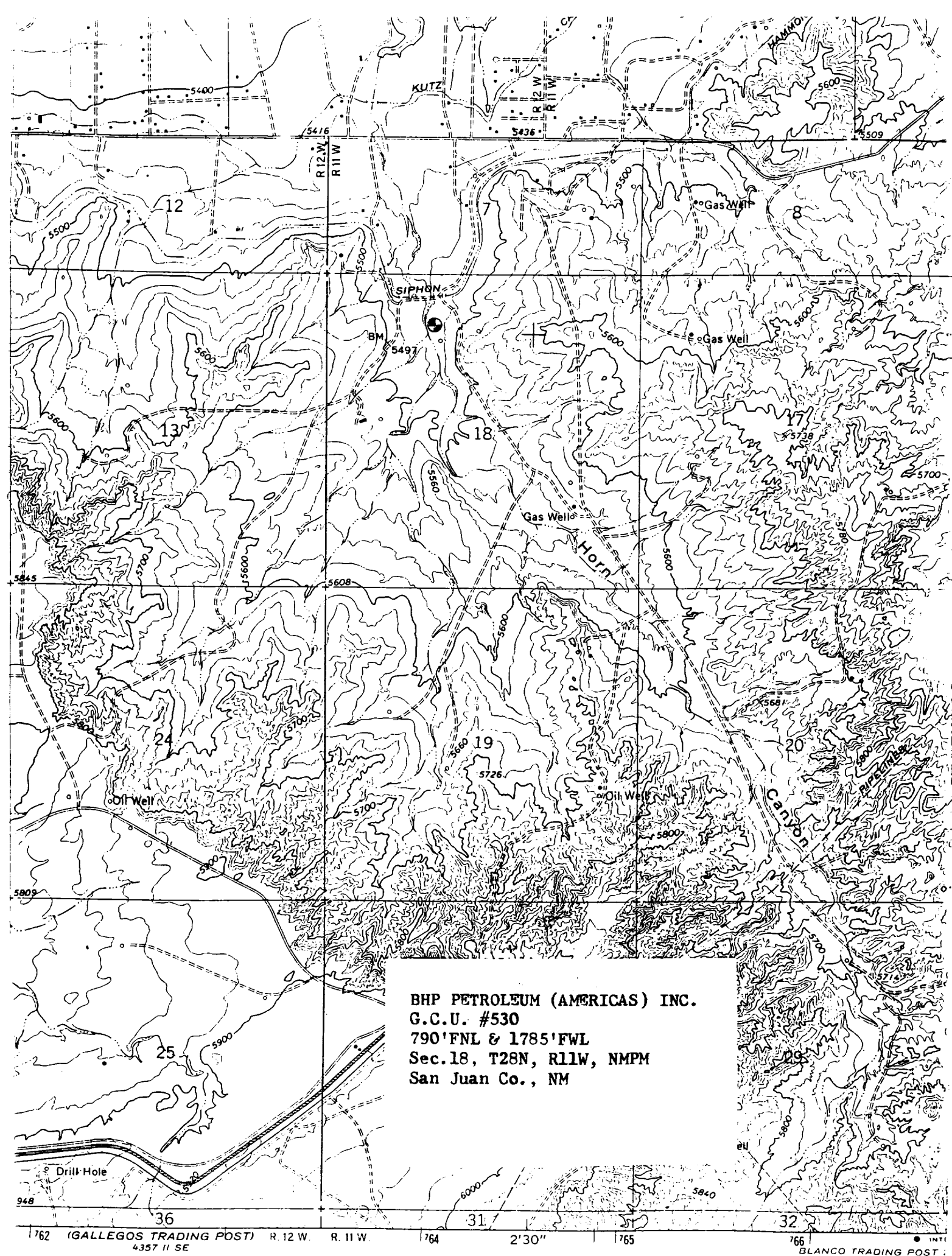
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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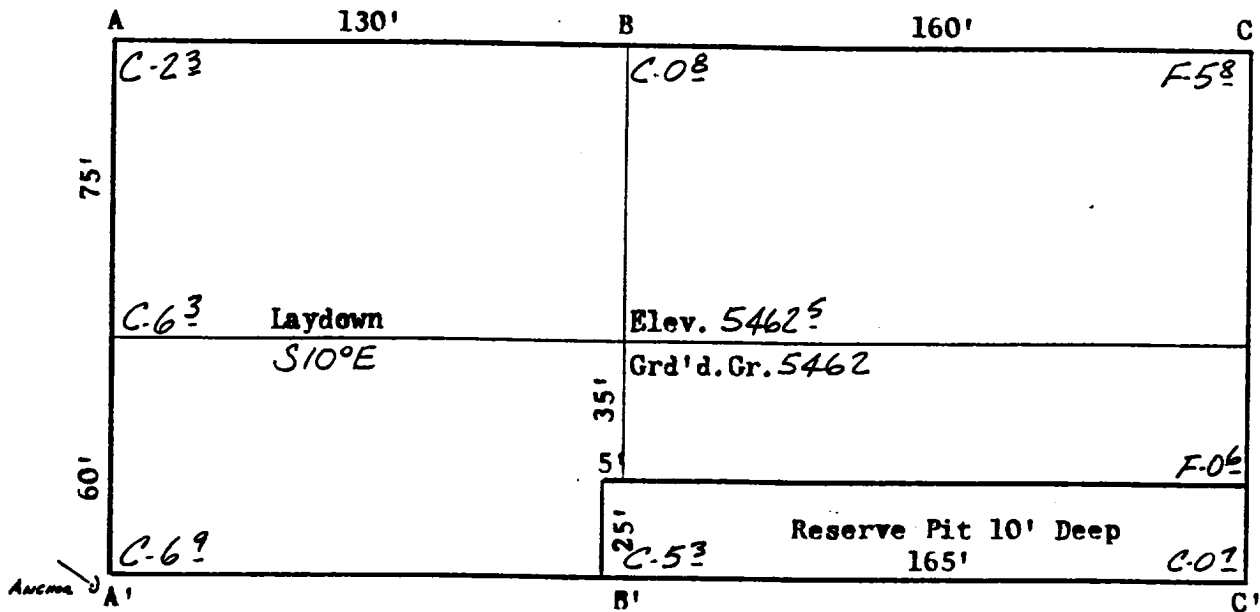
¹² Dedicated Acres 157.80	¹³ Joint or Infill	¹⁴ Consolidation Code U	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<div><p>Lot No. (TYP.) 1 1785' B10870 E2447</p><p>2</p><p>3</p><p>4</p><p>N 89° 56' E 79.48 cn.</p></div>	<div><p>79.44 cn.</p><p>RECEIVED NOV 22 1995 OIL CON. DIV. 11/23</p><p>18</p><p>79.48 cn.</p></div>	<div><p>¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p><p>Signature J. C. Harris</p><p>Printed Name Operations Superintendent</p><p>Title</p><p>Date</p></div> <div><p>¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p><p>DATE 4-30-1995</p><p>Date of Survey</p><p>Signature and Seal of Professional Surveyor: #8456 William P. Mahnke II</p><p>Certificate Number 8466</p></div>
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BHP PETROLEUM (AMERICAS) INC.
 G.C.U. #530
 790' FNL & 1785' FWL
 Sec. 18. T28N, R11W, NMPM
 San Juan Co., NM



A-A'	Vert.: 1"=30'	Horiz.: 1"=100'	C/L
5470			
5460			
B-B'			
5470			
5460			
C-C'			
5470			
5460			

BHP PETROLEUM (AMERICAS) INC.
GALLEGOS CANYON UNIT NO. 530
790 ' FNL - 1785 ' FWL, Section 18, T28N, R11W
San Juan County, New Mexico

TEN POINT PROGRAM

1.) Surface Formation: NACIMIENTO

2.) Estimated Formation Tops:

<u>Formation</u>	<u>Top</u>	<u>Expected Production</u>
Ojo Alamo	240'	
Kirtland	350'	
Fruitland	1135'	
Basal Fruitland Coal	1340'	Gas
Pictured Cliffs	1405'	Gas
TD	1560'	

3.) Casing and Cementing Program: A string of 7 ", 20 ppf, K - 55, ST & C casing will be set at 200 '± in an 8 3/4 " hole and cemented to the surface in a single stage with 50 sacks of Class B cement (yield = 1.18 cf/sk) containing 3 % CaCl₂ and ¼ lb/sk celloflake. Slurry volume assumes 100 % excess over calculated hole volume. If the cement does not circulate to surface, cement will be topped off through 1 " pipe run in the 8 3/4 X 7 " annulus. Centralizers will be run on the bottom two joints if boulders are not encountered while drilling the surface hole. If boulders are encountered, no centralizers will be run. Minimum clearance between the couplings and the hole is 1.094 ". Safety factors used in the casing design were: Burst = 1.1; Collapse = 1.125; and Tension = 1.80 or 100,000 lb overpull, whichever is greater.

A production string of 4 ½ ", 10.5 ppf, K - 55, ST & C casing will be run from surface to total depth in a 6 ½ " hole. This string will be cemented to the surface with a minimum of 170 sacks of 50 - 50 Pozmix containing 2 % gel, 10 % salt, and ¼ lb/sk celloflake (yield = 1.26 cf/sk) followed by 50 sacks Class B containing fluid loss additive (yield = 1.18 cf/sk). Slurry volume assumes 50 % excess over calculated hole volume. The cement volume is subject to change after review and recalculation of the hole volume from the open hole caliper logs. If the cement does not circulate to the surface a cement bond log will be run to determine the top of the cement. A decision to squeeze cement to surface will be made at that time. Centralizers will be spaced such that a minimum of two are located above and two are located below the Basal Fruitland Coal and a minimum of one centralizer will be run below the base and another into the base of the Ojo Alamo. Minimum clearance between the couplings and the hole is 1.25 ". Safety factors used in the casing design were: Burst = 1.1; Collapse = 1.125; and Tension = 1.8 or 100,000 lb overpull, whichever is greater.

A sundry notice with details of the casing run and the cement volumes and densities will be submitted following each job.

The production casing will be pressure tested to a minimum of 2500 psig prior to perforating.

- 4.) Pressure Control Equipment: (See attached schematic diagram) A minimum of 2000 psi working pressure BOP well control system will be utilized. BOP's, rotating head, and choke manifold will be installed and pressure tested before drilling out the surface casing shoe. The minimum working pressure required for the well control equipment as determined by Onshore Order No. 2, Section III.A.1 plus a 60 % safety factor is 585 psig. BHP Petroleum (Americas) Inc. requests this be stipulated as the "Approved Working Pressure" although 2000 psig working pressure well control equipment will be used. The pipe rams will be operated daily and the blind rams on each trip to insure proper mechanical function.

A full opening internal blowout preventer or drill pipe safety valve will be on the drill floor at all times and will be capable of fitting all connections of the drill string in use.

- 5.) Mud Program: A fresh water, low solids, non - dispersed mud system will be used to drill this well. Sufficient materials will be on location at all times to maintain mud properties and control any unforeseen lost circulation problems or abnormal pressure in the Farmington sands within the Kirtland Formation. All drilling fluids will be contained in a lined earthen pit or steel tanks if the wellsite location dictates a closed system is necessary. At completion of the drilling operation, the drilling fluid will be hauled off to be used in another well, The remaining solids accumulation will be allowed to dry and then covered.

<u>Interval - ft.</u>	<u>Mud Weight - ppq</u>	<u>Viscosity - sec/qt.</u>
0 -1000 '	8.4 - 8.6 or less	30 - 38
1000' - TD	9.3 or less	40 - 55

- 6.) Auxiliary Equipment: An upper kelly cock with handle available will be utilized. At a minimum, a flow sensor will be installed in the system and the mud volume will be visually monitored constantly.
- 7.) Logging Program: SP - DIL and GR - FDC - CNL logs will be run from TD to the surface casing shoe depth.
- 8.) Coring Program: No cores are planned.

Testing Program: No tests are planned.

Stimulation Program: Perforate Pictured Cliffs with 4 JSPF and fracture stimulate with approximately 3000 lbs. of frac sand per foot of perforated interval in either a 70 quality nitrogen foam or a cross - linked gel water system.

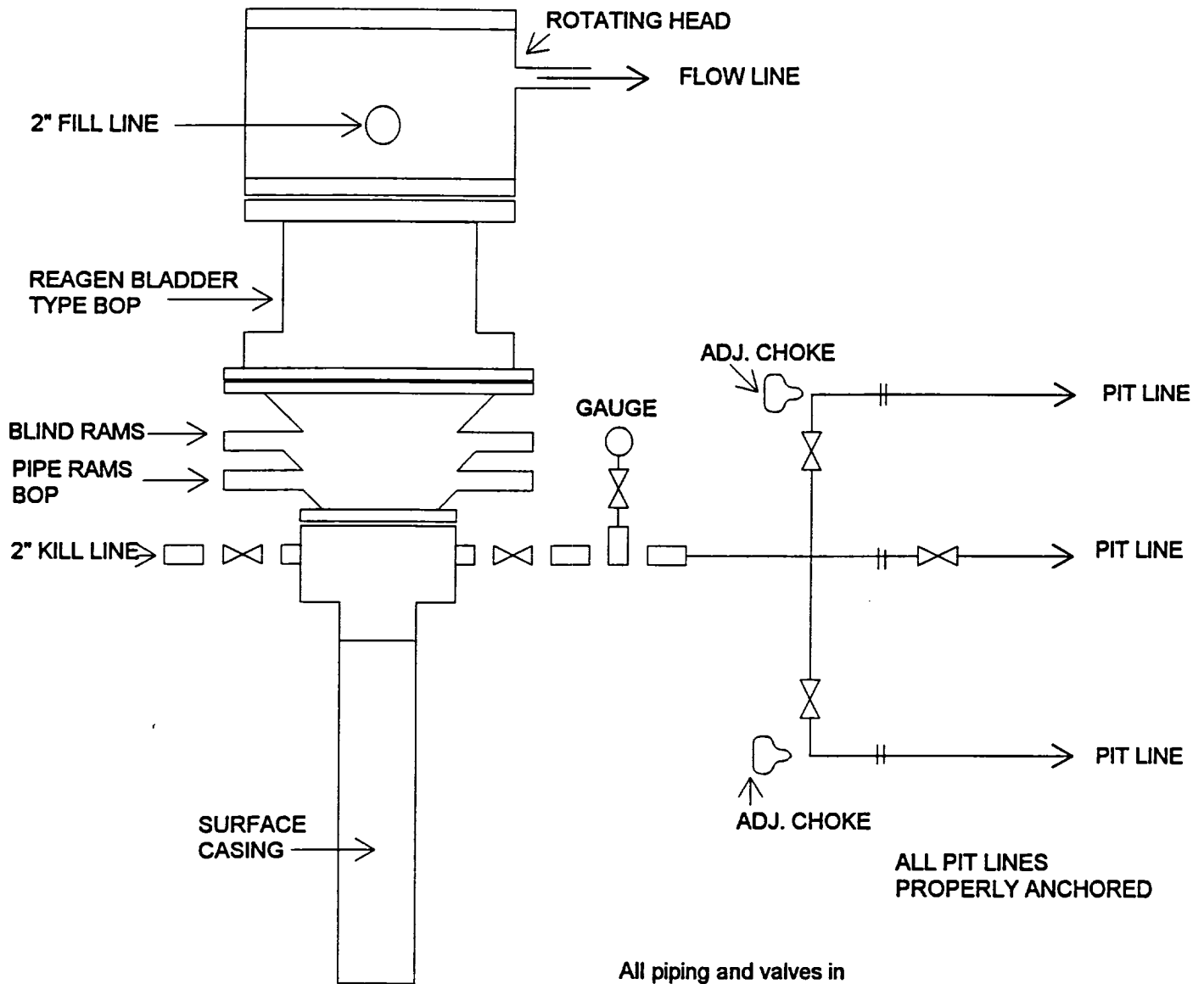
- 9.) Abnormal Pressures: Although not expected, abnormal pressures are possible in the Farmington sands of the Kirtland Formation.

Estimated Bottom Hole Pressure: 400 psig.

- 10.) Anticipated Starting Date: As soon as all necessary approvals are received.

Duration of Operations: It is estimated that a total of 4 days will be required for the drilling operation and 5 days for the completion operation.

2M SYSTEM



Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O.Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.	3004529308
5. Indicate Type of Lease	STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	Gallegos Canyon Unit
8. Well No.	530
9. Pool name or Wildcat	W. Kutz Pictured Cliff

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" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER	
2. Name of Operator Amoco Production Company	Attention: Patty Haeefe
3. Address of Operator P.O. Box 800 Denver Colorado 80201 (303) 830-4988	
4. Well Location Unit Letter C : 790 Feet From The North Line and 1785 Feet From The West Line Section 18 Township 28N Range 11W NMPM San Juan County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 5462' GR	

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐
OTHER: Change of Operator ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐
OTHER: ☐

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Amoco Production Company is assuming operatorship of this well from BHP.

RECEIVED
MAY 1 1996
OIL DIV.
MAY 3

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

SIGNATURE Patty Haeefe TITLE Staff Assistant DATE 04-25-1996
TYPE OR PRINT NAME Patty Haeefe TELEPHONE NO. (303) 830-4988

(This space for State Use)

APPROVED BY Original Signed by FRANK T. CHAVEZ TITLE SUPERVISOR DISTRICT # 3 DATE APR 26 1996
CONDITIONS OF APPROVAL, IF ANY: