NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
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Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

September 22, 2004
Nadel and Gussman Permian, LLC
601 N. Marienfield, Suite 508
Midland, TX 79701
Attn: Mr. Kem McCready or To Whom It May Concern

RE: Nadel and Gussman Permian, L.L.C.:
Big Apple Federal #1, located in Unit N, 685' FSL & 2140' FEL (surface hole location)
The projected BHL as being 660' FSL & 1600' FWL in Section 5, Township 24 South, Range 26 East, Eddy County, New Mexico
API # 30-015-33304

Dear Mr. McCready or To Whom It may Concern,

In regards to the above referenced well, the New Mexico Oil Conservation Division (NMOCD) has received from your office in part regulatory information, specifically form C-104. Also included in this package is a gyro multi-shot survey.
Ryan, the contractor whom ran the surveys, ran multi-shot surveys from a depth of 4685' to a reported depth of 12,279' (MD).
Please resubmit to our office here in Artesia an amended C-104 showing the correct surface hole location and the calculated bottom hole location, which are provided in items 10 and 11 of the C-104 form.
Additionally, please submit in writing the calculated legal location of the penetration point in respect to the top of the Morrow formation and the terminus point.
On a revised form C-102, please show in detail the producing area and the project area boundaries and the calculated acreage on a current form. NMOCD forms may be accessed from our web site: http://www.emnrd.state.nm.us/ocd
NMOCD Rule 111 will help explain questions you may have. In rule 111, please review 111.A, 111.B.(4), 111.C.(1) and most importantly 111.C.(2).
Please call if you have any questions regarding this matter,
Respectfully yours,

Bryan G. Arrant
PES

CC: Tim Gum, District Supervisor-Artesia
Michael Stogner, Chief Hearing Examiner-Santa Fe

Bryan,

Attached is the update C-101 that you requested for the Big Apple Federal #1. I have also enclosed a copy of the topographical map for section 5, T 24S, R 24E. As shown on the topographic map the south section line dips south from east to west. This is also brought out when we look at the planned surface hole and bottom hole locations. The surface location is 685′ from the South line and the planned bottom hole location was 660′ from the South line. According to the directional company the planned bottom hole location was 96.5′ south of the surface hole location. This distance was determined using US State Plane System based on the NAD 27 NME grid. These measurements confirm that the South lease line dips from East to West. Since the surface location is 15′ from the 660′ lease line limit the only way for the bottom hole location to be both 96.5′ south of the surface location and 660′ from the south line is for the south line to dip from east to west.

The Big Apple surface location is 685′ FSL and 2140′ FEL. The surface hole State Plane X coordinate is 506158.7′ and the Y coordinate is 451435.9′. The proposed bottom hole location was 660 FSL and 1600 FWL with an X of 504646.9′ and a Y of 451339.4′. To determine the distance from the surface location to the bottom hole location subtract the x and y coordinates. If we subtract the planned bottom hole location from the surface location with the sign convention that south and west are negative and east and north are positive we get the following:

X displacement 504646.9′ - 506158.7′ = - 1511.8′ west of the SHL
Y displacement 451339.4′ - 451435.9′ = - 96.5 south of the SHL

To determine how much the lease line dips to the west I normalized both the surface and bottom hole location so that they were both 660′ from the south line. I did this be subtracting 15′ from the SHL's Y coordinate and then calculated the east west dip of the south lease line.

Normalize surface hole location to 660′ FSL. 451435.9′ - 15′ = 451420.9′

South line dip calculation:
451339.4′ - 451420.9′ = 81.5′ south
1511.8′ west
(81.5′ / 1511.8′) * 100′ = 5.39′ per 100′

Arrant, Bryan

Bryan, attached is a letter that I propose to send to the OCD with the directional C-102. In summary what the directional survey and letter indicate is the following:

For the Big Apple

	FSL	FWL
BHL	678	1587
Morrow Base	676	1586
Morrow perfs	660	1577
Top of Morrow	657	1574

Please take a look at the letter and let me know your comments. I am curious if Rule 111.C.4 applies?

Kem E. McCready
Nadel and Gussman Permian LLC
601 N. Marienfeld Suite 508
Midland Texas, 70701
Office Phone 915-682-4429 ext. 12
Cell Phone 915-425-6347

The above calculation shows that the south lease line dips 5.39′ for every 100′ from east to west.

ACTUAL BOTTOM HOLE LOCATION.

The last survey point from Ryan the directional company at 12279′ MD and 11959.5 TVD showed an azimuth of 358 deg, an inclination of .9 degrees and a location of 80.17 ′ south and 1525.61′ west of the surface location. We TD the well at 12,338′ MD. Using the last measured point the projected BHL is 78.71′ south and 1525.56′ west of the surface location.

The planned BHL was 660′ FSL and 96.5′ south of the surface location. Since the actual BHL is only 78.01′ south of the surface location it is more than 660′ from the south line as shown below.

Distance FSL = 660′ + (96.5′ - 78.71′) = 677.79′ FSL

The correction for the south lease line dip is:

(1525.65-1511.8) / 100′ *5.39′′ = .747′ $\simeq$ .7′

Total distance from the south line = 677.79′ + .7′ = 678.490 $\simeq$ 678′ FSL

Distance from west line.

Planned BHL was 1600′ FWL and 1511.8′ $\simeq$ 1512′ west of the surface location.

Actual location 1525.56′ $\simeq$ 1525.5′ west of the surface location

Actual Distance from west line = 1600- (1525.5- 1512) = 1586.5 $\simeq$ 1587′ FWL

MORROW BASE LOCATION

Morrow Base Location
Morrow Base 12,220′ MD
81′ South of SHL
1526′ West of SHL

Distance from south lease line
96.5 - 81.21 = 15.19′ north of planned BHL
Lease line dip correction
1526 - 1511.8 = 14.2 ′ ≃ 14′ west of planned BHL
14′ / 100 * 5.39 = .75′ of dip

Morrow Base Location
660+15.19 + .75 = 675.94′ ≃ 676′ FSL
1600′ - (1526′ - 1511.8) = 1585.8′ ≃ 1586′ FWL

PERFORATION LOCATION.

Morrow perfs 111,614′ - 11,618′ MD

11,614′ MD = 1535.187′ W of SHL (based on directional survey)
97.68′ S of SHL (based on directional survey)

Perforation distance from south line
97.68′ - 96.5′ = 1.18′ south of the planned location @ 1600′ FWL
Lease line correction for dip

1535.187′ - 1511.8′ = 23.387′ further west than planned

23.387′ / 100 * 5.39 = 1.23′ of dip

Therefore 660′ - 1.18′ + 1.23′ = 660.05′ ≃ 660′ FSL at the perforations

FWL = 1600′-23′ = 1577′

MORROW TOP LOCATION

Top of Morrow @ 11,456′ MD

11,456′ = 100.69′ south of surface location
1538.13′ west of surface location

FSL = 660′ – (100.69 -96.5′) = 655.81′ FSL if well was 1600′ from west line0

Dip correction (1538.13 – 1511.8) = 26.33′ west of planned SHL
26.33 / 100 * 5.39 = 1.42′ of dip

FSL = 655.81′ + 1.42′ = 657.23′ ≃ 657′ FSL

FWL = 1600′ – (1538.13′- 1511.8′) =1573.7 ≃ 1574′ FWL