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William F. Carr

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August 5, 2002

VIA HAND DELIVERY

W. Thomas Kellahin, Esq.
Kellahin and Kellahin
117 North Guadalupe Street
Santa Fe, New Mexico 87501

12622

Re: New Mexico Oil Conservation Division Case No. ~~12522:~~ Application of Nearburg Exploration Company, L.L.C. for approval of two non-standard 160-acre gas spacing and proration units, Lea County, New Mexico.

Dear Mr. Kellahin:

Pursuant to you request of July 28, 2002, I am enclosing all pressure data for the Nearburg Grama Ridge 34 Well No. 1.

Very truly yours,

William F. Carr

Enclosures

cc: Robert Shelton
Nearburg Exploration Company, L.L.C.

BEFORE THE
OIL CONSERVATION COMMISSION
Case No. 12622 & 12908
Exhibit # E-2
Submitted By: Redrock Operating
Hearing Date: October 21 & 22, 2002

TECHNICAL DISCUSSION OF THE NEARBURG PRODUCING COMPANY GRAMA RIDGE EAST 34 STATE #1 WELL AND THE LG&E NATURAL PIPELINE GAS STORAGE UNIT WELLS T21S – R34E, LEA COUNTY, NEW MEXICO

GEOLOGICAL REVIEW

A geological evaluation of the Morrow Formation was conducted for the Nearburg Producing Company, Grama Ridge East "34" State #1 well (NE/4, Sec. 34-T21S-R34E) and the LG&E Natural Pipeline, GRM Unit wells #1(NW/4, Sec. 3-T22S-R34E) & #2 (SW/4 Sec. 34-T21S-R34E). This study involved the construction of detailed Morrow stratigraphic and structural cross sections, an isopach of the Morrow "GRE Sand", and a Morrow structure map. Several conclusions can be drawn from this geological study involving these wells, the most important of which will be discussed in the following section.

First, and most importantly, the current producing sand from 13,134'–13,156' ("GRE Sand") in the Nearburg, Grama Ridge East "34" St. #1 is **not** present in the GRM Unit # 1 & # 2 wells. The correlative interval in the GRM # 1 & # 2 wells shows **only** the presence of shale. The log character and core samples indicate coarsening upward, which suggests that this sand was deposited as a marine bar. An isopach of this sand shows a discrete sand body that is oriented in a NW - SE direction covering only portions of the NE/4 of Sec. 34, the W/2 of sec. 35 and the S/2 of sec. 27 in T21S-R34E. It is only present in two of the offset wells, both of which have very thin net sand values (2 & 3 ft. each). It should also be noted that this sand did not warrant testing in any of the immediate offset wells.

Secondly, the "GRE Sand" in the Nearburg Grama Ridge East 34 #1 is **not** in communication with the overlying sand package and is in fact separated by a distinct 10 ft. thick impermeable shale as seen on the porosity and FMI log presentations. This shale forms the top seal for the "GRE Sand" reservoir.

Thirdly, the upper sand from 12,921'–12,934' in the GRM Unit #2 well, which is the primary zone for gas storage and withdrawal, is **not** present in the Nearburg Grama Ridge East "34" State #1. In addition, the main gas storage and withdrawal sand from 12,827'–12,847' in the GRM unit #1 well, although present in the Nearburg well, is much thinner and not of reservoir quality. Rotary sidewall core analysis of this zone shows the sand to have very low permeability (0.05 md). This zone will **not** be production tested in the Nearburg Grama Ridge East "34" State #1.

Finally, the lower gas storage and withdrawal zone in the GRM #1 from 12,980'–13,024' and in the GRM #2 from 13,016'–13,080' is present in the Nearburg Grama Ridge East "34" State #1. However, the lower portion of this zone in the Nearburg well is essentially a non-productive reservoir with core measured permeabilities ranging from only 0.02 to only 0.18 md. This interval from 13,084'–13,124' in the Nearburg well is considered non-productive and will not be tested. The upper portion of the lower gas storage zone in the GRM #1 & 2 wells correlates to a zone in the Nearburg Grama Ridge East "34" State #1 well from 13,058'–13,069'. This interval did have good reservoir characteristics with core measured porosities up to 11.9% and permeabilities up to 54.6 md. However, this sand has very low resistivity (6 ohms) **and calculates wet.** Structurally, this zone in the Nearburg, Grama Ridge East "34" State #1 well is high to the correlative interval in the GRM Unit # 2 well, which is perforated and is one of the gas storage zones. It is apparent then, that these sands are not in reservoir communication and are separated by either a perm boundary or a fault. Structural mapping of the Morrow in this area does indicates the presence of a fault between the Nearburg, Grama Ridge East "34" #1 well and the GRM Unit #2 well. This zone, from 13,084'–13,124' in the Nearburg, Grama Ridge East "34" State #1 well is considered wet and will **not** be production tested.

In conclusion, the geological study shows that the zones used for gas storage and withdrawal within the LG & E, GRM Unit # 1 & 2 wells are either not present, fault separated, non-reservoir, or wet in the Nearburg, Grama Ridge East "34" State #1 well. It is further concluded that the current producing zone from 13,134–13,156' in the Nearburg, Grama Ridge East 34 State #1 well is not present in the LG&E, GRM Unit # 1 & 2 wells and is therefore not in communication with any of the gas storage zones in the Grama Ridge Unit.

ENGINEERING REVIEW

The Nearburg Grama Ridge East 34 State #1 well is a Morrow producer in Lea County, NM. It offsets a LG&E Morrow gas storage unit and produces approximately 4000 MCFD. The well has been the subject of much discussion as to the possibility of communication with the gas storage unit. Our review of gas data indicates that the Grama Ridge East 34 State #1 is not in communication with the offset gas storage unit and produces out of a separate gas sand.

The offset gas storage unit is completed in selected Morrow sands. A potential buyer of the unit requested that Schlumberger perform a pressure build-up survey and determine the true reservoir pressure of the gas storage reservoirs. Schlumberger performed pressure transient analyses on two wells in the unit, the LG&E Grama Ridge Morrow Unit #'s 1 & 2. Schlumberger found the gas storage unit pressure to be 2,123# in the #1 and 2,115# in the #2. The data was gathered from 10/6 -10/17/00.

The Nearburg Grama Ridge East 34 State #1 is currently completed in the Morrow GRE Sand which is geologically separate from the Gas Storage Unit Sands. Nearburg Producing Company has performed pressure surveys on the 34 #1 with distinctly different results than the offset Gas Storage Unit.

On 6/9/00, the GRE Sand was perforated in the Grama Ridge East 34 State #1 well with TCP guns from 13,134' - 13,156' w/5 JSPF. On 6/10/00, the well flowed 45 BO, 0 BW, and 2,010 MCF with 5,300 # flowing tubing pressure on a 6/64"choke. The bottom hole flowing pressure of the Morrow GRE Sand can be estimated from flowing performance data. We have estimated the initial bottom hole **flowing** pressure at 6,790# using the Petroleum Engineering Toolkit program. The initial **static** reservoir pressure would be intuitively higher than 6,790#. This is distinctly different than the 2,123# reservoir pressure measured in the offset gas storage unit.

We also performed a bottom hole pressure survey on the Grama Ridge East State 34 #1 on 11/3/00. The well was shut-in for 70 hours and a bottom hole static pressure was measured at 3,057#. This measurement is after 5 months of producing gas at a high rate. Again, this is distinctly different than the 2,123# measured in the offset gas storage unit. This substantially reduced pressure in the Nearburg well also indicates a reservoir with somewhat limited aerial extent, which is inconsistent with the gas storage unit sands.

During the 11/3/00 pressure survey, the original (and current) surface pressure wellhead gauge was checked for accuracy by comparing readings with a dead weight tester. The Nearburg pressure gauge read 2,250# at the surface and the dead weight tester read 2,130# at the surface. This indicates a gauge error of 120#, which is insignificant. Also, when we calculated reservoir pressure from the surface gauge reading of 2,250#, it was determined to be 3,095#, which is in close agreement with the 3,057# actually measured by the bottom hole pressure bombs. This validates the original high reservoir pressures calculated on 6/10/00 using the same gauge and methods.

A final indication that the Nearburg well is not in communication with the offset gas storage unit is the gas quality. Last summer, gas samples were analyzed from both gas storage unit wells and the Grama Ridge East State 34 #1. The gas from the gas storage wells (#1 & #2) had a liquid hydrocarbon content of 1.007 and 1.073 GPM, respectively. This is indicative of lean processed gas typically re-injected into a gas storage unit. However, our 34 #1 had a significantly richer liquid hydrocarbon content of 2.487 GPM. This is indicative of unprocessed produced gas typically found in SE New Mexico Morrow wells.

In summary, both pressure data and gas quality measurements indicate that the Nearburg Grama Ridge East 34 State #1 is not in communication with the gas storage unit and produces out of a separate gas sand.

Jarrel Services Inc.
P.O. Box 1230
Hobbs, New Mexico 88240

Tel: (505)393-1736 Fax: (505)393-1737

B.H.P. TEST REPORT

Company : Nearburg Producing

Test date	: 11/03/00 @ 12:00n	Packr set at	: 13055
Lease	: Grama Ridge 34 #1	Perforations	: 13134-13156
Field	: Grama Ridge Morrow	DW Tbg press	: 2130
County	: Lea	Well status	: Shut in
State	: New Mexico	Instrument #	: 50005
Formation	: Morrow	Tested by	: Standefer
Total depth	@ 0	Gauge set at	: 13145
Tubing size	: 2 3/8	B.H. Temp. F	: 184

Test type:

Flowing Pressure Gradient	-	No
Bottom Hole Pressure Build-up Test	-	No
Bottom Hole Pressure Draw-Down Test	-	No
Shut-in Pressure Gradient	-	Yes

Data File : GRAMA.BHP

Shut-in Pressure Gradient

Company : Nearburg Producing

Test date : 11/03/00 @ 12:00n

Data File : GRAMA.BHP

Remarks: Fluid level @ 13099'

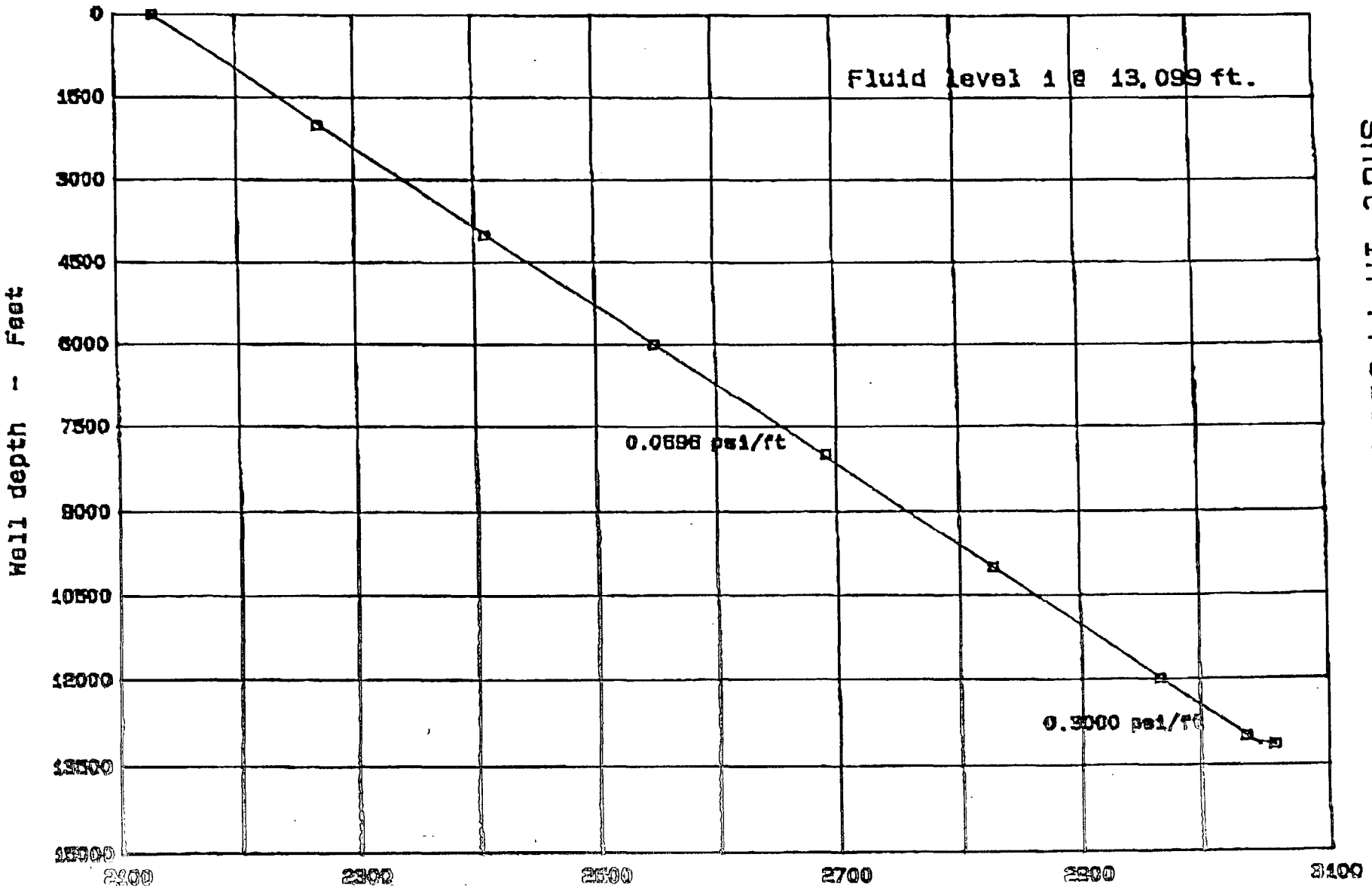
Depth (feet)	Pressure (psig)	Delta Pressure (psig)	Pressure Gradient (psig/ft)
Surface	2,132.00		
2,000	2,269.00	137.00	0.0685
4,000	2,408.00	139.00	0.0695
6,000	2,549.00	141.00	0.0705
8,000	2,691.00	142.00	0.0710
10,000	2,828.00	137.00	0.0685
12,000	2,966.00	138.00	0.0690
13,000	3,035.00	69.00	0.0690
13,145	3,057.00	22.00	0.1517

Jarrel Services Inc.

Company : Nearburg Producing | Well # : | Location :

Lease : Grama Ridge 34 #1 | Field : Grama Ridge Morrow | Test data : 11/09/00 @ 12:00n

County : Lea | State : New Mexico | File - GRAMA



Jarrel Services Inc.
P.O. Box 1230
Hobbs, New Mexico 88240

Tel: (505)393-1736 Fax: (505)393-1737

B.H.P. TEST REPORT

Company : Nearburg Producing

Test date	: 02/06/02	Packr set at	: 13055
Lease	: Grama Ridge 34 #1	Perforations	: 13134 13156
Field	:	DW Tbg press	: 1115
County	: Lea	Well status	: Shut in
State	: New Mexico	Instrument #	: 850384
Formation	:	Tested by	: Dye
Total depth	@ 0	Gauge set at	: 13145
Tubing size	: 2 3/8	B.H. Temp. F	: 184

Test type:

Flowing Pressure Gradient	- No
Bottom Hole Pressure Build-up Test	- No
Bottom Hole Pressure Draw-Down Test	- No
Shut-in Pressure Gradient	- Yes

Data File : GRAMA23.BHP

Shut-in Pressure Gradient

Company : Nearburg Producing

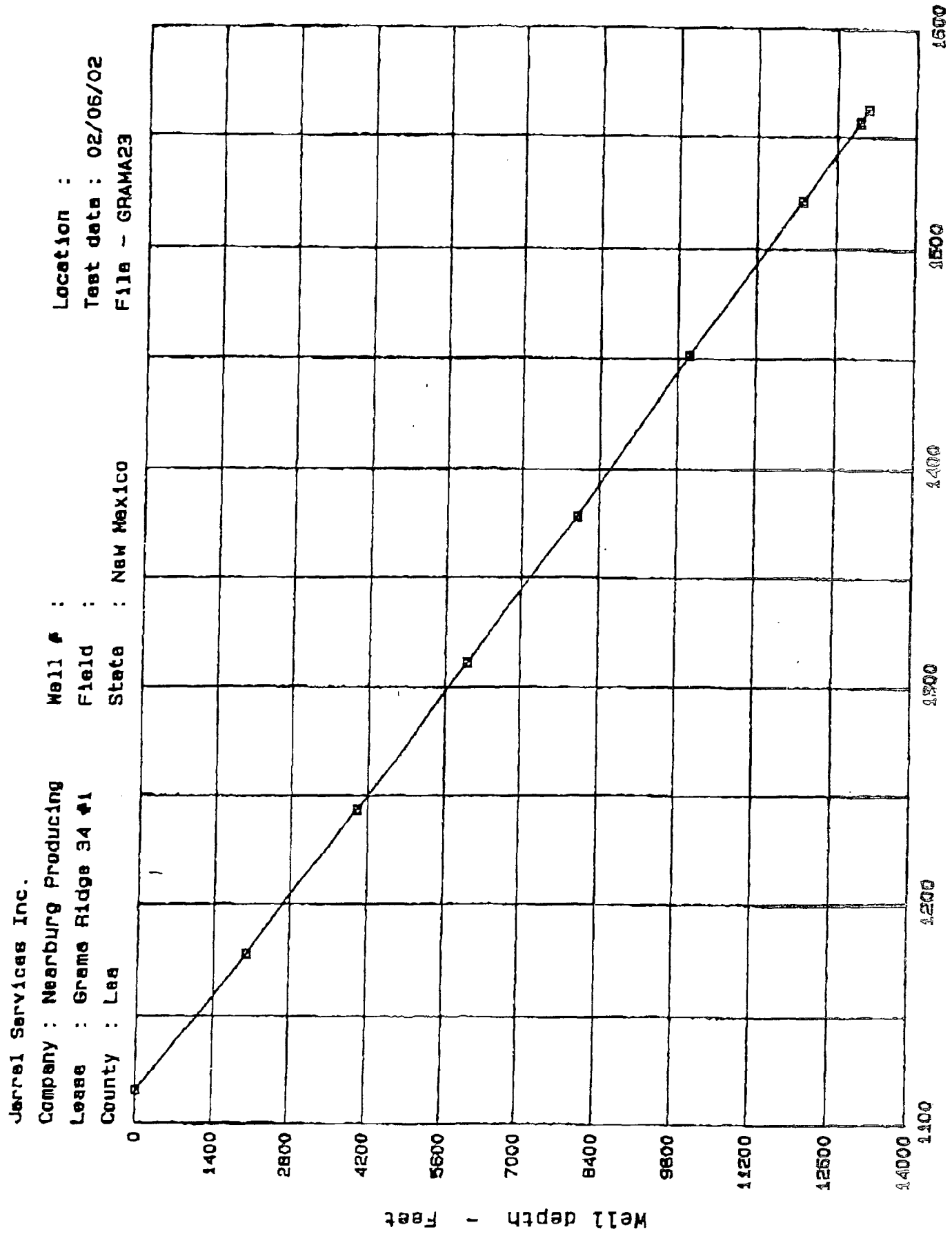
Test date : 02/06/02

Data File : GRAMA23.BHP

Remarks:

Depth (feet)	Pressure (psig)	Delta Pressure (psig)	Pressure Gradient (psig/ft)
Surface	1,115.00		
2,000	1,178.00	63.00	0.0315
4,000	1,243.00	65.00	0.0325
6,000	1,311.00	68.00	0.0340
8,000	1,378.00	67.00	0.0335
10,000	1,451.00	73.00	0.0365
12,000	1,521.00	70.00	0.0350
13,000	1,556.00	35.00	0.0350
13,145	1,562.00	6.00	0.0414

Shut-in Pressure Gradient



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BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

LARGE FORMAT
EXHIBIT HAS
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AND IS LOCATED
IN THE NEXT FILE