

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
May 27, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

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

Operator Name and Address Patina San Juan, Inc. 5802 U. S. Highway 64 Farmington, NM 87401 (505) 632-8056		GRID Number 173252
Property Code 34333	Property Name ALAMO 22	Well No. #08
Proposed Pool 1 BASIN FRUITLAND COAL		Proposed Pool 2

Surface Location									
UL or lot no. H	Sec. 22	Township 31N	Range 13W	Lot Idn H	Feet from the 2285	North/South line NORTH	Feet from the 675	East/West line EAST	County SAN JUAN

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

Additional Well Information				
Work Type Code N	Well Type Code G	Cable/Rotary R	Lease Type Code P	Ground Level Elevation 5607'
Multiple N	Proposed Depth 2200'	Formation Basin Fruitland Coal	Contractor N/A	Spud Date JUNE 1, 2005
Depth to Groundwater >100'		Distance from nearest fresh water well >500'		Distance from nearest surface water >1000'
Pit: Liner: Synthetic <input type="checkbox"/> 12 mils thick Clay <input type="checkbox"/> Pit Volume: _____ bbls Drilling Method: Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input checked="" type="checkbox"/>				
Closed-Loop System <input type="checkbox"/>				

Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12 1/4"	9 5/8"	36#	250'	165 sx	SURFACE
8 3/4"	7"	23#	2200' +/-	220 sx	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.

Patina San Juan, Inc. proposes to drill a vertical well at the above described location and test the Basin Fruitland Coal formation as referenced in the attached drilling plan.

The Basin Fruitland Coal formation will be selectively perforated and completed.

The well will be connected to the Gulfterra gathering system.

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OGD-approved plan ☐.

Printed name: **JEAN M. MUSE**

Title: **REGULATORY/ENGINEERING TECHNICIAN**

E-mail Address: **jmuse@patinasanjuan.com**

Date: **12/13/04**

Phone: **505-632-8056**

OIL CONSERVATION DIVISION

Approved by

Title:

DEPUTY OIL & GAS INSPECTOR, DIST. #3

Approval Date:

DEC 15 2004

Expiration Date:

DEC 15 2005

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

*API Number 30-015-32736		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 34333	*Property Name ALAMO 22		*Well Number 08
*GRID No. 173252	*Operator Name PATINA SAN JUAN, INC.		*Elevation 5607'

¹⁰ Surface Location

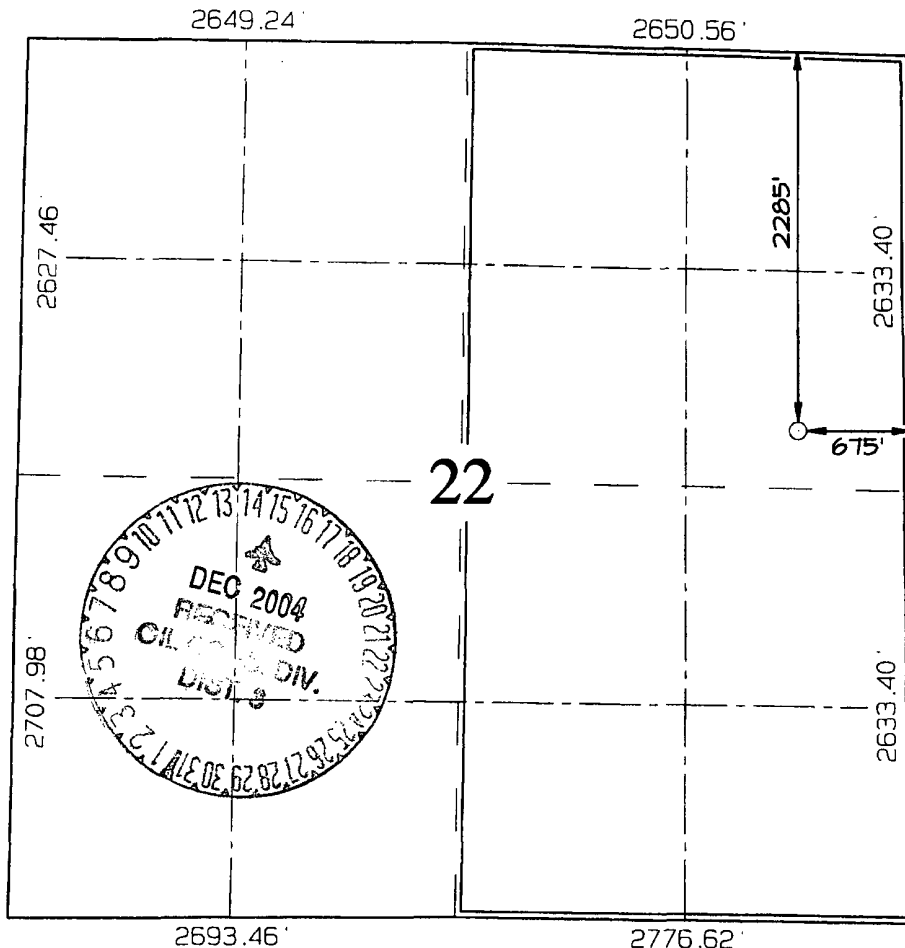
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	22	31N	13W		2285	NORTH	675	EAST	SAN JUAN

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

¹² Dedicated Acres 320.0 Acres - (E/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	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



¹⁷ OPERATOR CERTIFICATION

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

Signature: *J. M. Mues*
Printed Name: **Jean M. Mues**
Title: **Reg/Eng'g Tech**
Date: **12/13/04**

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

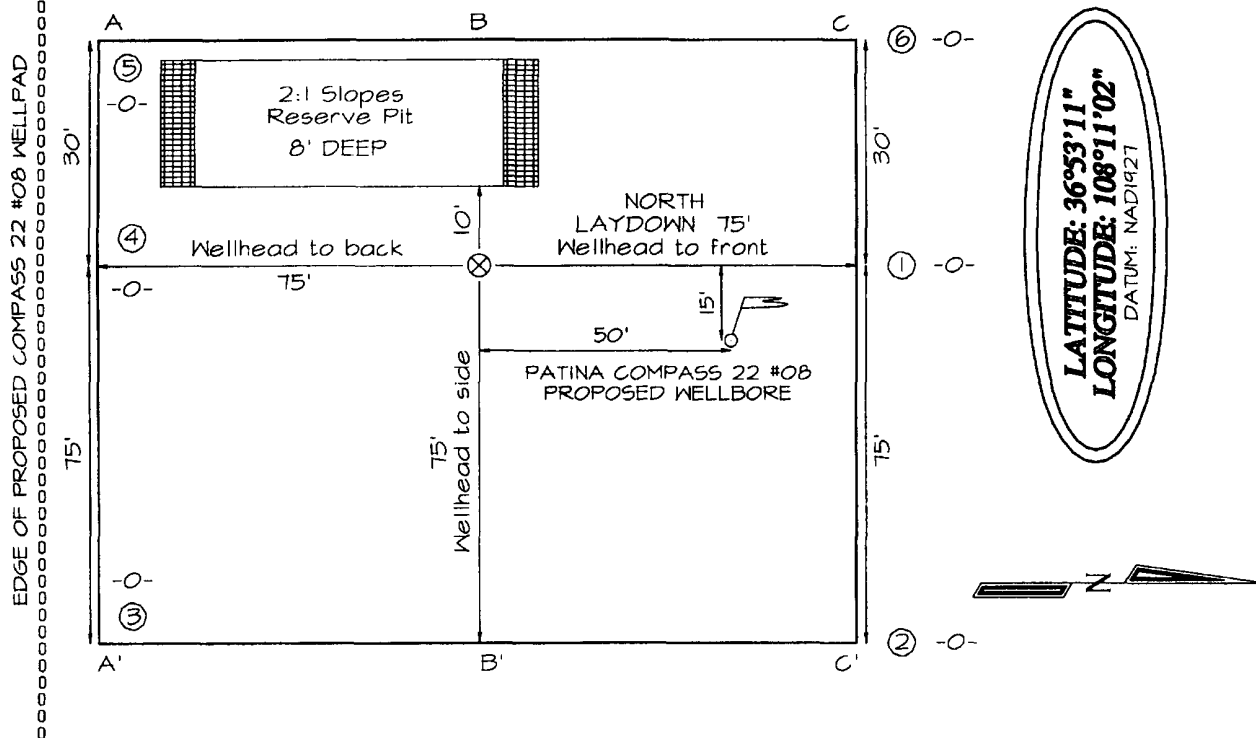
Survey Date: OCTOBER 8, 2004

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

PATINA SAN JUAN, INC. ALAMO 22 #08
2285' FNL & 675' FEL, SECTION 22, T31N, R13W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 5607'



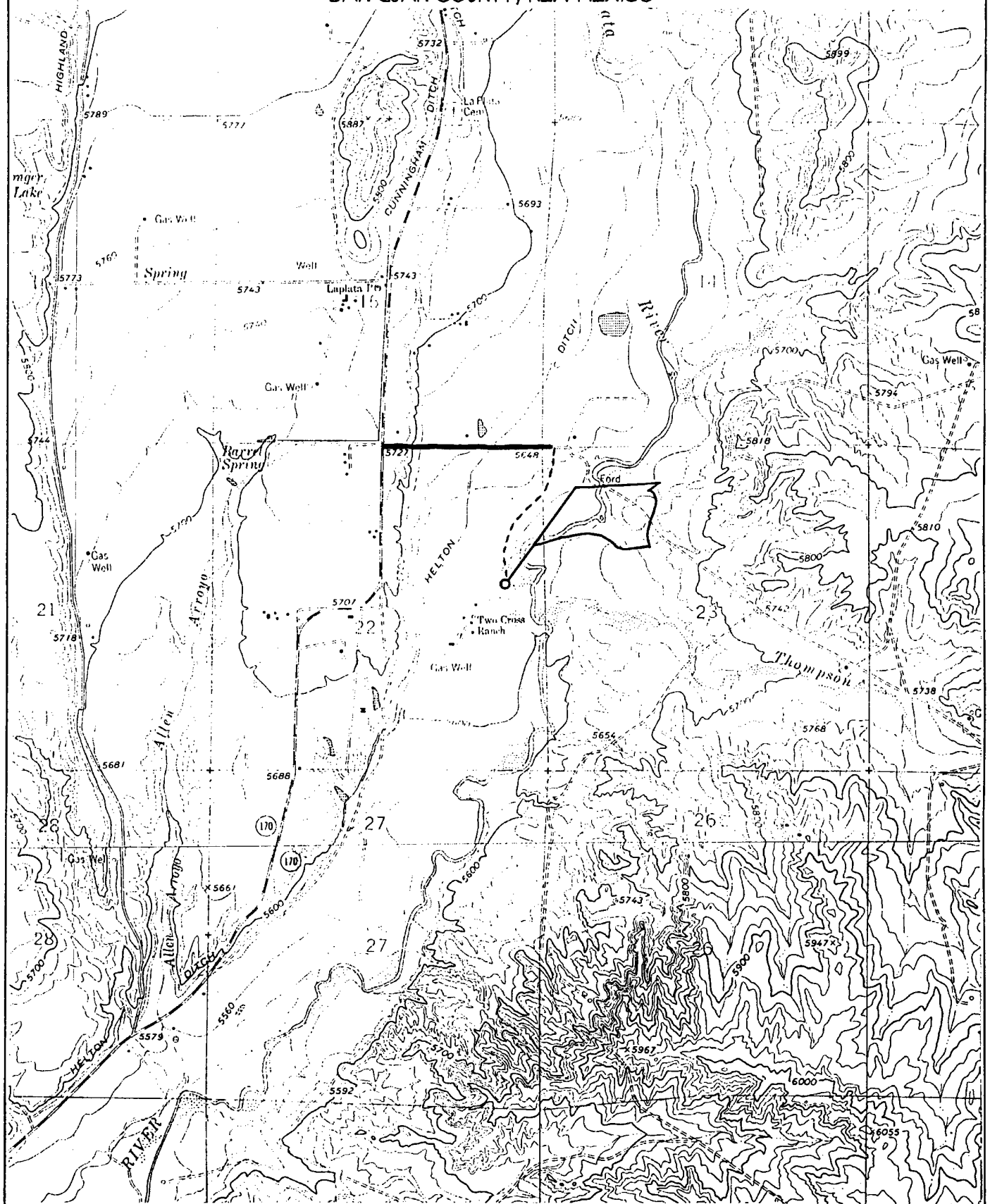
A-A'						
5617'						
5607'						
5597'						

B-B'						
5617'						
5607'						
5597'						

C-C'						
5617'						
5607'						
5597'						

Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction

PATINA SAN JUAN, INC. ALAMO 22 #08
2285' FNL & 675' FEL, SECTION 22, T31N, R13W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO



**Alamo #22-08
General Drilling Plan
Patina San Juan, Inc.
San Juan County, New Mexico**

LOCATION:

SE NE
Section 22, T31N, R13W
San Juan County, New Mexico

Field: Basin Fruitland Coal
Surface: Fee
Minerals: Fee

**SURFACE FORMATION, ESTIMATED TOPS AND WATER, OIL, GAS OR
MINERAL BEARING FORMATIONS (TVD):**

Surface formation – Nacimiento

<i>Formation</i>	<i>Depth</i>
Fruitland**	1228'
Pictured Cliffs ***	1971'
TD	2200'

Legend: * Freshwater bearing formation
 ** Possible hydrocarbon bearing formation
 *** Probable hydrocarbon bearing formation
 # Possible H2S bearing formation

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected.

3. PRESSURE CONTROL EQUIPMENT:

BOP equipment will be tested to its rated working pressure or 70-percent of the internal yield of the surface casing. See attachments for BOP and choke manifold diagrams.

Production Hole BOP Requirements and Test Plan

**Alamo 22 No. 08
General Drilling Plan
Patina San Juan, Inc.
San Juan County, New Mexico**

LOCATION:

SENE of Section 22, T31N, R13W
San Juan, New Mexico

PRESSURE CONTROL EQUIPMENT:

BOP equipment will be tested to the lesser of its rated working pressure, 70-percent of the internal yield of the surface casing or 1,000 psi. See attachments for BOP and choke manifold diagrams.

Production Hole BOP Requirements and Test Plan

11" – 2,000 psi single ram (blind)
11" – 2,000 psi single ram (pipe)

Test as follows:

a) Pipe rams:	1,000 psi (High)	250 psi (low)
b) Choke manifold and lines:	1,000 psi (High)	250 psi (low)

All ram type preventers and related equipment will be hydraulically tested at nipple-up. They will also be retested in either of the following events:

- A pressure seal is broken.
- 30 days have elapsed since the last successful test of the equipment.

Furthermore, BOP's will be checked daily as to mechanical operating condition. All ram type preventers will have hand wheels, which will be operative and accessible at the time the preventers are installed. See attached Exhibit for details on the BOP equipment.

AUXILIARY EQUIPMENT:

- a) Manually operated kelly cock (upper and lower)
- b) Full opening manually operated safety valves in the full open position, capable of fitting all drill stem connections.

CASING DESIGN:

Casing Program:

Hole Size

12 1/4"

8 3/4"

Depth / Formation

250'

2200' and through the Fruitland coal
to sufficient depth to test the coal

Casing Size

9 5/8"

7"

Hole Size	Casing Type	Top (MD)	Bottom (MD)	Wt. (lb./ft)	Grade	Thread	Condition
9-5/8"	Surface	0'	250'	36.0	K55/J55	STC	New
7"	Intermediate <i>Production</i>	0'	2200' +/-	23.0	K55/J55	STC / LTC	New

Casing Data				Collapse (psi)	Burst (psi)	Min. Tensile (Lbs.)
OD	Wt/Ft	Grade	Thread			
9-5/8"	36.0 lbs.	K55/J55	STC	2,020	3,520	394,000
7"	23.0 lbs.	K55/J55	STC / LTC	3,270	4,360	366,000

MINIMUM CASING DESIGN FACTORS:

COLLAPSE: 1.125

BURST: 1.00

TENSION: 1.80

Area Fracture Gradient Range:

0.7 – 0.8 psi/foot

Maximum anticipated reservoir pressure:

900 psi

Maximum anticipated mud weight:

9.0 ppg

Maximum surface treating pressure:

3,500 psi

Float Equipment:

Surface Casing: Guide shoe on bottom and 3 centralizers on the bottom 3 joints.

Production Casing: 7" cement nosed guide shoe and a float collar on top of bottom joint with centralizers over potential hydrocarbon bearing zones.

CEMENTING PROGRAMS:

9-5/8" Surface casing:

165 sxs Type III cement with 2% CaCl_2 , 1/4#/sx cellofakes. 100% excess to circulate cement to surface. WOC 12 hrs. Pressure test surface casing to 1000 psi for 30 minutes.

Slurry weight: 15.2 ppg
Slurry yield: 1.27 ft³/sack

Volume basis:	40' of 9-5/8" shoe joint	17 cu ft
	300' of 12-1/4" x 9-5/8" annulus	94 cu ft
	<u>100% excess (annulus)</u>	<u>94 cu ft</u>
	Total	205 cu ft

Note:

1. Design top of cement is the surface.
2. Have available 100 sx Type III cement with 2% CaCl_2 for top out purposes.

7" Production casing:

220 sacks of Premium lite high strength 35/65 pozmix cement.

Slurry weight: 12.4 ppg
Slurry yield: 1.91 ft³/sack

Volume basis:	40' of 7" shoe joint	9 cu ft
	7 " x 8 3/4" hole	322 cu ft
	250' of 9 5/8" x 7" casing overlap	42 cu ft
	<u>15% excess (annulus)</u>	<u>48 cu ft</u>
	Total	421 cu ft

Note:

1. Design top of cement is the surface.
2. Actual cement volumes to be based on caliper log plus 15%.

MUD PROGRAM:

The surface hole will be drilled with spud mud. Gel and polymer sweeps will be used from surface to 250 feet as necessary to keep hole clean.

The production hole will be drilled with LSND mud from base of surface casing to TD. Anticipated mud weight ranges from 8.5 – 9.0 ppg. Mud weight will be increased as required to maintain hole stability and control gas influx.

Sufficient mud materials to maintain stable wellbore conditions (for either well control or lost circulation scenarios) will be maintained at the well site.

No chrome-based additives will be used in the mud system

EVALUATION PROGRAM:

Mud logger: None Planned.

Testing: No DST is planned

Coring: None Planned

Electric logs:

Intermediate Hole:

- 1) DIL-GR-SP: TD to base of surface casing.
- 2) LDT-CNL-GR-CAL-PE: TD to base of surface casing

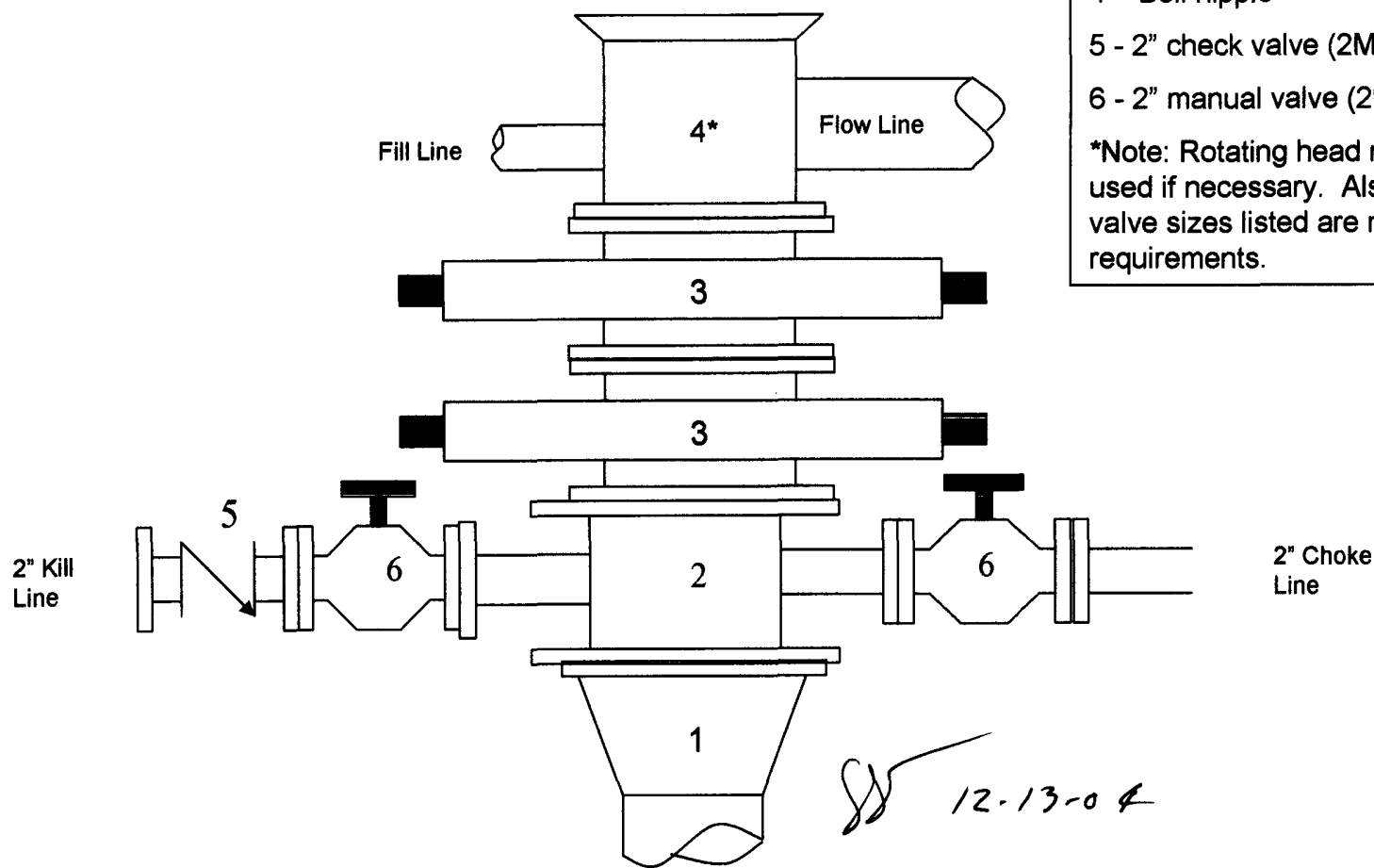
Production Hole:

- 1) DIL-GR-SP: TD to base of intermediate casing.
- 2) LDT-CNL-GR-CAL-PE: TD to base of intermediate casing

4 *SV* 12-13-02

Alamo 22 No. 08

2000 psi BOP stack
Minimum requirements



Components

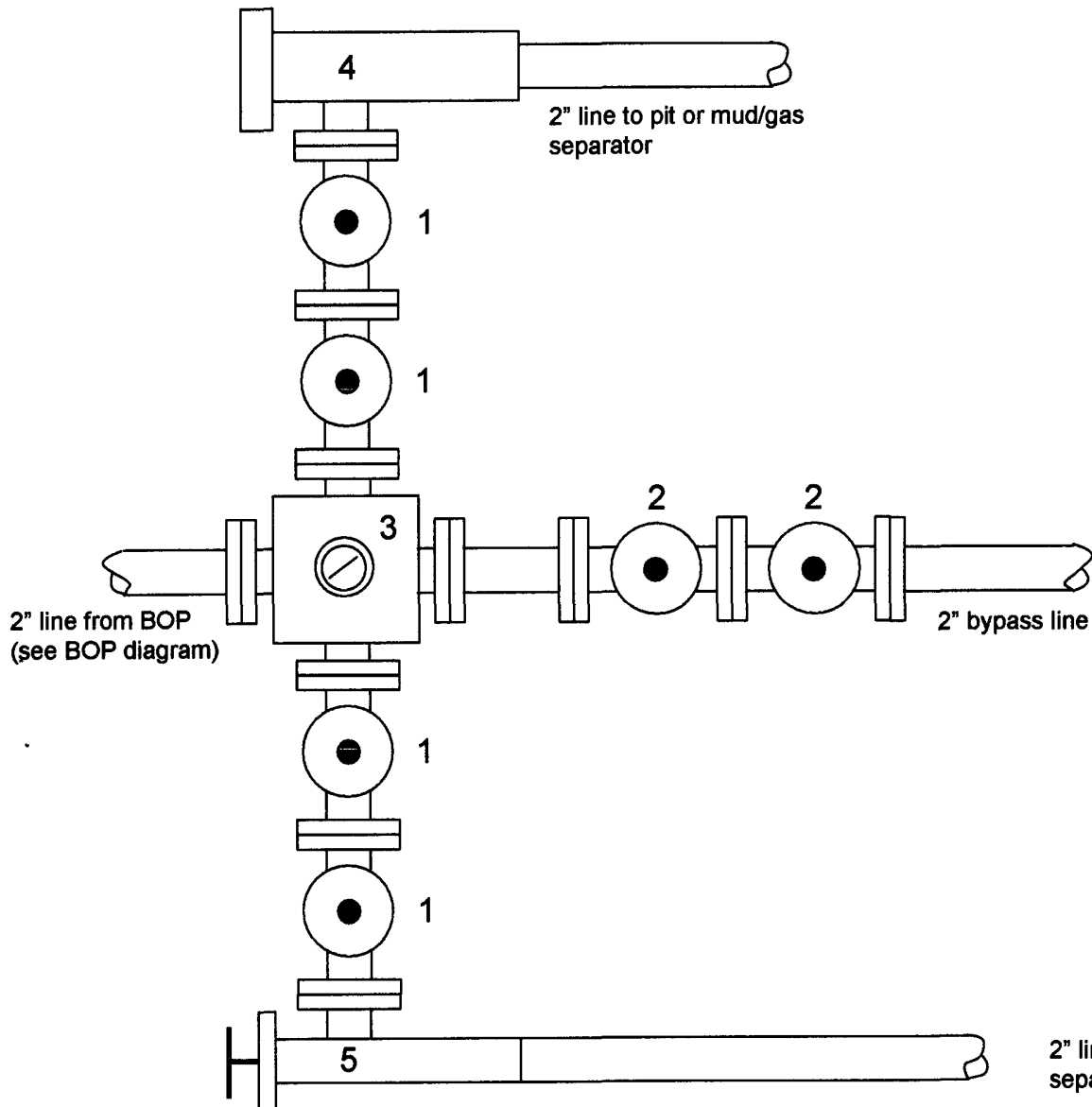
- 1 - Wellhead 9-5/8" (2M)
- 2 - Drilling spool 11" (2M)
- 3 - A double or two single rams with blinds on bottom 11" (2M)
- 4 - Bell nipple*
- 5 - 2" check valve (2M)
- 6 - 2" manual valve (2M)

*Note: Rotating head may also be used if necessary. Also, all line and valve sizes listed are minimum requirements.

Alamo 22 No. 08

2000 psi Choke Manifold

Minimum requirements



Components

1 – 2" Valve (2M)

2 – 2" Valve (2M)

3 – Mud cross with gauge (2M) flanged below the gage.

4 – Adjustable beam choke (2M)

5 – Adjustable needle choke (2M)

Note: All line and valve sizes listed are minimum requirements.

SV 12-13-04