



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

BRUCE KING  
GOVERNOR

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

December 1, 1994

Phillips Petroleum Company  
4001 Penbrook  
Odessa, Texas 79762

Attention: L. M. Sanders

**AMENDED**  
***Administrative Order DD-101 (NSBHL)***

Dear Mr. Sanders:

Reference is made to your letter of application dated November 18, 1994, under the provisions of General Rules 111 (C), (D) and (E) and 104 (F), to amend Administrative Order DD-101, issued by the Division on November 15, 1994 for authorization to directional drill the East Vacuum Grayburg/San Andres Unit Well No. 388, Lea County, New Mexico.

At this time the Division Director finds that:

- (1) The amended application has been duly filed under the directional drilling provisions of Rules 111 (D) and (E) of the Division General Rules and Regulations;
- (2) Under the provisions of Division General Rule 104.F(1) the applicant further requests that the bottom-hole location be unorthodox for the purpose of completing an efficient injection/production pattern within the East Vacuum Grayburg/San Andres Unit Pressure Maintenance Project Area;
- (3) The proposed well and its dedicated acreage is within the applicant's East Vacuum Grayburg/San Andres Unit Area;
- (4) No notification was required in this instance; and,
- (5) The applicant has presented satisfactory evidence that all requirements prescribed in General Rule 111 have either been or will be met.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Phillips Petroleum Company, is hereby authorized to directionally drill its proposed East Vacuum Grayburg/San Andres Unit Well No. 388, the surface which shall be 349 feet from the South line and 414 feet from the West line (Unit M) of Section 27, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, by kicking-off from vertical in a southeasterly direction and drilling in such a manner as to bottom in the Vacuum Grayburg-San Andres Pool within 50 feet of a target point located 205 feet from the South line and 255 feet from the West line (Unit M) of said Section 27, being an unorthodox bottom-hole oil well location for said formation.

**PROVIDED HOWEVER THAT** prior to commencing directional drilling operations into said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

**PROVIDED HOWEVER THAT** during or upon completion of said directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Hobbs district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Hobbs offices of the Division upon completion.

(3) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

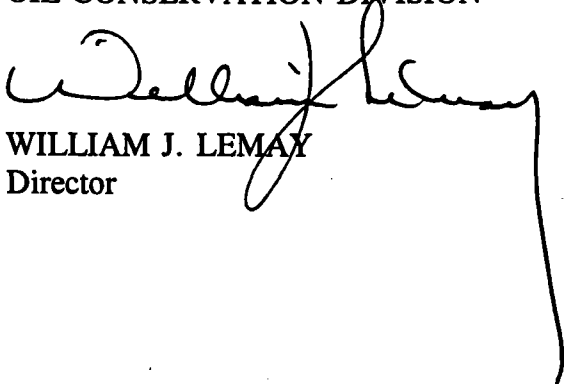
(4) Said well shall be dedicated to an existing standard 40- acre oil spacing and proration unit comprising the SW/4 SW/4 of said Section 27.

(5) The previous Division Administrative Order DD-101, dated November 15, 1994, shall be superseded by this amended order and placed in abeyance until further notice.

(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

WJL/MES/kv

cc: Oil Conservation Division - Hobbs  
New Mexico State Land Office - Santa Fe

Rec. 11/18/94  
Rel 11/29/94

*E-mailed as  
DD-101. amed*

November 29, 1994

Phillips Petroleum Company  
4001 Penbrook  
Odessa, Texas 79762

Attention: L. M. Sanders

**AMENDED**  
**Administrative Order DD-101 (NSBHL)**

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388

At this time the Division Director finds that:

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- (2) Under the provisions of Division General Rule 104.F(1) the applicant further requests that the bottom-hole location be unorthodox for the purpose of completing an efficient injection/production pattern within the East Vacuum Grayburg/San Andres Unit Pressure Maintenance Project Area;
- (3) The proposed well and its dedicated acreage is within the applicant's East Vacuum Grayburg/San Andres Unit Area;
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STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Administrative Order DD-\**  
*November 29, 1994*  
*Page No. 3*

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WILLIAM J. LEMAY  
Director

S E A L

WJL/MES

cc: Oil Conservation Division - Hobbs  
New Mexico State Land Office - Santa Fe



**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79762  
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP  
Permian Basin Region

**November 18, 1994**

**RE: Amended Application for Directional  
Drilling and Unorthodox Location  
East Vacuum Gb/SA Unit  
Well No. 388  
Section 27, T-17-S, R-35-E  
Lea County, New Mexico**

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, New Mexico 87504

**Attention: Mr. William J. LeMay, Director**

**Gentlemen:**

We respectfully request amended approval to intentionally deviate our East Vacuum GB/SA Unit No. 388, as provided in Statewide Rule 111. The surface location of this well is 349' FSL and 414' FWL, with an unorthodox bottom hole location of 205' FSL and 255' FWL at depth of 4700'. The top of the San Andres should be cut at 4365' TVD. This location was selected due to electrical high wires.

Attached is a plat showing surface location and targeted bottom hole location.

This directional well shall be tested at least once every 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104.

This well is located within the central portion of the East Vacuum GB/SA Unit, therefore Phillips is its own offset operator. Your consideration and approval will be appreciated. Please direct any questions to me at (915) 368-1488.

Sincerely,

L. M. Sanders, Supervisor  
Regulatory Affairs

District I  
PO Box 1988, Hobbs, NM 88241-1988  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Bruma Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

☒ **AMENDED REPORT**

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

<sup>1</sup> Operator name and Address <b>Phillips Petroleum Company 4001 Penbrook Street Odessa, TX 797962</b>		<sup>2</sup> OGRID Number <b>017643</b>
		<sup>3</sup> API Number <b>30-025-32736</b>
<sup>4</sup> Property Code <b>009166</b>	<sup>5</sup> Property Name <b>EAST VACUUM GB/SA UNIT</b>	<sup>6</sup> Well Number <b>388</b>

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>349</b>	<b>SOUTH</b>	<b>414</b>	<b>WEST</b>	<b>LEA</b>

<sup>8</sup> 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
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>205</b>	<b>SOUTH</b>	<b>255</b>	<b>WEST</b>	<b>LEA</b>

<sup>9</sup> Proposed Pool 1

**VACUUM GRAYBURG/SAN ANDRES**

<sup>10</sup> Proposed Pool 2

**VACUUM GRAYBURG/SAN ANDRES**

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>0</b>	<sup>13</sup> Cable/Rotary <b>ROTARY</b>	<sup>14</sup> Lease Type Code <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3937' GR UNPREPARED</b>
<sup>16</sup> Multiple <b>NO</b>	<sup>17</sup> Proposed Depth <b>4700'</b>	<sup>18</sup> Formations <b>SAN ANDRES</b>	<sup>19</sup> Contractor <b>NA</b>	<sup>20</sup> Spud Date <b>UPON APPROVAL</b>

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
<b>12-1/4"</b>	<b>8-5/8"</b>	<b>24#</b>	<b>1625'</b>	<b>750 SXS C</b>	<b>SURFACE</b>
<b>7-7/8"</b>	<b>5-1/2"</b>	<b>15.5#</b>	<b>4700'</b>	<b>850 SXS C</b>	<b>4000'</b>

<sup>22</sup> 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

**SEE ATTACHED BLOW OUT PREVENTER SCHEMATIC.**

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *L. M. Sanders*

Printed name: **L. M. SANDERS**

Title: **SUPERVISOR, REG. AFFAIRS**

Date: **11/18/94**

Phone: **915/368-1488**

**OIL CONSERVATION DIVISION**

Approved by:

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐



A M E N D E D

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Instruction on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

**OIL CONSERVATION DIVISION**

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-32736</b>	Pool Code <b>62180</b>	Pool Name <b>Vacuum Grayburg/San Andres</b>
Property Code <b>009166</b>	Property Name <b>East Vacuum GB/SA Unit</b>	
OGRID No. <b>017643</b>	Operator Name <b>PHILLIPS PETROLEUM COMPANY</b>	
		Well Number <b>388</b>
		Elevation <b>3937'</b>

Surface Location

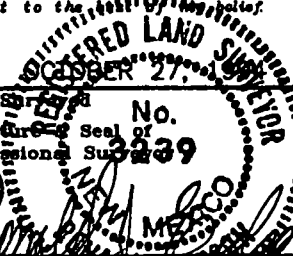
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	17 S	35 E		349	SOUTH	414	WEST	LEA

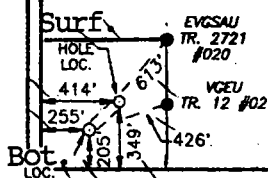
Bottom Hole Location If Different From Surface

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M	27	17 S	35 E		205	SOUTH	255	WEST	LEA

Dedicated Acres	Infill	Consolidation Code	Order No.
	10		R-5897

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

<table style="width: 100%; height: 400px;"> <tr><td style="width: 25%;">D</td><td style="width: 25%;">C</td><td style="width: 25%;">B</td><td style="width: 25%;">A</td></tr> <tr><td>E</td><td>F</td><td>G</td><td>H</td></tr> <tr><td>L</td><td>K</td><td>J</td><td>I</td></tr> <tr><td>M</td><td>N</td><td>O</td><td>P</td></tr> </table>	D	C	B	A	E	F	G	H	L	K	J	I	M	N	O	P	<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><i>L. M. Sanders</i> _____ Signature</p> <p><b>L. M. Sanders</b> _____ Printed Name</p> <p><b>Supv., Reg. Affairs</b> _____ Title</p> <p><b>11/18/94</b> _____ Date</p> <hr/> <p><b>SURVEYOR CERTIFICATION</b></p> <p><i>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 knowledge and belief.</i></p> <p>_____ Date Surveyed</p> <p>_____ Signature of Professional Surveyor</p> <p style="text-align: center;">  </p> <p>_____ Certificate No.</p> <p style="text-align: right;"> <b>JOHN W. WEST, 676</b>  <b>RONALD J. EIDSON, 3239</b> </p>
D	C	B	A														
E	F	G	H														
L	K	J	I														
M	N	O	P														



A M E N D E D

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

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Energy, Minerals and Natural Resources Department

Form C-102  
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Santa Fe, New Mexico 87504-2088

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AMENDED REPORT

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GRID No. <b>017643</b>	Operator Name <b>PHILLIPS PETROLEUM COMPANY</b>		Elevation <b>3937'</b>

Surface Location

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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Dedicated Acres	Order No.
10	R-5897

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OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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	<p>Date Shown No. Signature &amp; Seal of Professional Surveyor</p> <p style="text-align: right;">W.O. No. 1823</p>
	<p>Certificate No. JOHN W. WEST, 676 RONALD J. EIDSON, 3239</p>

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-101

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 6 Copies

Fee Lease - 5 Copies

District I  
PO Box 1928, Hobbs, NM 88241-1928  
District II  
PO Drawer DD, Aramis, NM 88211-0719  
District III  
1000 Rio Bruezo Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

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**P.O. Box 2088**  
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<sup>9</sup> Proposed Pool 1 <b>VACUUM GRAYBURG/SAN ANDRES</b>					<sup>10</sup> Proposed Pool 2 <b>VACUUM GRAYBURG/SAN ANDRES</b>				

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>0</b>	<sup>13</sup> Cable/Rotary <b>ROTARY</b>	<sup>14</sup> Lease Type Code <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3937' GR UNPREPARED</b>
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Signature: <i>L.M. Sanders</i>		Approved by:	
Printed name: <b>L. M. SANDERS</b>		Title:	
Title: <b>SUPERVISOR, REG. AFFAIRS</b>		Approval Date:	Expiration Date:
Date: <b>11/18/94</b>	Phone: <b>915/368-1488</b>	Conditions of Approval: Attached <input type="checkbox"/>	

## CASING & CEMENTING PROGRAM

EVGSAU - 388

Well 388 kickoff point is approx. 3000' build to 11-1/2 deg. and hold.

8 5/8" 24 lb/ft k-55 Surface Casing Set at 1625' - 12 1/4" Hole:

Lead to surface with 600 sx 75/25 Class "C" Pozmix + 4% gel + 2% CaCl<sub>2</sub>

Slurry Weight:	13.5 ppg
Slurry Yield:	1.58 ft <sup>3</sup> /sx
Water Requirement:	7.99 gals/sx

Tail with 150 sx of Class "C" + 2% CaCl<sub>2</sub>.

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 ft <sup>3</sup> /sx
Water Requirement:	6.3 gals/sx

5 1/2" 15.5 lb/ft J-55 Production Casing Set at 4700' - 7 7/8" Hole:

Lead: 500 sx Class "C" 65/35 Poz + 6% Gel + 3% Salt. Desired TOC = Surface.

Slurry Weight:	12.8 ppg
Slurry Yield:	1.85 ft <sup>3</sup> /sx
Water Requirement:	9.9 gals/sx

Tail: 350 sx Class "C" 50/50 Poz + 0.5% Halad-9 + 1.5% CaCl<sub>2</sub>.  
Desired TOC = 4000'.

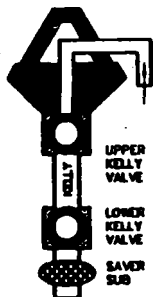
Slurry Weight:	14.6 ppg
Slurry Yield:	1.15 ft <sup>3</sup> /sx
Water Requirement:	5.0 gals/sx

# MUD PROGRAM

EVGSAU -388

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	CL PPM	SOLIDS	ADDITIVES
Surf - 1625'	8.3 - 9.0 ppg	28 - 36 sec/1000cc	-	Fresh Water	-	FW Gel + Lime for spud mud.
1625' - 4700'	10.0 ppg	28 - 32 sec/1000cc	-	Saturated	-	Native Solids + Paper Sweeps before reaching pay zone. Circulate hole at TD prior to logging.

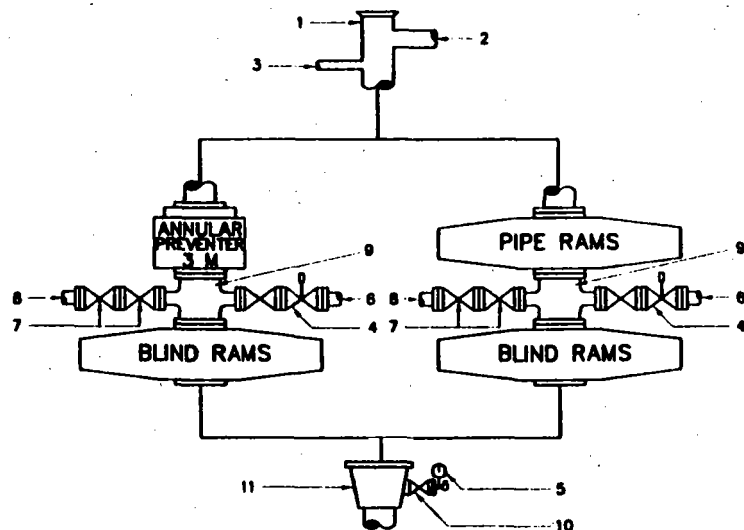
# DRILLSTRING CONTROL DEVICES



## ON DRILL FLOOR



## BOP STACK



## CHOKE MANIFOLD

### DISCHARGE MANIFOLD OPTIONAL FOR LAND RIGS

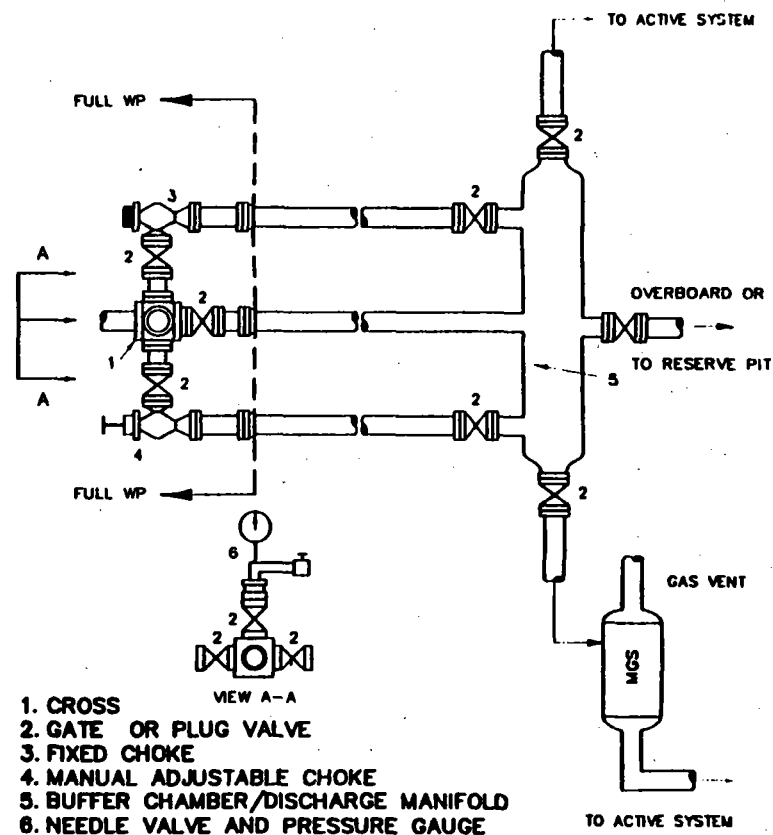
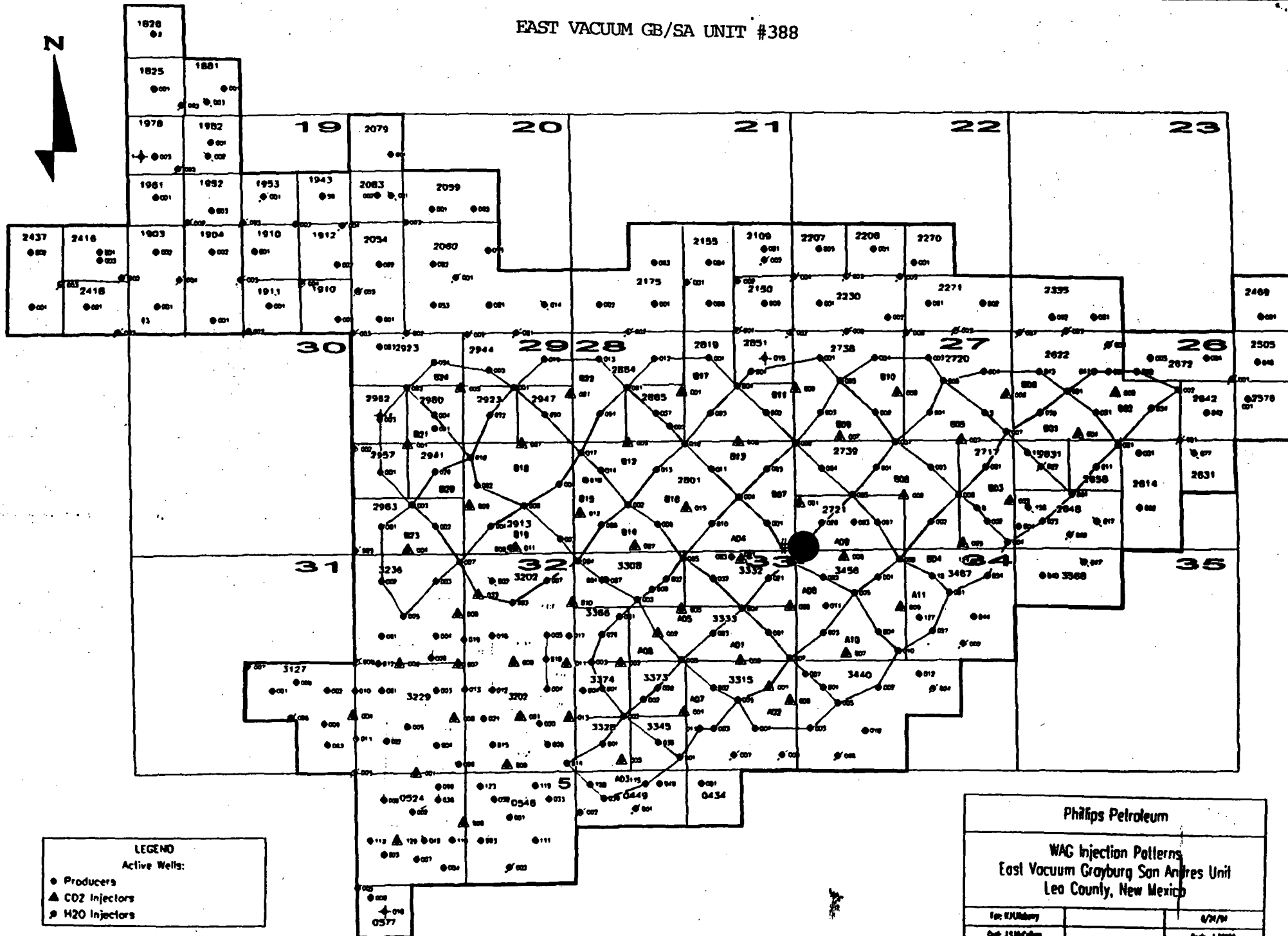


Fig. 2.4. Class 2 BOP and Choke Manifold.

# EAST VACUUM GB/SA UNIT #388





**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79762  
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP  
Permian Basin Region

**November 18, 1994**

**RE: Amended Application for Directional  
Drilling and Unorthodox Location  
East Vacuum Gb/SA Unit  
Well No. 388  
Section 27, T-17-S, R-35-E  
Lea County, New Mexico**

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, New Mexico 87504

**Attention: Mr. William J. LeMay, Director**

**Gentlemen:**

We respectfully request amended approval to intentionally deviate our East Vacuum GB/SA Unit No. 388, as provided in Statewide Rule 111. The surface location of this well is 349' FSL and 414' FWL, with an unorthodox bottom hole location of 205' FSL and 255' FWL at depth of 4700'. The top of the San Andres should be cut at 4365' TVD. This location was selected due to electrical high wires.

Attached is a plat showing surface location and targeted bottom hole location.

This directional well shall be tested at least once every 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104.

This well is located within the central portion of the East Vacuum GB/SA Unit, therefore Phillips is its own offset operator. Your consideration and approval will be appreciated. Please direct any questions to me at (915) 368-1488.

Sincerely,

**L. M. Sanders, Supervisor  
Regulatory Affairs**



## A M E N D E D

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

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## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-32736		Pool Code 62180	Pool Name Vacuum Grayburg/San Andres
Property Code 009166	Property Name East Vacuum GB/SA Unit		Well Number 388
OGRID No. 017643	Operator Name PHILLIPS PETROLEUM COMPANY		Elevation 3937'

## Surface Location


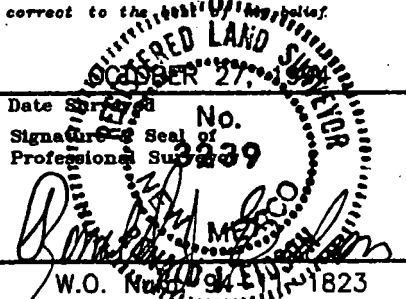
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	17 S	35 E		349	SOUTH	414	WEST	LEA

## 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
M	27	17 S	35 E		205	SOUTH	255	WEST	LEA

Dedicated Acres	Surface Infill	Consolidation Code	Order No.
	10		R-5897

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

D	C	B	A	<b>OPERATOR CERTIFICATION</b>  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.   Signature L. M. Sanders Printed Name Supv., Reg. Affairs Title 11/18/94 Date
E	F	G	H	
L	K	J	I	
M	N	O	P	<b>SURVEYOR CERTIFICATION</b>  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 knowledge and belief.   Date Signed Signature & Seal of Professional Surveyor W.O. No. 1823 Certificate No. JOHN W. WEST, 676 RONALD J. EIDSON, 3239

Surf.  
HOLE LOC.  
414'  
255'  
205'  
349'  
426'

EVGSAU TR. 2721 #020  
VGEV TR. 12 #02

Bot. LOC.

State of New Mexico  
Energy, Minerals & Natural Resources Department

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1000 Edo Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

☒ AMENDED REPORT

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

<sup>1</sup> Operator name and Address <b>Phillips Petroleum Company 4001 Penbrook Street Odessa, TX 797962</b>		<sup>2</sup> OGRID Number <b>017643</b>
		<sup>3</sup> API Number <b>30-025-32736</b>
<sup>4</sup> Property Code <b>009166</b>	<sup>5</sup> Property Name <b>EAST VACUUM GB/SA UNIT</b>	
		<sup>6</sup> Well Number <b>388</b>

<sup>7</sup> Surface Location									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>349</b>	<b>SOUTH</b>	<b>414</b>	<b>WEST</b>	<b>LEA</b>

<sup>8</sup> 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
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<sup>9</sup> Proposed Pool 1 <b>VACUUM GRAYBURG/SAN ANDRES</b>					<sup>10</sup> Proposed Pool 2 <b>VACUUM GRAYBURG/SAN ANDRES</b>				

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>0</b>	<sup>13</sup> Cable/Rotary <b>ROTARY</b>	<sup>14</sup> Lease Type Code <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3937' GR UNPREPARED</b>
<sup>16</sup> Multiple <b>NO</b>	<sup>17</sup> Proposed Depth <b>4700'</b>	<sup>18</sup> Formations <b>SAN ANDRES</b>	<sup>19</sup> Contractor <b>NA</b>	<sup>20</sup> Spud Date <b>UPON APPROVAL</b>

<sup>21</sup> Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
<b>12-1/4"</b>	<b>8-5/8"</b>	<b>24#</b>	<b>1625'</b>	<b>750 SXS C</b>	<b>SURFACE</b>
<b>7-7/8"</b>	<b>5-1/2"</b>	<b>15.5#</b>	<b>4700'</b>	<b>850 SXS C</b>	<b>4000'</b>

<sup>22</sup> 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

**SEE ATTACHED BLOW OUT PREVENTER SCHEMATIC.**

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		<b>OIL CONSERVATION DIVISION</b>	
Signature: <i>L.M. Sanders</i>		Approved by:	
Printed name: <b>L. M. SANDERS</b>		Title:	
Title: <b>SUPERVISOR, REG. AFFAIRS</b>		Approval Date:	Expiration Date:
Date: <b>11/18/94</b>	Phone: <b>915/368-1488</b>	Conditions of Approval: Attached <input type="checkbox"/>	

## CASING & CEMENTING PROGRAM

EVGSAU - 388

Well 388 kickoff point is approx. 3000' build to 11-1/2 deg. and hold.

8 5/8" 24 lb/ft k-55 Surface Casing Set at 1625' - 12 1/4" Hole:

Lead to surface with 600 sx 75/25 Class "C" Pozmix + 4% gel + 2% CaCl<sub>2</sub>

Slurry Weight:	13.5 ppg
Slurry Yield:	1.58 ft <sup>3</sup> /sx
Water Requirement:	7.99 gals/sx

Tail with 150 sx of Class "C" + 2% CaCl<sub>2</sub>.

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 ft <sup>3</sup> /sx
Water Requirement:	6.3 gals/sx

5 1/2" 15.5 lb/ft J-55 Production Casing Set at 4700' - 7 7/8" Hole:

Lead: 500 sx Class "C" 65/35 Poz + 6% Gel + 3% Salt. Desired TOC = Surface.

Slurry Weight:	12.8 ppg
Slurry Yield:	1.85 ft <sup>3</sup> /sx
Water Requirement:	9.9 gals/sx

Tail: 350 sx Class "C" 50/50 Poz + 0.5% Halad-9 + 1.5% CaCl<sub>2</sub>. Desired TOC = 4000'.

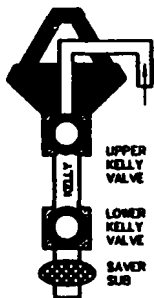
Slurry Weight:	14.6 ppg
Slurry Yield:	1.15 ft <sup>3</sup> /sx
Water Requirement:	5.0 gals/sx

# MUD PROGRAM

EVGSAU -388

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	CL PPM	SOLIDS	ADDITIVES
Surf - 1625'	8.3 - 9.0 ppg	28 - 36 sec/1000cc	-	Fresh Water	-	FW Gel + Lime for spud mud.
1625' - 4700'	10.0 ppg	28 - 32 sec/1000cc	-	Saturated	-	Native Solids + Paper Sweeps before reaching pay zone. Circulate hole at TD prior to logging.

# DRILLSTRING CONTROL DEVICES

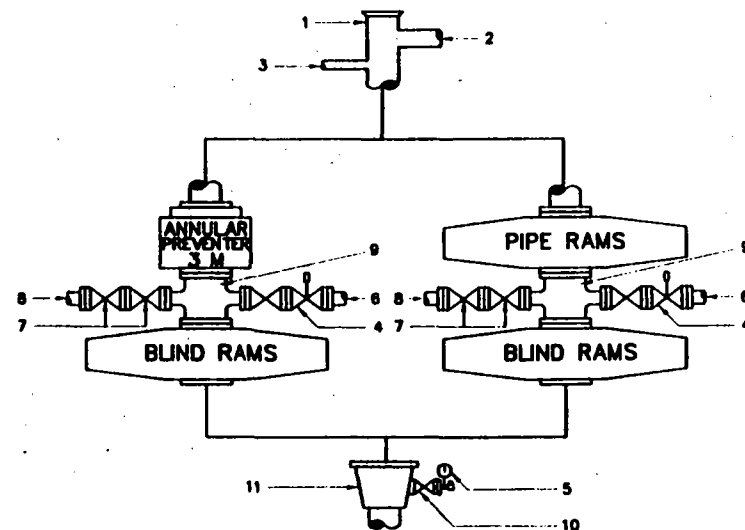


## ON DRILL FLOOR



FULL OPENING

## BOP STACK



1. BELL NIPPLE
2. FLOW LINE
3. FILL-UP LINE
4. 2" FE PRESSURE-OPERATED CHOKE LINE VALVE
5. PRESSURE GAUGE
6. 2" CHOKE LINE TO CHOKE MANIFOLD
7. 2" FE GATE OR PLUG VALVES
8. 2" KILL LINE
9. DRILLING SPOOL
10. 2" SE OR FE GATE VALVE WITH NEEDLE VALVE
11. CASING HEAD HOUSING

## CHOKE MANIFOLD

### DISCHARGE MANIFOLD OPTIONAL FOR LAND RIGS

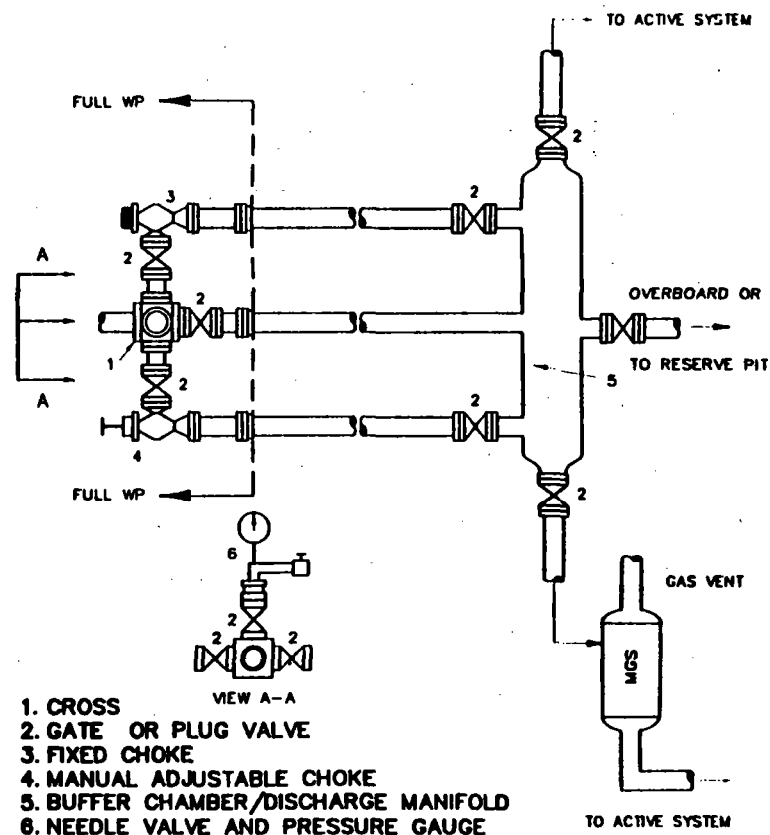
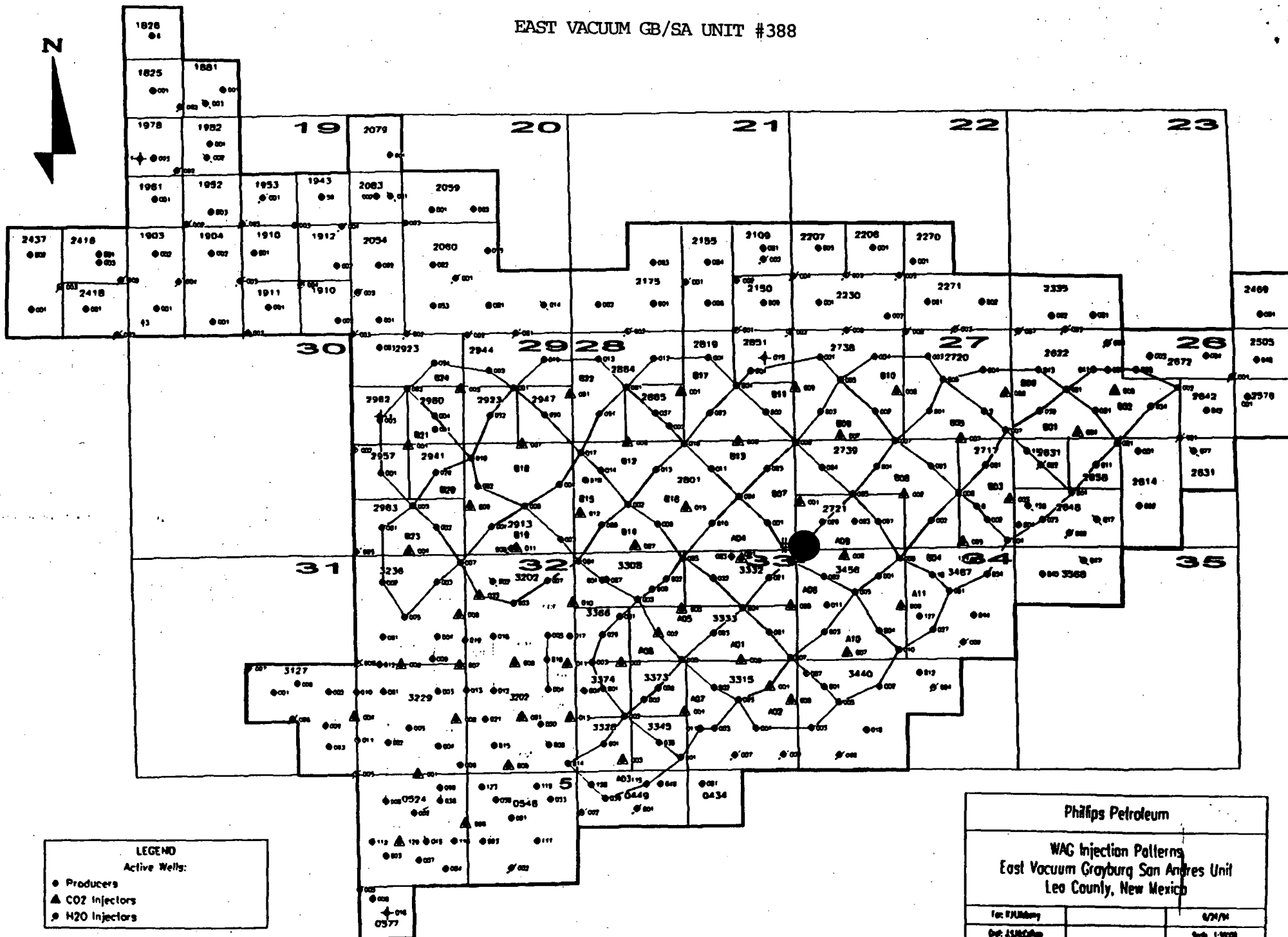


Fig. 2.4. Class 2 BOP and Choke Manifold.

# EAST VACUUM GB/SA UNIT #388





**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79762  
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP  
Permian Basin Region

**November 18, 1994**

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Attached is a plat showing surface location and targeted bottom hole location.

This directional well shall be tested at least once every 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104.

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Sincerely,

L. M. Sanders, Supervisor  
Regulatory Affairs

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**OIL CONSERVATION DIVISION**  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-32736</b>		Pool Code <b>62180</b>	Pool Name <b>Vacuum Grayburg/San Andres</b>
Property Code <b>009166</b>	Property Name <b>East Vacuum GB/SA Unit</b>		Well Number <b>388</b>
OGRID No. <b>017643</b>	Operator Name <b>PHILLIPS PETROLEUM COMPANY</b>		Elevation <b>3937'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	17 S	35 E		349	SOUTH	414	WEST	LEA

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
M	27	17 S	35 E		205	SOUTH	255	WEST	LEA

Dedicated Acres	Order No.
10	R-5897

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

	<p style="text-align: center;"><b>OPERATOR CERTIFICATION</b></p> <p style="font-size: small;">I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p style="text-align: right;"><i>L. M. Sanders</i> Signature</p> <p style="text-align: right;">L. M. Sanders Printed Name</p> <p style="text-align: right;">Supv., Reg. Affairs Title</p> <p style="text-align: right;">11/18/94 Date</p>
	<p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></p> <p style="font-size: small;">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 knowledge and belief.</p> <p style="text-align: right;">Date Surveyed Signature and Seal of Professional Surveyor</p> <p style="text-align: right;">No. 3239 W.O. No. 1823</p>
	<p style="text-align: right;">Certificate No. JOHN W. WEST, 676 RONALD J. EIDSON, 3239</p>
	<p style="text-align: right;">11/18/94</p>



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Energy, Minerals & Natural Resources Department

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<sup>8</sup> Proposed Bottom Hole Location If Different From Surface									
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<sup>9</sup> Proposed Pool 1 <b>VACUUM GRAYBURG/SAN ANDRES</b>					<sup>10</sup> Proposed Pool 2 <b>VACUUM GRAYBURG/SAN ANDRES</b>				

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>0</b>	<sup>13</sup> Cable/Rotary <b>ROTARY</b>	<sup>14</sup> Lease Type Code <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3937' GR UNPREPARED</b>
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Printed name: <b>L. M. SANDERS</b>		Title:	
Title: <b>SUPERVISOR, REG. AFFAIRS</b>		Approval Date:	Expiration Date:
Date: <b>11/18/94</b>	Phone: <b>915/368-1488</b>	Conditions of Approval: Attached <input type="checkbox"/>	

## CASING & CEMENTING PROGRAM

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Lead to surface with 600 sx 75/25 Class "C" Pozmix + 4% gel + 2% CaCl<sub>2</sub>

Slurry Weight:	13.5 ppg
Slurry Yield:	1.58 ft <sup>3</sup> /sx
Water Requirement:	7.99 gals/sx

Tail with 150 sx of Class "C" + 2% CaCl<sub>2</sub>.

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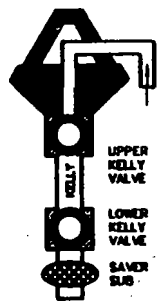
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# MUD PROGRAM

EVGSAU -388

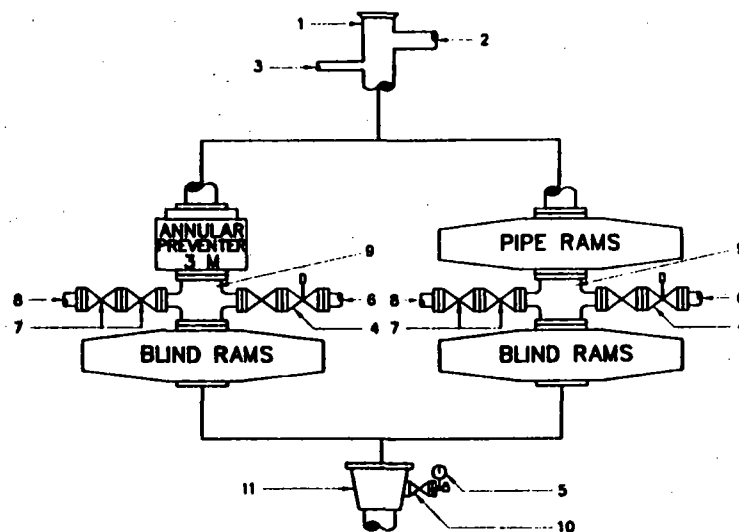
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## ON DRILL FLOOR



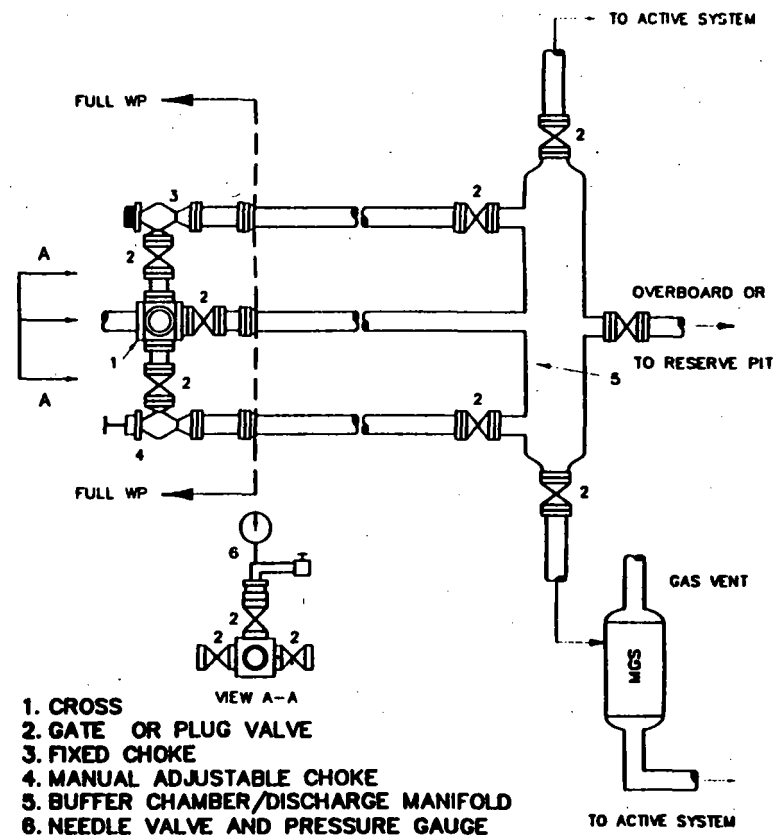
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11. CASING HEAD HOUSING

## CHOKE MANIFOLD

**DISCHARGE MANIFOLD OPTIONAL FOR LAND RIGS**



**Fig. 2.4. Class 2 BOP and Choke Manifold.**

EAST VACUUM GB/SA UNIT #388

**LEGEND**  
Active Wells:

- Producers
- ▲ CO2 Injectors
- ⊙ H2O Injectors

**Phillips Petroleum**  
**WAG Injection Patterns**  
**East Vacuum Grayburg San Andres Unit**  
**Lea County, New Mexico**  
 1st: R/H/MB  
 2nd: JSM/CLM  
 Date: 4/24/94  
 Scale: 1"=2000'

WAG Injection Patterns  
East Vacuum Groyburg San Andres Unit  
Lea County, New Mexico

6/21/74

Feb 1 1964

DD-101

TO: DAVID CATANACH

From: ALVA FRANCO w/Phillips Pet. Co.

8 PAGES

**PHILLIPS PETROLEUM COMPANY**ODESSA, TEXAS 79762  
4001 PENBROOKEXPLORATION AND PRODUCTION GROUP  
Permian Basin Region

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## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-32736	Pool Code 62180	Pool Name Vacuum Grayburg/San Andres
Property Code 0091.66	Property Name East Vacuum GB/SA Unit	Well Number 388
OCRM No. 017643	Operator Name PHILLIPS PETROLEUM COMPANY	Elevation 3937'

## Surface Location

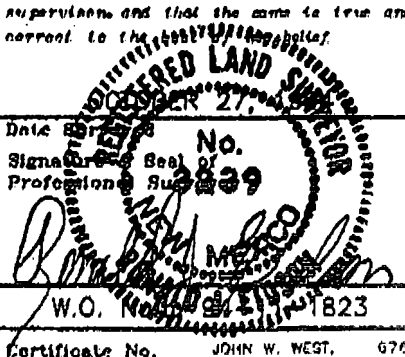
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	17 S	35 E		349	SOUTH	414	WEST	LEA

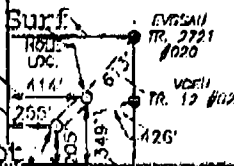
## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	17 S	35 E		205	SOUTH	255	WEST	LEA

Dedicated Acres	Infill	Consolidation Code	Order No.
10			R-5897

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

D	C	B	A	<b>OPERATOR CERTIFICATION</b>  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  <i>L.M. Sanders</i> Signature L. M. Sanders Printed Name Supv., Reg. Affairs Title 11/18/94 Date
E	F	G	H	
L	K	J	I	
M	N	O	P	<b>SURVEYOR CERTIFICATION</b>  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 knowledge and belief.   Date Signature Professional Seal W.O. No. 8239 Certificate No. JOHN W. WEST, 678 RONALD J. CROSON, 3236





State of New Mexico  
Energy, Minerals & Natural Resources Department

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

Form C-101

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

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Fee Lease - 5 Copies

☒ AMENDED REPORT**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1 Operator name and Address <b>Phillips Petroleum Company</b> <b>4001 Penbrook Street</b> <b>Odessa, TX 797962</b>		2 OGRID Number <b>017643</b>
		3 API Number <b>30-025-32736</b>
4 Property Code <b>009166</b>	5 Property Name <b>EAST VACUUM GB/SA UNIT</b>	6 Well Number <b>388</b>

## 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
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>349</b>	<b>SOUTH</b>	<b>414</b>	<b>WEST</b>	<b>LEA</b>

## 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
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>205</b>	<b>SOUTH</b>	<b>255</b>	<b>WEST</b>	<b>LEA</b>

## 9 Proposed Pool 1

## 10 Proposed Pool 2

<b>VACUUM GRAYBURG/SAN ANDRES</b>	<b>VACUUM GRAYBURG/SAN ANDRES</b>
-----------------------------------	-----------------------------------

11 Work Type Code <b>M</b>	12 Well Type Code <b>O</b>	13 Cable/Rotary <b>ROTARY</b>	14 Lease Type Code <b>S</b>	15 Ground Level Elevation <b>3937' GR UNPREPARED</b>
16 Multiple <b>NO</b>	17 Proposed Depth <b>4700'</b>	18 Formations <b>SAN ANDRES</b>	19 Contractor <b>NA</b>	20 Spud Date <b>UPON APPROVAL</b>

## 21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
<b>12-1/4"</b>	<b>8-5/8"</b>	<b>24#</b>	<b>1625'</b>	<b>750 SXS C</b>	<b>SURFACE</b>
<b>7-7/8"</b>	<b>5-1/2"</b>	<b>15.5#</b>	<b>4700'</b>	<b>850 SXS C</b>	<b>4000'</b>

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

**SEE ATTACHED BLOW OUT PREVENTER SCHEMATIC.**

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>L. M. Sanders</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed name: <b>L. M. SANDERS</b>		Approved by:	
Title: <b>SUPERVISOR, REG. AFFAIRS</b>		Title:	
Date: <b>11/18/94</b>		Approval Date:	Expiration Date:
Phone: <b>915/368-1488</b>		Conditions of Approval: Attached <input type="checkbox"/>	

**CASING & CEMENTING PROGRAM****EVGSAU -388**

Well 388 kickoff point is approx. 3000' build to 11-1/2 deg. and hold.

8 5/8" 24 lb/ft k-55 Surface Casing Set at 1625' - 12 1/4" Hole:

Lead to surface with 600 sx 75/25 Class "C" Pozmix + 4% gel + 2% CaCl<sub>2</sub>

Slurry Weight:	13.5 ppg
Slurry Yield:	1.58 ft <sup>3</sup> /sx
Water Requirement:	7.99 gals/sx

Tail with 150 sx of Class "C" + 2% CaCl<sub>2</sub>.

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 ft <sup>3</sup> /sx
Water Requirement:	6.3 gals/sx

5 1/2" 15.5 lb/ft J-55 Production Casing Set at 4700' - 7 7/8" Hole:

Lead: 500 sx Class "C" 65/35 Poz + 6% Gel + 3% Salt. Desired TOC = Surface.

Slurry Weight:	12.8 ppg
Slurry Yield:	1.85 ft <sup>3</sup> /sx
Water Requirement:	9.9 gals/sx

Tail: 350 sx Class "C" 50/50 Poz + 0.5% Halad-9 + 1.5% CaCl<sub>2</sub>.  
Desired TOC = 4000'.

Slurry Weight:	14.6 ppg
Slurry Yield:	1.15 ft <sup>3</sup> /sx
Water Requirement:	5.0 gals/sx

# MUD PROGRAM

EVGSAU -388

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	CL PPM	SOLIDS	ADDITIVES
Surf - 1625'	8.3 - 9.0 ppg	28 - 36 sec/1000cc	-	Fresh Water	-	FW Gel + Lime for spud mud.
1625' - 4700'	10.0 ppg	28 - 32 sec/1000cc	-	Saturated	-	Native Solids + Paper Sweeps before reaching pay zone. Circulate hole at TD prior to logging.

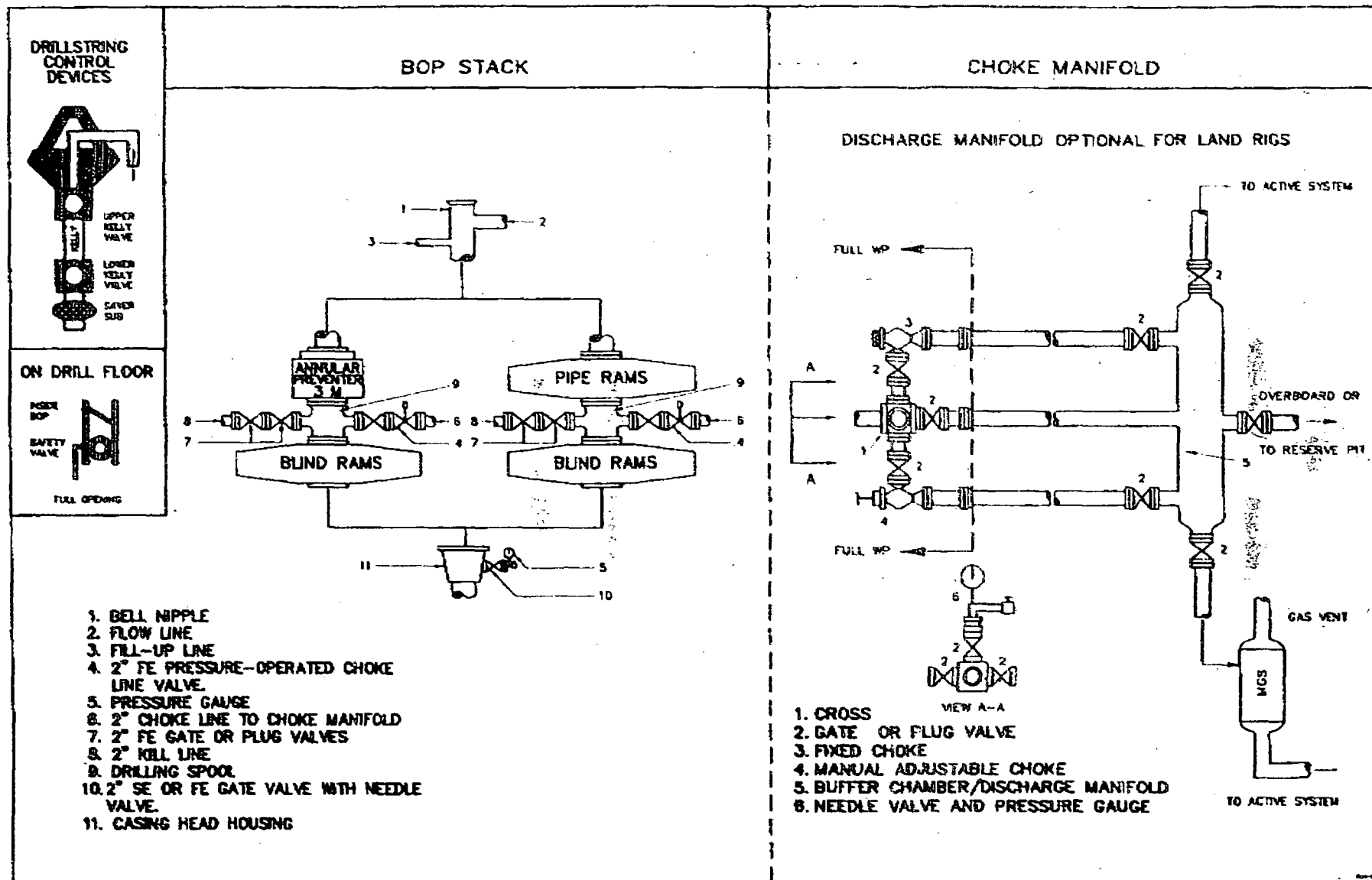
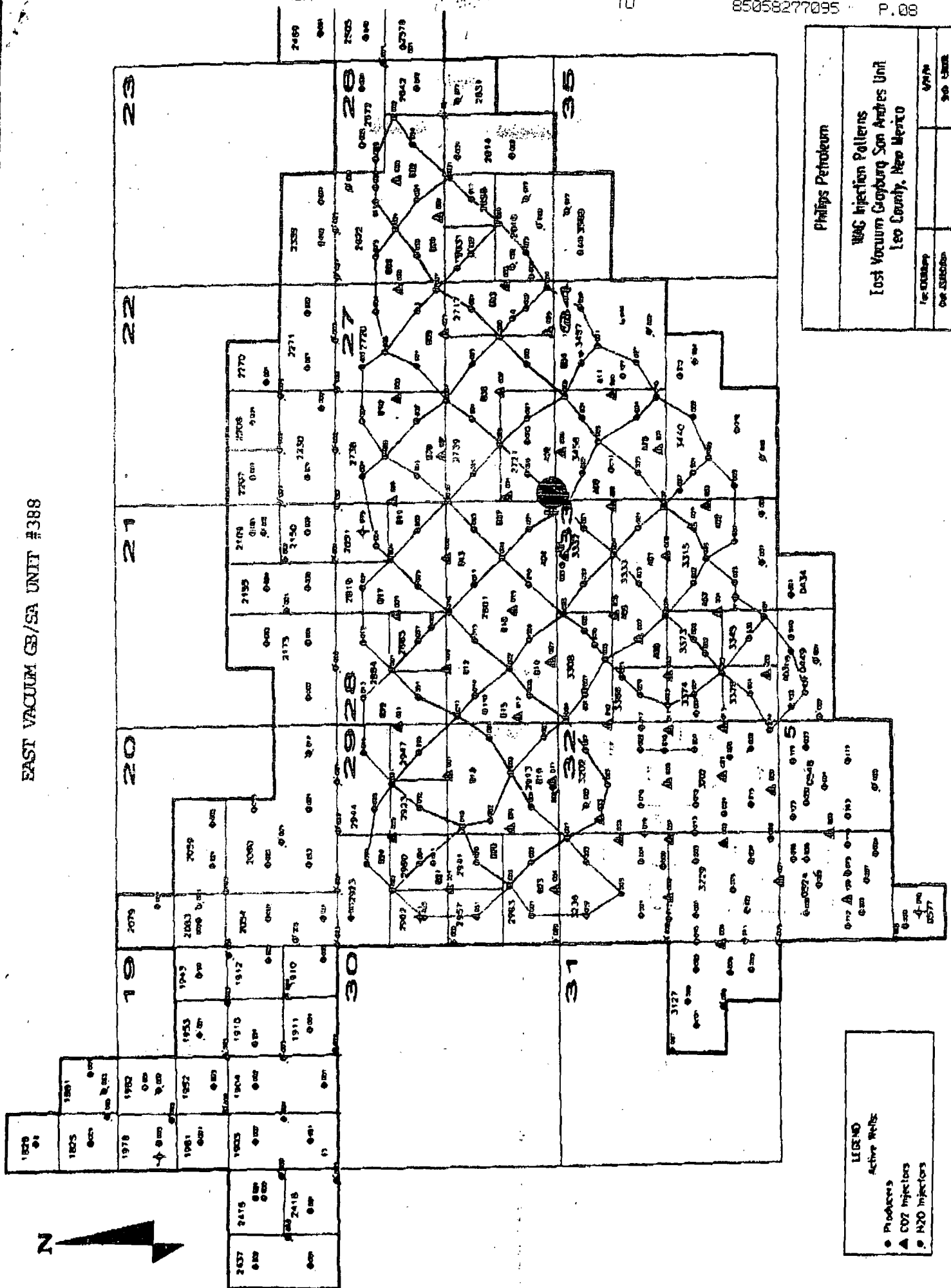


Fig. 2.4. Class 2 BOP and Choke Manifold.

EAST VACUUM CB/SA UNIT #388



Phillips Petroleum

WAG Injection Patterns  
East Vacuum Grabburg San Andres Unit  
Leo County, New Mexico

Prepared By: [blank]  
Date: [blank]

Scale: [blank]  
Sheet: [blank]

LEGEND  
Active Wells  
● Producers  
▲ CO2 injectors  
● N2O injectors



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



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

November 15, 1994

Phillips Petroleum Company  
4001 Penbrook  
Odessa, Texas 79762

Attention: L. M. Sanders

**Administrative Order DD-101**

Dear Mr. Sanders:

Under the provisions of General Rule 111 (c), (d) and (e), Phillips Petroleum Company made application to the New Mexico Oil Conservation Division on November 15, 1994, for authorization to directionally drill its proposed East Vacuum Grayburg San Andres Unit Well No. 388, Lea County, New Mexico.

**The Division Director Finds That:**

- (1) The application has been duly filed under the provisions of Rule 111(d) and (e) of the Division General Rules and Regulations;
- (2) The applicant is the owner and operator of all offset acreage to the proposed well;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in General Rule 111 will be met; and
- (4) No objections have been received by the Division.

**IT IS THEREFORE ORDERED THAT:**

- (1) The applicant, Phillips Petroleum Company, is hereby authorized to directionally drill its East Vacuum Grayburg San Andres Unit Well No. 388, the surface location of which shall be 205 feet from the South line and 255 feet from the West line (Unit M) of Section 27, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, by kicking off from the vertical and drilling in such a manner as to penetrate the Vacuum-Grayburg San Andres Pool at a standard bottomhole location within 50 feet of a point 349 feet from the South line and 414

feet from the West line of said Section 27.

PROVIDED HOWEVER THAT prior to commencing directional drilling operations into said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

PROVIDED HOWEVER THAT during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Hobbs district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Hobbs offices of the Division upon completion.

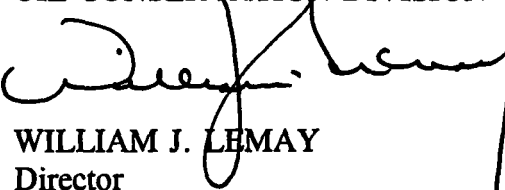
(3) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

(4) The SW/4 SW/4 of said Section 27 shall be dedicated to the well forming a standard 40-acre oil spacing and proration unit for the subject pool.

(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

WJL/DRC/kv

cc: Oil Conservation Division - Hobbs



**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79762  
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP  
Permian Basin Region

OIL CONSERVATION DIVISION  
RECEIVED

94 NOV 14 AM 8:52

RE: Application for Directional  
Drilling and Unorthodox Loc.  
East Vacuum Gb/SA Unit  
Well No. 388  
Section 27, T-17-S, R-35-E  
Lea County, New Mexico

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, New Mexico 87504

Attention: Mr. William J. LeMay, Director

Gentlemen:

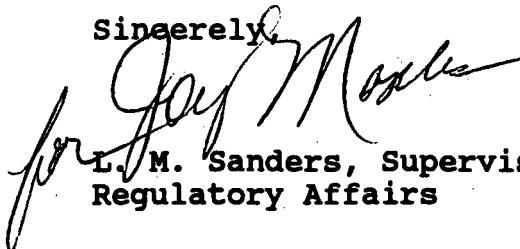
We respectfully request approval to intentionally deviate our East Vacuum GB/SA Unit No. 388, as provided in Statewide Rule 111. The surface location of this well is 205' FSL and 255' FWL, with an intended bottom hole location of 349' FSL and 414' FWL at depth of 4700'. The top of the San Andres should be cut at 4365' TVD. This unorthodox surface location was selected due to electrical high wires. The intended bottom hole location is an orthodox location.

Attached is a plat showing surface location and targeted bottom hole location.

This directional well shall be tested at least once every 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104.

This well is located with in the central portion of the East Vacuum GB/SA Unit, therefore Phillips is its own offset operator. Your consideration and approval will be appreciated. Please direct any questions to me at (915) 368-1488.

Sincerely,

  
L. M. Sanders, Supervisor  
Regulatory Affairs



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

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

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
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OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 62180	Pool Name VACUUM GRAYBURG/SAN ANDRES
Property Code 009166	Property Name EAST VACUUM GB/SA UNIT	Well Number 388
OGRID No. 017643	Operator Name PHILLIPS PETROLEUM COMPANY	Elevation 3937'

Surface Location

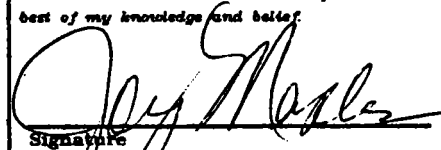
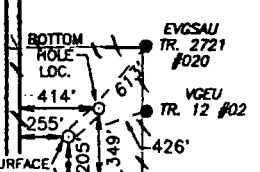
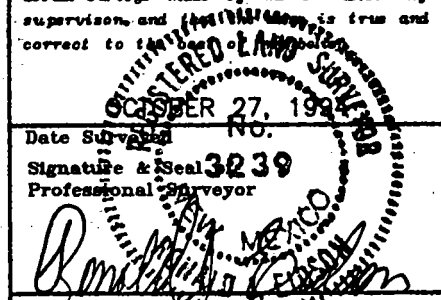
UL or lot No. M	Section 27	Township 17 S	Range 35 E	Lot Idn	Feet from the 205	North/South line SOUTH	Feet from the 255	East/West line WEST	County LEA
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Bottom Hole Location If Different From Surface

UL or lot No. M	Section 27	Township 17 S	Range 35 E	Lot Idn	Feet from the 349'	North/South line SOUTH	Feet from the 414'	East/West line WEST	County LEA
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Dedicated Acres	Consolidation Code	Order No.
10		R-5897

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

D	C	B	A	<b>OPERATOR CERTIFICATION</b>  I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.   Signature L. M. Sanders Printed Name Supv., Reg. Affairs Title November 9, 1994 Date
E	F	G	H	
L	K	J	I	
M	N	O	P	
 BOTTOM HOLE LOC. SURFACE LOC. EVGSAU TR. 2721 #020 VGEU TR. 12 #02				<b>SURVEYOR CERTIFICATION</b>  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 the same is true and correct to the best of my knowledge and belief.   Date Surveyed Signature & Seal Professional Surveyor W.O. Numa Certificate No. JOHN W. WEST, 676 RONALD J. EIDSON, 3239

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-101

Revised February 10, 1994

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District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

☐ AMENDED REPORT

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

<sup>1</sup> Operator name and Address <b>Phillips Petroleum Company 4001 Penbrook Street Odessa, TX 797962</b>		<sup>2</sup> OGRID Number <b>017643</b>
		<sup>3</sup> API Number <b>30-0</b>
<sup>4</sup> Property Code <b>009166</b>	<sup>5</sup> Property Name <b>EAST VACUUM GB/SA UNIT</b>	
		<sup>6</sup> Well Number <b>388</b>

<sup>7</sup> Surface Location									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>205</b>	<b>SOUTH</b>	<b>255</b>	<b>WEST</b>	<b>LEA</b>

<sup>8</sup> 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
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>349</b>	<b>SOUTH</b>	<b>414</b>	<b>WEST</b>	<b>LEA</b>
<sup>9</sup> Proposed Pool 1 <b>VACUUM GRAYBURG/SAN ANDRES</b>					<sup>10</sup> Proposed Pool 2 <b>VACUUM GRAYBURG/SAN ANDRES</b>				

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>0</b>	<sup>13</sup> Cable/Rotary <b>R</b>	<sup>14</sup> Lease Type Code <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3937' GR-UNPREPARED</b>
<sup>16</sup> Multiple <b>NO</b>	<sup>17</sup> Proposed Depth <b>4700'</b>	<sup>18</sup> Formations <b>SAN ANDRES</b>	<sup>19</sup> Contractor <b>NA</b>	<sup>20</sup> Spud Date <b>UPON APPROVAL</b>

<sup>21</sup> Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
<b>12-1/4"</b>	<b>8-5/8"</b>	<b>24#</b>	<b>1625'</b>	<b>750 SXS C</b>	<b>SURFACE</b>
<b>7-7/8"</b>	<b>5-1/2"</b>	<b>15.5#</b>	<b>4700'</b>	<b>850 SXS C</b>	<b>4000'</b>

<sup>22</sup> 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

**SEE ATTACHED BLOW OUT PREVENTER SCHEMATIC.**

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>L. M. Sanders</i> Printed name: <b>L. M. SANDERS</b> Title: <b>SUPERVISOR, REG. AFFAIRS</b> Date: <b>11/09/94</b> Phone: <b>915/368-1488</b>		<b>OIL CONSERVATION DIVISION</b> Approved by: _____ Title: _____ Approval Date: _____ Expiration Date: _____ Conditions of Approval: Attached <input type="checkbox"/>	
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## CASING & CEMENTING PROGRAM

EVGSAU - 388

Well 388 kickoff point is approx. 3000' build to 11-1/2 deg. and hold.

8 5/8" 24 lb/ft k-55 Surface Casing Set at 1625' - 12 1/4" Hole:

Lead to surface with 600 sx 75/25 Class "C" Pozmix + 4% gel + 2% CaCl<sub>2</sub>

Slurry Weight:	13.5 ppg
Slurry Yield:	1.58 ft <sup>3</sup> /sx
Water Requirement:	7.99 gals/sx

Tail with 150 sx of Class "C" + 2% CaCl<sub>2</sub>.

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 ft <sup>3</sup> /sx
Water Requirement:	6.3 gals/sx

5 1/2" 15.5 lb/ft J-55 Production Casing Set at 4700' - 7 7/8" Hole:

Lead: 500 sx Class "C" 65/35 Poz + 6% Gel + 3% Salt. Desired TOC = Surface.

Slurry Weight:	12.8 ppg
Slurry Yield:	1.85 ft <sup>3</sup> /sx
Water Requirement:	9.9 gals/sx

Tail: 350 sx Class "C" 50/50 Poz + 0.5% Halad-9 + 1.5% CaCl<sub>2</sub>. Desired TOC = 4000'.

Slurry Weight:	14.6 ppg
Slurry Yield:	1.15 ft <sup>3</sup> /sx
Water Requirement:	5.0 gals/sx

# MUD PROGRAM

EVGSAU -388

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	CL PPM	SOLIDS	ADDITIVES
Surf - 1625'	8.3 - 9.0 ppg	28 - 36 sec/1000cc	-	Fresh Water	-	FW Gel + Lime for spud mud.
1625' - 4700'	10.0 ppg	28 - 32 sec/1000cc	-	Saturated	-	Native Solids + Paper Sweeps before reaching pay zone. Circulate hole at TD prior to logging.

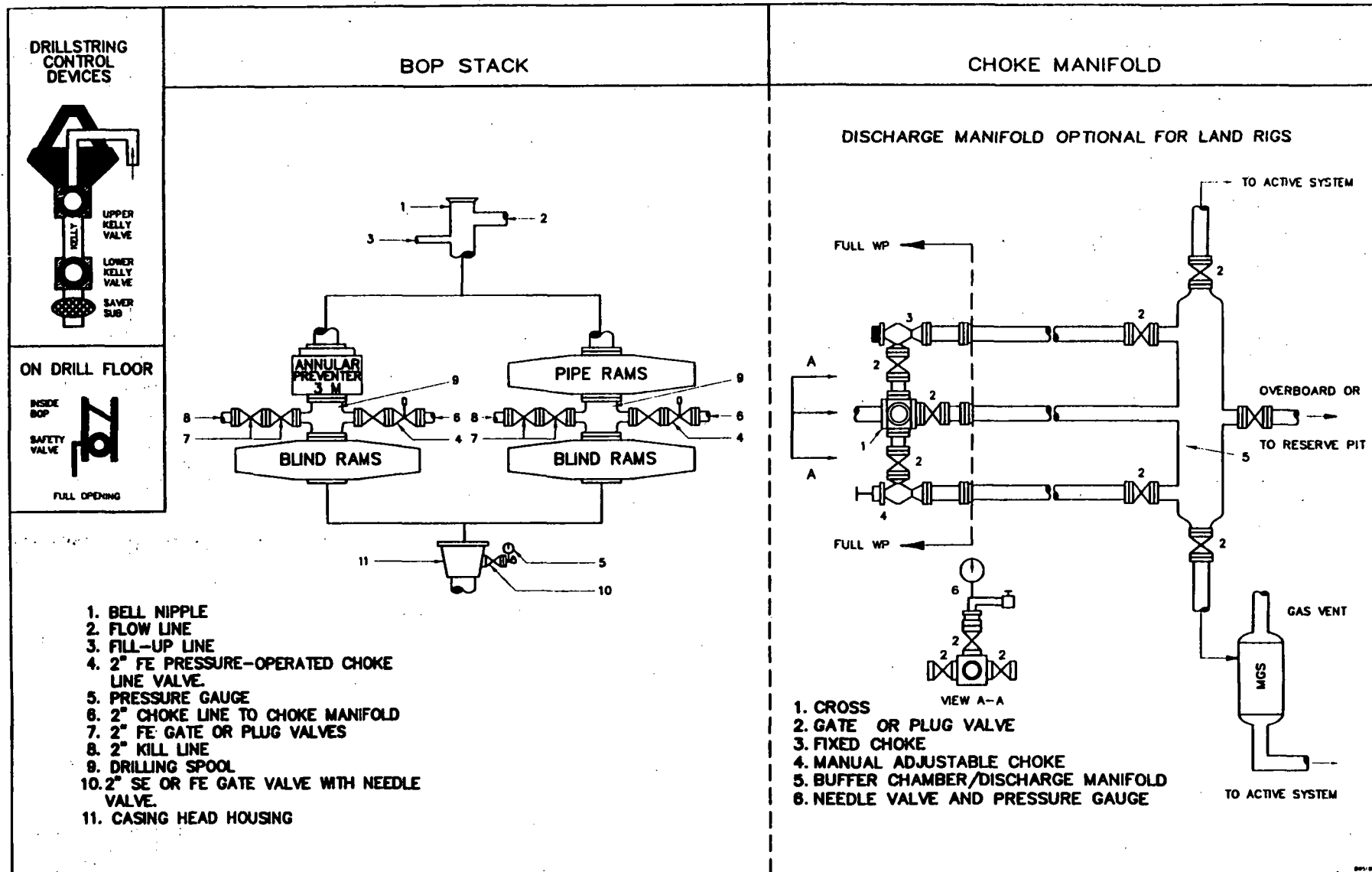
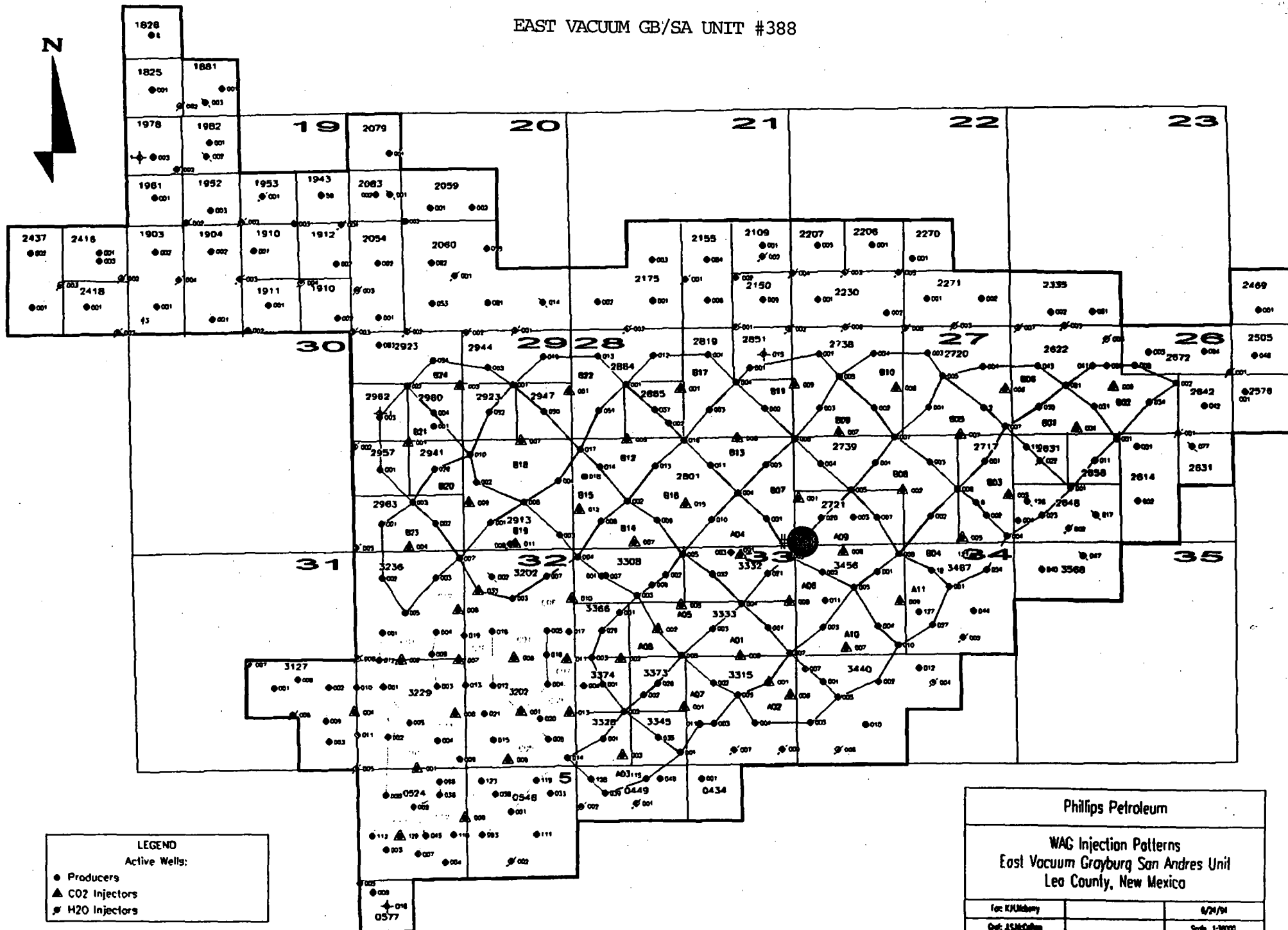


Fig. 2.4. Class 2 BOP and Choke Manifold.

# EAST VACUUM GB/SA UNIT #388

N



Philips Petroleum

WAG Injection Patterns  
East Vacuum Grayburg San Andres Unit  
Lea County, New Mexico

For: KJH/BB

6/24/94

By: JSM/BB

Scale 1:25000



**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79762  
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP  
Permian Basin Region

OIL CONSERVATION DIVISION  
RECEIVED

'94 NO 174 PM 8 52

**RE: Application for Directional  
Drilling and Unorthodox Loc.  
East Vacuum Gb/SA Unit  
Well No. 388  
Section 27, T-17-S, R-35-E  
Lea County, New Mexico**

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, New Mexico 87504

Attention: Mr. William J. LeMay, Director

Gentlemen:

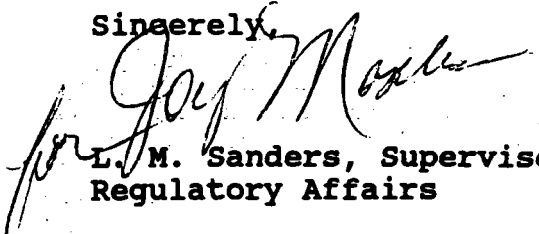
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Sincerely,

  
L. M. Sanders, Supervisor  
Regulatory Affairs

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

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P.O. Drawer DD, Artesia, NM 88210

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 62180	Pool Name VACUUM GRAYBURG/SAN ANDRES
Property Code 009166	Property Name EAST VACUUM GB/SA UNIT	Well Number 388
GRID No. 017643	Operator Name PHILLIPS PETROLEUM COMPANY	Elevation 3937'

Surface Location

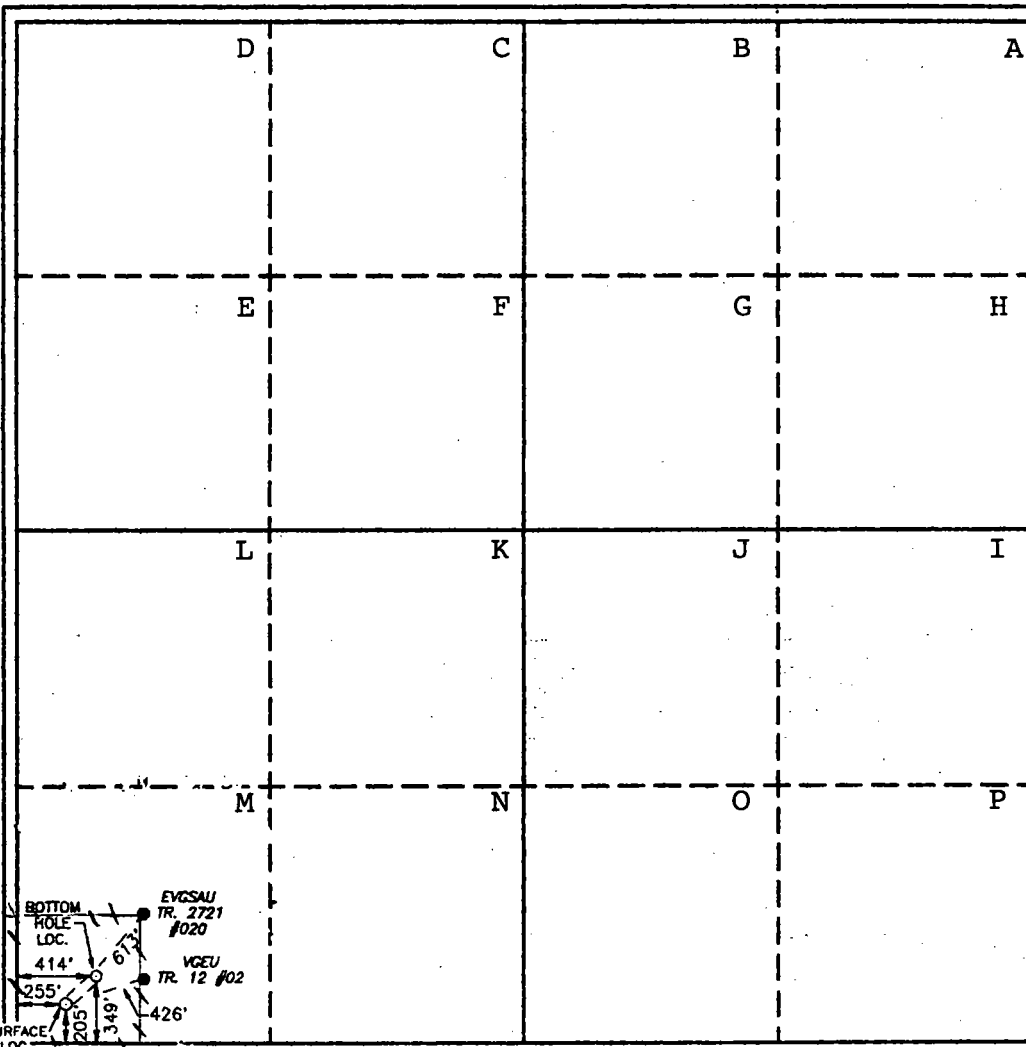
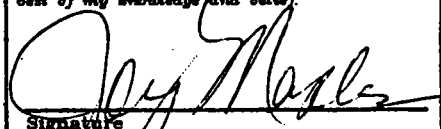
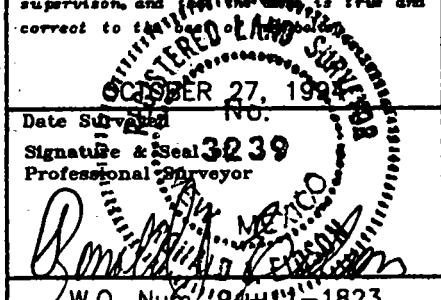
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	17 S	35 E		205	SOUTH	255	WEST	LEA

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
M	27	17 S	35 E		349'	SOUTH	414'	WEST	LEA

Dedicated Acres	<del>20000</del> 10	Consolidation Code	Order No. R-5897
-----------------	------------------------	--------------------	---------------------

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

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.</p> <p> Signature L. M. Sanders Printed Name Supv., Reg. Affairs Title November 9, 1994 Date</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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 knowledge and belief.</p> <p> Date Surveyed Signature &amp; Seal Professional Surveyor W.O. NUKO '94-11-1823</p> <p>Certificate No. JOHN W. WEST, 676 RONALD J. EIDSON, 3239</p>
---	--



State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-101

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 6 Copies

Fee Lease - 5 Copies

District I  
PO Box 1988, Hobbs, NM 88241-1988  
District II  
PO Drawer DD, Artesia, NM 88211-4719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

☐ AMENDED REPORT

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

<sup>1</sup> Operator name and Address <b>Phillips Petroleum Company</b> <b>4001 Penbrook Street</b> <b>Odessa, TX 797962</b>		<sup>2</sup> OGRID Number <b>017643</b>
		<sup>3</sup> API Number <b>30-0</b>
<sup>4</sup> Property Code <b>009166</b>	<sup>5</sup> Property Name <b>EAST VACUUM GB/SA UNIT</b>	<sup>6</sup> Well Number <b>388</b>

<sup>7</sup> Surface Location

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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<sup>8</sup> 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
<b>M</b>	<b>27</b>	<b>17 S</b>	<b>35 E</b>		<b>349</b>	<b>SOUTH</b>	<b>414</b>	<b>WEST</b>	<b>LEA</b>

<sup>9</sup> Proposed Pool 1

**VACUUM GRAYBURG/SAN ANDRES**

<sup>10</sup> Proposed Pool 2

**VACUUM GRAYBURG/SAN ANDRES**

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>0</b>	<sup>13</sup> Cable/Rotary <b>R</b>	<sup>14</sup> Lease Type Code <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3937' GR-UNPREPARED</b>
<sup>16</sup> Multiple <b>NO</b>	<sup>17</sup> Proposed Depth <b>4700'</b>	<sup>18</sup> Formations <b>SAN ANDRES</b>	<sup>19</sup> Contractor <b>NA</b>	<sup>20</sup> Spud Date <b>UPON APPROVAL</b>

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
<b>12-1/4"</b>	<b>8-5/8"</b>	<b>24#</b>	<b>1625'</b>	<b>750 SXS C</b>	<b>SURFACE</b>
<b>7-7/8"</b>	<b>5-1/2"</b>	<b>15.5#</b>	<b>4700'</b>	<b>850 SXS C</b>	<b>4000'</b>

<sup>22</sup> 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

**SEE ATTACHED BLOW OUT PREVENTER SCHEMATIC.**

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>L. M. Sanders</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed name: <b>L. M. SANDERS</b>		Approved by:	
Title: <b>SUPERVISOR, REG. AFFAIRS</b>		Title:	
Date: <b>11/09/94</b>	Phone: <b>915/368-1488</b>	Approval Date:	Expiration Date:
		Conditions of Approval: Attached <input type="checkbox"/>	

## CASING & CEMENTING PROGRAM

EVGSAU - 388

Well 388 kickoff point is approx. 3000' build to 11-1/2 deg. and hold.

8 5/8" 24 lb/ft k-55 Surface Casing Set at 1625' - 12 1/4" Hole:

Lead to surface with 600 sx 75/25 Class "C" Pozmix + 4% gel + 2% CaCl<sub>2</sub>

Slurry Weight:	13.5 ppg
Slurry Yield:	1.58 ft <sup>3</sup> /sx
Water Requirement:	7.99 gals/sx

Tail with 150 sx of Class "C" + 2% CaCl<sub>2</sub>.

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 ft <sup>3</sup> /sx
Water Requirement:	6.3 gals/sx

5 1/2" 15.5 lb/ft J-55 Production Casing Set at 4700' - 7 7/8" Hole:

Lead: 500 sx Class "C" 65/35 Poz + 6% Gel + 3% Salt. Desired TOC = Surface.

Slurry Weight:	12.8 ppg
Slurry Yield:	1.85 ft <sup>3</sup> /sx
Water Requirement:	9.9 gals/sx

Tail: 350 sx Class "C" 50/50 Poz + 0.5% Halad-9 + 1.5% CaCl<sub>2</sub>. Desired TOC = 4000'.

Slurry Weight:	14.6 ppg
Slurry Yield:	1.15 ft <sup>3</sup> /sx
Water Requirement:	5.0 gals/sx

# MUD PROGRAM

EVGSAU -388

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	CL PPM	SOLIDS	ADDITIVES
Surf - 1625'	8.3 - 9.0 ppg	28 - 36 sec/1000cc	-	Fresh Water	-	FW Gel + Lime for spud mud.
1625' - 4700'	10.0 ppg	28 - 32 sec/1000cc	-	Saturated	-	Native Solids + Paper Sweeps before reaching pay zone. Circulate hole at TD prior to logging.

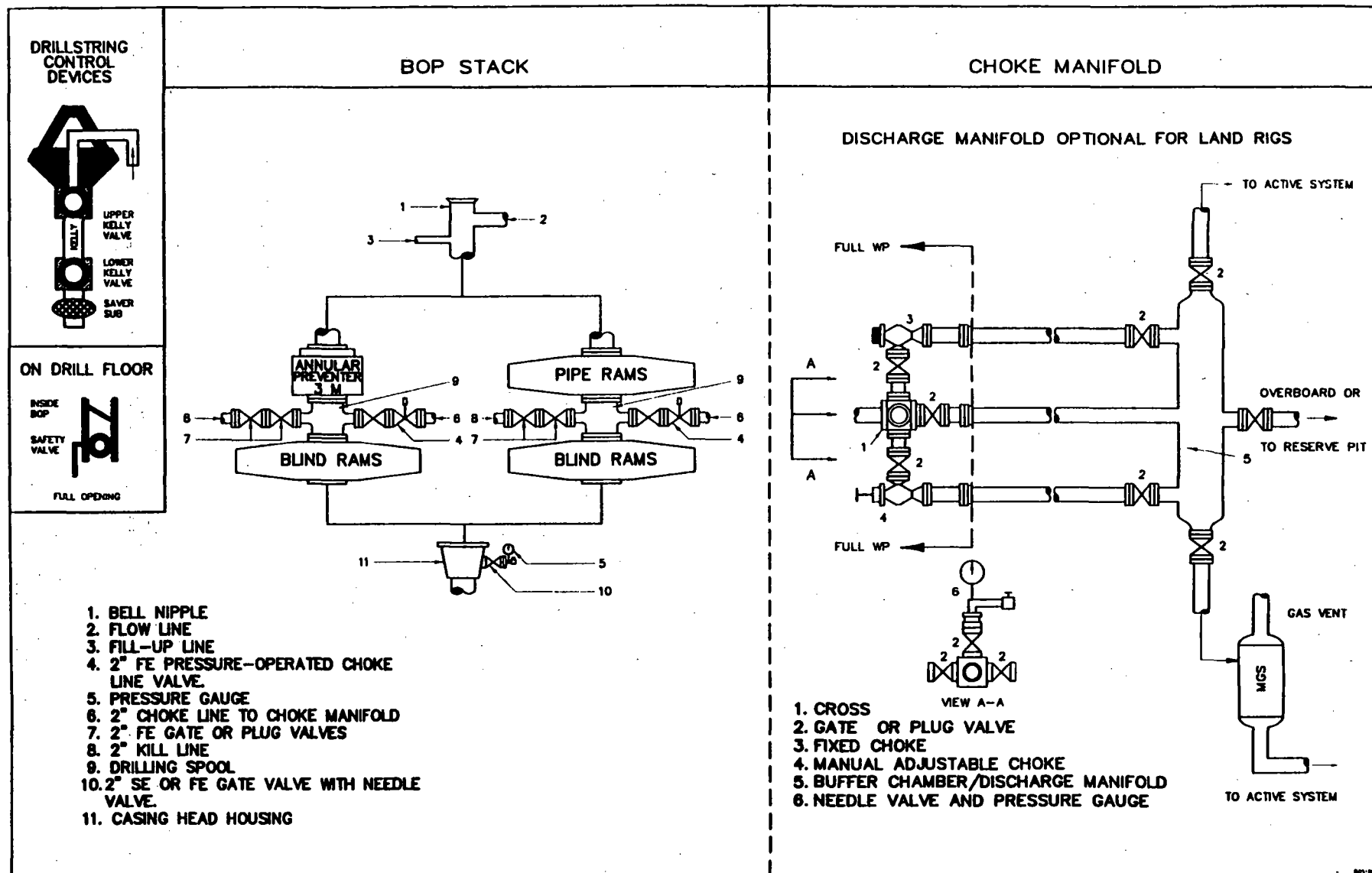
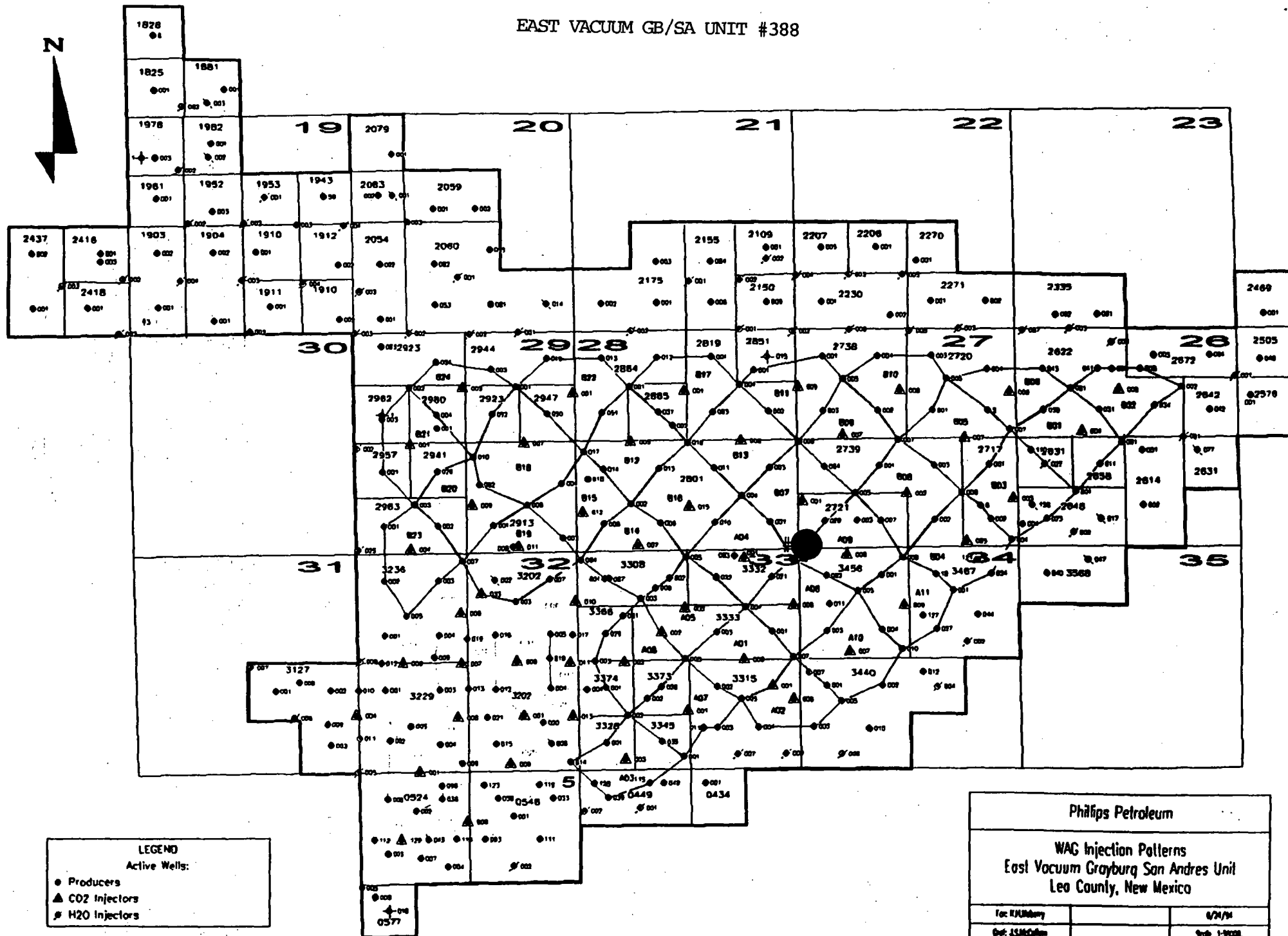


Fig. 2.4. Class 2 BOP and Choke Manifold.

# EAST VACUUM GB/SA UNIT #388





**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79762  
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP  
Permian Basin Region

OIL CONSERVATION DIVISION  
RECEIVED

'94 NOV 14 AM 8 52

**RE: Application for Directional  
Drilling and Unorthodox Loc.  
East Vacuum Gb/SA Unit  
Well No. 388  
Section 27, T-17-S, R-35-E  
Lea County, New Mexico**

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, New Mexico 87504

Attention: Mr. William J. LeMay, Director

Gentlemen:

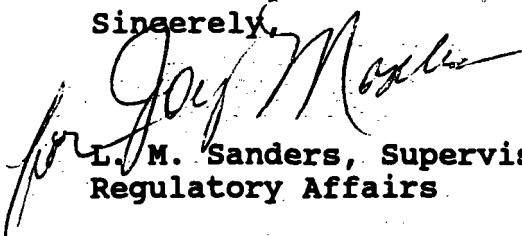
We respectfully request approval to intentionally deviate our East Vacuum GB/SA Unit No. 388, as provided in Statewide Rule 111. The surface location of this well is 205' FSL and 255' FWL, with an intended bottom hole location of 349' FSL and 414' FWL at depth of 4700'. The top of the San Andres should be cut at 4365' TVD. This unorthodox surface location was selected due to electrical high wires. The intended bottom hole location is an orthodox location.

Attached is a plat showing surface location and targeted bottom hole location.

This directional well shall be tested at least once every 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104.

This well is located within the central portion of the East Vacuum GB/SA Unit, therefore Phillips is its own offset operator. Your consideration and approval will be appreciated. Please direct any questions to me at (915) 368-1488.

Sincerely,

  
L. M. Sanders, Supervisor  
Regulatory Affairs

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Instruction on back  
Submit to Appropriate District Office  
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Fee Lease - 3 Copies

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 62180	Pool Name VACUUM GRAYBURG/SAN ANDRES
Property Code 009166	Property Name EAST VACUUM GB/SA UNIT	Well Number 388
OGRID No. 017643	Operator Name PHILLIPS PETROLEUM COMPANY	Elevation 3937'

Surface Location


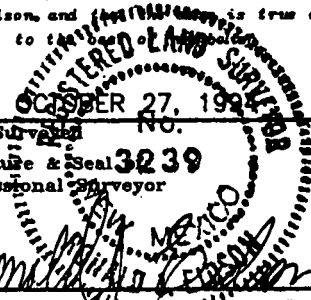
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	17 S	35 E		349'	SOUTH	414'	WEST	LEA

Dedicated Acres	<del>255.00</del> Infill	Consolidation Code	Order No.
10			R-5897

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

D	C	B	A	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.   Signature L. M. Sanders Printed Name Supv., Reg. Affairs Title November 9, 1994 Date	
E	F	G	H		<b>SURVEYOR CERTIFICATION</b>  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 knowledge and belief.   Date Surveyed Signature & Seal Professional Surveyor W.O. NUK Certificate No. JOHN W. WEST, 676 RONALD J. EIDSON, 3239
L	K	J	I		
M	N	O	P		

**Diagram:**  
BOTTOM HOLE LOC. 414' 255' 205' 349' 426'  
EVCSAU TR. 2721 #020  
VCEU TR. 12 #02

District I  
PO Box 1988, Hobbs, NM 88241-1988  
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

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

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Phone: <b>915/368-1488</b>			



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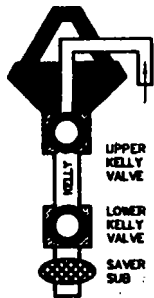
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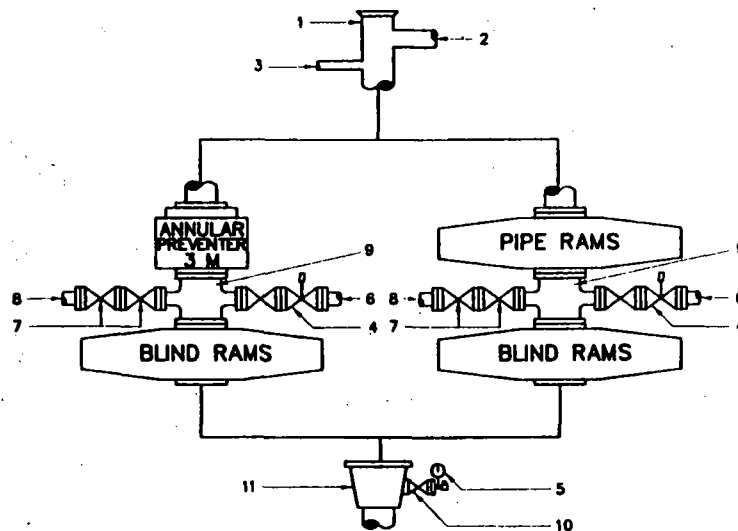
# DRILLSTRING CONTROL DEVICES



## ON DRILL FLOOR



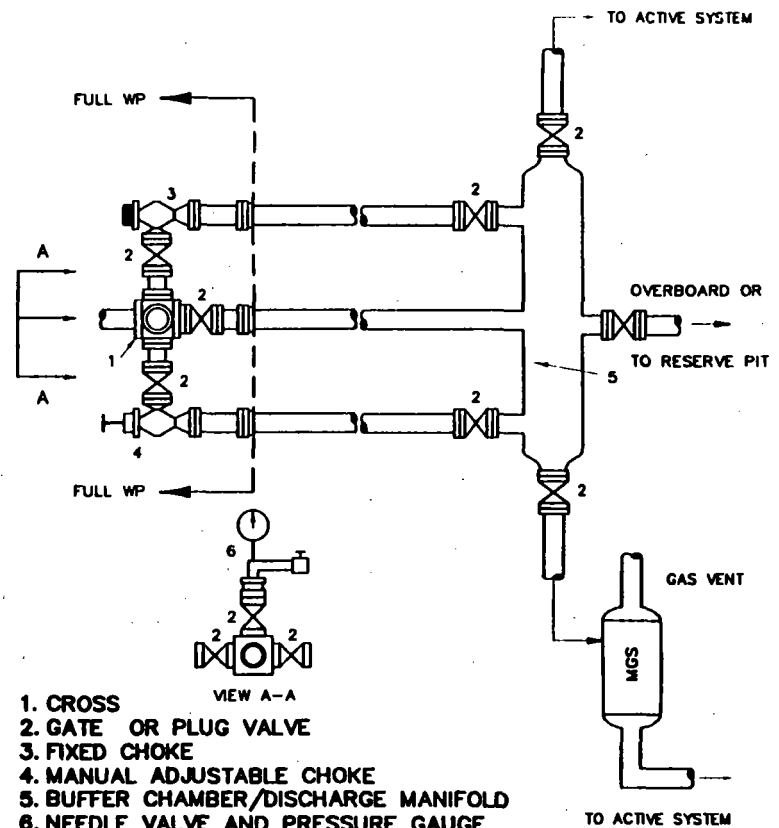
## BOP STACK



1. BELL NIPPLE
2. FLOW LINE
3. FILL-UP LINE
4. 2" FE PRESSURE-OPERATED CHOKE LINE VALVE
5. PRESSURE GAUGE
6. 2" CHOKE LINE TO CHOKE MANIFOLD
7. 2" FE GATE OR PLUG VALVES
8. 2" KILL LINE
9. DRILLING SPOOL
10. 2" SE OR FE GATE VALVE WITH NEEDLE VALVE
11. CASING HEAD HOUSING

## CHOKE MANIFOLD

### DISCHARGE MANIFOLD OPTIONAL FOR LAND RIGS



1. CROSS
2. GATE OR PLUG VALVE
3. FIXED CHOKE
4. MANUAL ADJUSTABLE CHOKE
5. BUFFER CHAMBER/DISCHARGE MANIFOLD
6. NEEDLE VALVE AND PRESSURE GAUGE

Fig. 2.4. Class 2 BOP and Choke Manifold.

# EAST VACUUM GB/SA UNIT #388

