

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  
Revised June 10, 2003

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

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**

<sup>1</sup> Operator Name and Address Nadel and Gussman Permian, L.L.C. 601 N. Marienfeld, Suite 508 Midland, TX 79701		<sup>2</sup> OGRID Number 155615
		<sup>3</sup> API Number 30 - 015 - 32925
<sup>3</sup> Property Code	<sup>5</sup> Property Name Dulce Amor	<sup>6</sup> Well No. 1

**7 Surface Location**

UL or lot no.	Section	Townshi	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	4	p 18S	26E		900	North	1980	East	Eddy

**8 Proposed Bottom Hole Location If D**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	N	County
<sup>9</sup> Proposed Pool 1 Undesignated Morrow						NOTIFY OCD SPUD & TIME TO WITNESS 8 5/8" CASING	

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code G	<sup>13</sup> Cable/Rotary Rotary	<sup>14</sup> Lease Type Code P	<sup>15</sup> Ground Level Elevation 3291'
<sup>16</sup> Multiple NO	<sup>17</sup> Proposed Depth 9500'	<sup>18</sup> Formation Morrow	<sup>19</sup> Contractor Patterson	<sup>20</sup> Spud Date 7/20/03

**21 Proposed Casing and Cement Program**

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#	400'	345sx	Circ. To Surface
11"	8-5/8"	24# or 32#	1300'	450sx	Circ. To Surface
7-7/8"	5-1/2"	17#	9500'	520sx	3000'

<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.

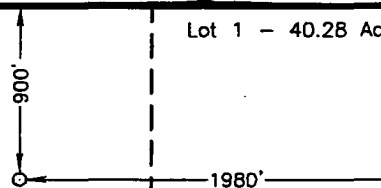
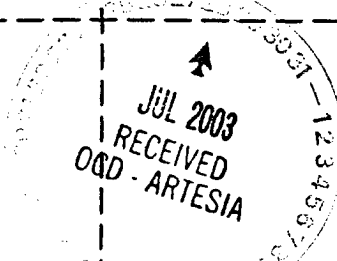
Drill and complete well in the morrow w/ a projected TD of 9500'. The morrow will be completed using tubing or Casing guns. A tree or BOP/ lubricator assembly will be nipped up prior to perforating.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: <i>Joel Martin</i>		Approved by: <i>Jim W. Guss</i>	
Printed name: Joel Martin		Title: District Supervisor	
Title: Engineering Manager		Approval Date: AUG 03 2003	Expiration Date: AUG 03 2004
E-mail Address:			
Date: 7/25/03	Phone: 915 682 4429	Conditions of Approval: Attached <input type="checkbox"/>	

**DISTRICT IV**  
**2040 South Pacheco, Santa Fe, NM 87505**

**Submit to Appropriate District Office**  
**State Lease - 4 Copies**  
**Fee Lease - 3 Copies**

2040 South Pacheco  
Santa Fe, New Mexico 87504-2088

Lot 4 - 40.04 Ac	Lot 3 - 40.12 Ac	<div style="text-align: center;">  </div>	Lot 1 - 40.28 Ac
<div style="text-align: center;">  </div>		Lot 2 - 40.20 Ac Lat - N32°46'54.8" Lon - W104°23'04.7"	

### OPERATOR CERTIFICATION

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

*Joel Martin*

Signature

Engineering Manager

Printed Name

Joel Martin

Title

7/25/03

Date

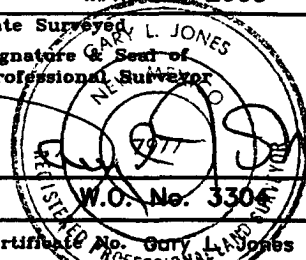
### SURVEYOR CERTIFICATION

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.

**MAY 22, 2003**

Date Surveyed

Signature & Seal of Professional Surveyor

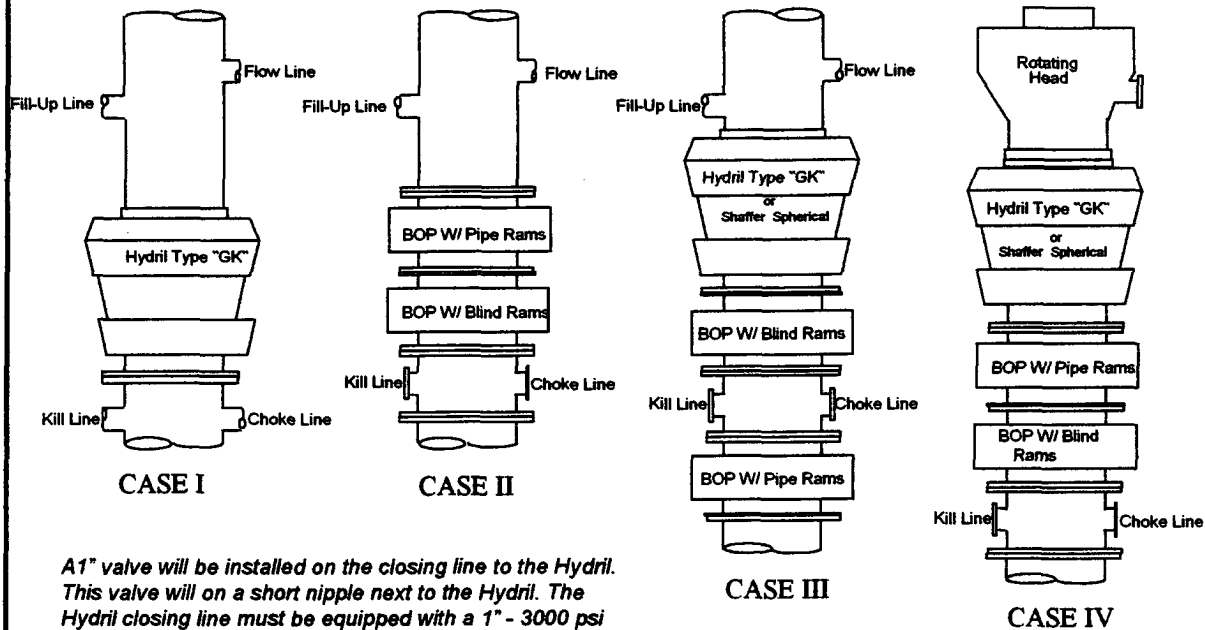


Certified No. Gary L. Jones 7977

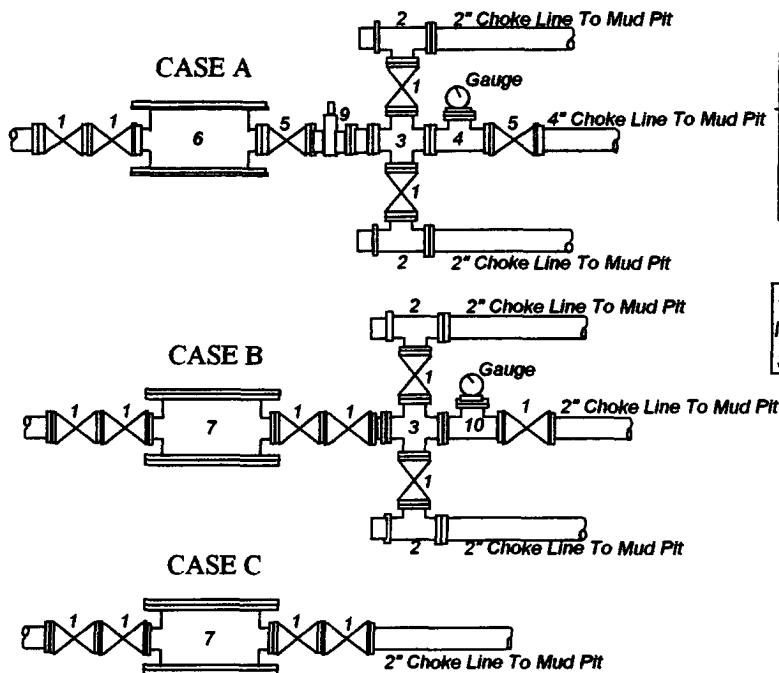
**BASIN SURVEYS**

Nadel and Gussman Permian  
Dulce Amor #1

MINIMUM BLOWOUT PREVENTER REQUIREMENTS



A1" valve will be installed on the closing line to the Hydril. This valve will be on a short nipple next to the Hydril. The Hydril closing line must be equipped with a 1" - 3000 psi WP plug valve on the nipple into the Hydril.



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
11"	III	5000	B

\*Rotating head required

Bradenhead : \_\_\_\_\_  
Mfr: \_\_\_\_\_  
Size: \_\_\_\_\_ Type: \_\_\_\_\_

**Legend**

1. 2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shafter Flo-Seal.
2. 2" flanged adjustable chokes. min. 1" full opening & equipped with hard trim.
3. 4" x 2" flanged steel cross.
4. 4" flanged steel tee.
5. 4" flanged all steel valve (Type as in no. 1).
6. Drilling Spool with 2" x 4" flanged outlet.
7. Drilling Spool with 2" x 2" flanged outlet.
8. 2" x 2" flanged steel cross.
9. 4" pressure operated gate valve.
10. 2" flanged steel tee.

**Notes**

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.

(10-31-96) WTXBOPS.PPT

**NADEL AND GUSSMAN PERMIAN, L.L.C.**  
**601. N. Marienfeld, Suite 508**  
**Midland, TX 79701**  
**(915) 682-4429 (P)**  
**(915) 682-4325 (Fax)**

7/25/03

Mr. Bryan Arrant  
District 2 Geologist  
New Mexico Oil and Gas Division  
1301 West Grand  
Artesia, NM 88210

**Re: Dulce Amor #1**  
**900' FNL, 1980' FEL**  
**Sec. 4-18s-26e**  
**Eddy, NM**  
**Rule 118 H2S Exposure**

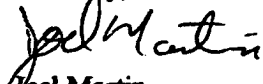


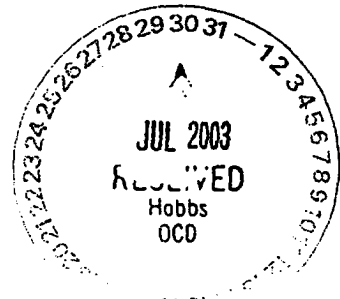
Dear Mr. Arrant,

Nadel and Gussman Permian has evaluated this well and we don not expect to encounter hydrogen sulfide. However, we will employ a third party monitoring system. We will begin monitoring prior to drilling out the intermediate casing and will continue through monitoring through the remainder of the well.

Please contact me if you have any additional questions.

Sincerely,

  
Joel Martin  
Engineering Manager





**Newpark Drilling Fluids, LLC**



## ***DRILLING FLUIDS PROGRAM***

### ***PREPARED FOR:***

***Dulce Amor No.1***

***Section 4, T-18-S, R-26-E  
Eddy County, New Mexico***

### ***SUBMITTED TO:***

***Mr. Joel Martin***

***Nadel & Gussman Permian, LLC  
601 N Marienfeld  
Suite 508  
Midland, Texas 79701***

### ***PREPARED BY:***

***Ken Anthony***

**Newpark Drilling Fluids, LLC**

Dulce Amor No.1  
Section 4, T-18-S, R-26-E  
Eddy County, New Mexico

**Anticipated Formation Tops**

San Andres	960'
Glorietta	2,402'
Abo	4,328'
Wolfcamp	5,480'
Wolfcamp Marker	5,946'
1 <sup>st</sup> Sister	6,286'
Strawn	7,982'
Atoka	8,390'
Morrow (lime)	8,536'
Morrow (clastics)	8,578'
Mississippian	8,828'

**Newpark Drilling Fluids, LLC**

Dulce Amor No.1  
Section 4, T-18-S, R-26-E  
Eddy County, New Mexico

**Mud Program Summary**

<u>Depth</u>	<u>Hole Size</u>	<u>Mud Wt.</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>pH</u>
0' - 400'	17-1/2"	8.6-8.7	34-36	N/C	N/C
400' - 1,450'	12-1/4"	8.4-8.5	28-29	N/C	9-10
1,450' - 7,900'	7-7/8"	8.4-9.0	28-29	N/C	9-10
7,900' - 9,500'	7-7/8"	8.8-9.0	36-40	15-8	9-10

**Potential Problems****Surface Interval 0 - 400'**

- Moderate/severe lost circulation.
- Poorly consolidated formations, may require higher than normal viscosity.

**Intermediate Interval 400' - 1,450'**

- Moderate/severe seepage in San Andres.

**Open Hole Interval 1,450' - 7,900'**

- Moderate/severe seepage in Glorieta and Abo.
- Sloughing shale in the in the Abo.
- Abnormal pressure in the Wolfcamp.

**Open Hole Interval 7,900' - 9,500'**

- Moderate/severe seepage.
- Abnormal pressure possible in Atoka and Morrow.

**Newpark Drilling Fluids, LLC**

Dulce Amor No.1  
Section 4, T-18-S, R-26-E  
Eddy County, New Mexico

**Surface Interval**

**Interval:** 0 - 400'  
**Hole Size:** 17-1/2"  
**Casing Size:** 13-3/8"  
**Total Days:** 1  
**Mud Type:** New Gel/Lime  
**Properties:**  
    **Weight:** 8.6 - 8.7 ppg  
    **Viscosity:** 34 - 36 sec/1000cc  
    **Filtrate:** N/C  
    **pH:** N/C

**Interval Discussion:**

Spud with a conventional New Gel/Lime "spud mud". Use NewGel and native solids to maintain a sufficient viscosity to keep the hole clean. Compound pumps to provide adequate volume to produce required annular velocity to clean hole. Mix Paper as needed to control seepage loss. Run fresh water at flowline for dilution and volume.

At total depth of interval, mix in pre-mix pit, 200 barrels of fresh water, NewGel for a viscosity of 100 sec/1000cc, add 0.50 ppb of Super Sweep. Pump this pill prior to trip to run surface casing.

**Materials Consumption & Cost:**

30 sx	NewGel	\$ 702.00
5 sx	Lime	99.20
5 sx	Paper	<u>262.50</u>

Total	\$ 362.70
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**Newpark Drilling Fluids, LLC**

Dulce Amor No.1  
Section 4, T-18-S, R-26-E  
Eddy County, New Mexico

**Open Hole Interval**

Interval: 400' - 1,450'  
Hole Size: 12-1/4"  
Casing Size: 8-5/8"  
Total Days: 3  
Mud Type: Fresh Water  
Properties:  
Weight: 8.6 - 8.8 ppg  
Viscosity: 28 - 29 sec/1000cc  
Filtrate: N/C  
pH: 9 - 10

**Interval Discussion:**

Drill out below Surface Casing with Fresh water. Circulate through a controlled portion of the reserve pit for maximum gravitational solids removal. Mix Paper to control seepage losses. Mix Lime to maintain pH at 9-10. Mix one gallon of New-55 at flowline to promote solids settling. Sweep hole with high viscosity NewGel pills to clean hole.

If severe losses are encountered, fill pre-mix pit with fresh water, mix NewGel for a 40-50 sec/1000cc viscosity, Maxi-Seal (15-20 ppb) and Mica (5-10 ppb). Pull 5 stands above the loss zone and pump the LCM pill at a reduced rate until returns are gained.

At total depth sweep the hole using 100-barrels of system fluid, NewGel for a 100 sec/1000cc viscosity and 0.50 pounds per barrel of Super Sweep.

**Materials Consumption & Cost:**

40 sx	NewGel	\$345.20
20 sx	Lime	165.20
1 sx	New-55	226.37
25 sx	Paper	<u>312.50</u>

Total \$ 1,049.27

**Newpark Drilling Fluids, LLC**

Dulce Amor No.1  
Section 4, T-18-S, R-26-E  
Eddy County, New Mexico

**Open Hole Interval**

Interval: 1300'  
1,450' - 7,900'  
Hole Size: 7-7/8  
Casing Size:  
Total Days: 9  
Mud Type: Fresh Water to Cut Brine  
Properties:  
Weight: 8.3 - 9.0 ppg  
Viscosity: 28 - 29 sec/1000cc  
Filtrate: N/C  
pH: 9 - 10

**Interval Discussion:**

Drill out below Intermediate Casing with fresh water. Circulate through the remaining portion of the reserve pit for gravitational solids removal. Use sweeps of Paper to control seepage loss. Use Lime for pH control. Mix one gallon of New-55 at flowline to promote solids settling. Sweep hole with high viscosity NewGel pills to clean hole.

At 4,300' add 3% Potassium Chloride for inhibition of the shale in the Abo formation. At 5,400' add brine water to increase mud weight to 8.8-9.0 ppg for expected pressure in the Wolfcamp.

**Materials Consumption & Cost:**

300 sx	Potassium Chloride	\$4,542.00
60 sx	NewGel	517.80
50 sx	Paper	625.00
45 sx	Lime	371.70
5 cn	New-55	<u>1,131.85</u>
Total		\$ 7,188.35

**Newpark Drilling Fluids, LLC**

Dulce Amor No 1  
Section 4, T-18-S, R-26-E  
Eddy County, New Mexico



## Open Hole Interval

**Interval:** 7,900' – 9,500'  
**Hole Size:** 7-7/8"  
**Casing Size:** 5-1/2"  
**Total Days:** 3  
**Mud Type:** Brine-Polymer  
**Properties:**  
    **Weight:** 8.8 – 9.0 ppg  
    **Viscosity:** 36 – 40 sec/1000cc  
    **Filtrate:** 15 – 8 cc/30min  
    **pH:** 9 – 10

### Interval Discussion:

At 7,900' confine circulation to steel pits. Adjust and maintain pH with Caustic Soda. Treat the system with Newcide to prevent bacterial degradation of organic materials. Mix White Starch to control API filtrate at <15cc. At 8,500' (*Morrow*) reduce API filtrate to 8-10cc with Starch (white). Increase the viscosity with Dyna Zan for hole cleaning and a firm-thin wall cake.

At total depth fill pre-mix pit with 80 barrels of system fluid. Mix Saltgel for a 80 sec/1000cc viscosity. Sweep with 40-barrels and spot the additional 40-barrels on bottom for logging and casing operations.

\*Newpark recommends installation of a Linear Motion shale shaker with 100-120 mesh screens for initial mud up. An attempt to screen down to a fine mesh should be ongoing during the course of the well.

### Materials Consumption & Cost:

60 sx	Dynazan	\$22,329.60
75 sx	Starch (white)	1,854.75
20 sx	Caustic Soda	779.80
45 sx	Saltgel	395.55
5 cn	Newcide	<u>1,216.90</u>
<b>Total</b>		<b>\$26,576.60</b>