



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

October 28, 2004

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

**Platinum Exploration Inc.**  
**550 West Texas Avenue – Suite 500**  
**Midland, Texas 79701**

**Attention: Diane Kuykendall**  
**Regulator Analyst**

**Re:** *Administrative application for an exception to the well location provisions of the rules and regulations governing the South Knowles-Devonian Pool (36480) for Platinum Exploration Inc.'s proposed Federal Davis Well No. 4 to be drilled and completed utilizing horizontal drilling techniques such that the resulting drainhole's producing area will extend beyond the standard setback requirements from the outer boundary of the proposed project area, being a standard 80-acre stand-up oil spacing and proration unit, comprising the E/2 NE/4 of Section 13, Township 17 South, Range 38 East, NMPM, Lea County, New Mexico.*

Dear Ms. Kuykendall:

This letter acknowledges the above-described administrative application received by the Division on September 24, 2004 and assigned **administrative application reference No. pSEM0-426848750**. Please refer to this number in future correspondence with the Division.

My preliminary review indicates that the information provided in the application is not sufficient to process an administrative order. You mention in your application a couple of times that the proposed horizontal lateral drainhole "will have structural advantage to a standard bottomhole location" and "will drain the reservoir more effectively." However no details were provided nor were there any geological or engineering support data included. Please provide me with a detailed discussion how the proposed drainhole will drain or deplete the reservoir more efficiently and a geological interpretation on the Devonian structure underlying the E/2 NE/4 of Section 13. Also, provide sufficient information (plats, maps, cross-sections, calculations) to support your claim.

Since the submitted information is insufficient to review, the application was ruled as incomplete on October 28, 2004. Please submit the above stated information by Friday, November 12, 2004.

The Division cannot proceed with your application until the required information is submitted. Upon receipt, the Division will continue to process your application. The additional information can be: (i) faxed to (505) 476-3462; (ii) e-mailed to "[mstogner@state.nm.us](mailto:mstogner@state.nm.us)"; or (iii) mailed to the address shown above.

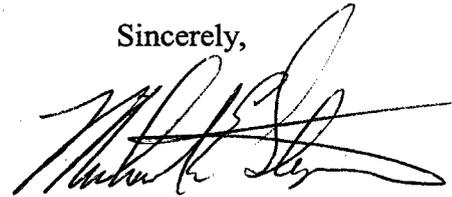
October 28, 2004

**Platinum Exploration Inc.**

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Should you have any questions concerning this matter, please contact me in Santa Fe at (505) 476-3465. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael E. Stogner", with a long horizontal flourish extending to the right.

Michael E. Stogner  
Chief Hearing Officer/Engineer

cc: New Mexico Oil Conservation Division - Hobbs



NEW MEXICO ENERGY, MINERALS and  
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(1)

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ENCLOSED IS THE  
MATERIAL YOU REQUESTED  
IN THESE LETTERS.

Platinum Exploration Inc.  
550 West Texas Avenue – Suite 500  
Midland, Texas 79701

FROM: ~~DOROTHY LOGAN~~  
ATTENTION: ~~Diane Kuykendall~~  
Regulator Analyst

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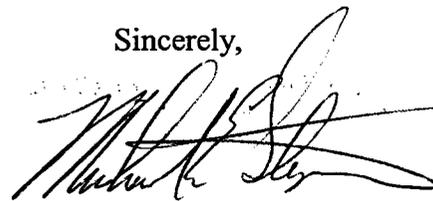
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Michael E. Stogner  
Chief Hearing Officer/Engineer

cc: New Mexico Oil Conservation Division - Hobbs

RE: Administrative application reference No. **pSEM0-426848750**

The **Platinum Exploration Inc. (Platinum), Federal-Davis #4H** proposed directional well is located in the SE/4 NE/4 of section 13, T-17S, R-38E in Lea County, New Mexico. The proposed location is staked 2400' FNL and 930' FEL and is a non-standard location. Platinum applies for this non-standard location *primarily* because of surface, and near-surface, restrictions. *Secondary*, but technically valid, considerations such as improving structural advantage and positioning the penetration point and lateral away from a likely fault are a result of the avoidance of the surface impediment.

The standard surface location, with pad, is within the 20 foot right-of-way of a Duke buried pipeline. The north, south, and west offsets would still be in this right-of-way. The east 150' offset would position part of the location in a junkyard with abundant surface impediments. The present surface location is midway between the Duke buried pipeline and a WJC saltwater disposal line and the drilling pad could be built without interfering with the pipelines.

This well could be deviated to penetrate the Devonian in a standard location. However Platinum expects to install submersible pumps as artificial lift and wishes to avoid needless deviations to the wellbore. The deviated portion of the wellbore to penetrate the Devonian at a legal location results in setting the artificial lift equipment much higher in the wellbore (above the deviated section). This restricts the amount of drawdown and fluid which can be produced from the Devonian. This reduced drawdown and fluid production, in our experience, causes a significant loss in reserves from the wellbore/location.

Also, subsurface mapping suggests that drilling a vertical borehole in the non-standard location would penetrate the Devonian with structural advantage to the standard location position, possibly 10 feet or more. While this is not an overriding consideration, however, there is concern that a fault extends north, northeastward along the boundary of sections 13

and 18. Evidence of this fault is found not only in subsurface mapping, but also in an old 2-D seismic interpretation of the Knowles, South Field (no 3-D seismic has been shot over the field). Stratigraphic cross-sections built across the field show an anomalous thickening of the Woodford shale in the Hamon, Wilhoit #1 well (NW/4 NW/4, section 18) and the Hamon Federal-Davis #2 well (SE/4 SE/4, section 13) indicating a pre-Woodford low, very dramatic in the latter well (see cross-section X-X'). This anomaly coupled with the odd structural geometry of the field (see structure map, top of Devonian) suggest this is a pre-Woodford, strike-slip fault that, when subaerially exposed, was possibly further eroded into a small canyon that extends across the central portion of the field.

Deviating back in the direction of the standard location would be increasing the risk of encountering difficulties with this erosional feature and jeopardizing the well.

The Knowles, South Devonian field is a heterogeneous reservoir. Careful studies of electric logs, mudlogs, cores, drillstem tests, and stratigraphic cross-sections across the field indicate the reservoir is interbedded with limestones, dolomites, and shales that would inhibit the upward migration of hydrocarbons in various degrees thus creating separate, or "baffled" reservoirs. The proposed non-standard Platinum, Federal-Davis #4H should penetrate the uppermost, or first, dolomite pay structurally flat with that in the Holloway #3 (1100' northwest) and 10 feet high to this zone perforated in the Federal-Davis #3 (850' south, southeast). The well should then encounter "Stray Shale 1", below which is a second dolomite pay produced in the Federal-Davis #1 (1700' north). This zone, historically, has been the primary producing zone. We anticipate being 60 feet high to the same interval in the Federal-Davis #1. Below this second dolomite pay is an intermittent "Stray Shale 2", below of which should be a third dolomite pay zone. This zone has only been produced in the Federal-Davis #2 (structurally 80 feet downdip to the south), the Wilhoit #2 (structurally 5 feet downdip and 2800' southeast), and the Anshutz, Arco #1 (structurally flat and 3100' east). The geometry of the lateral will "heel" 40 feet in this zone, turn, and drill an additional 402 feet of measured depth and extend across this pay 400 feet beyond the initial penetration point. We will continue drilling back up through the "Stray Shale 2" and re-enter the second Dolomite pay zone 550 feet north of the original penetration point. We will then

Platinum Exploration Inc., Federal-Davis #4H,  
Knowles, South Field, Lea County, New Mexico

level out at 90 degrees and drill along strike of the structure (1.04 degree dip north) and drill the entire second Dolomite pay section by 1200 feet. In total, there should be 1300 feet of this pay section open. The last 150 feet of lateral will angle up and re-enter the first dolomite pay section and drill about 100 feet of measured depth through this zone.

The result will be, instead of drilling potentially 90 feet of total pay in a conventional vertical wellbore, we will have up to 1800 feet of pay open. The lateral will help prevent "coning" or prematurely "watering out" of the pay zones. Platinum considers these as justified and prudent reasons for applying for this non-standard location and drilling a north lateral.