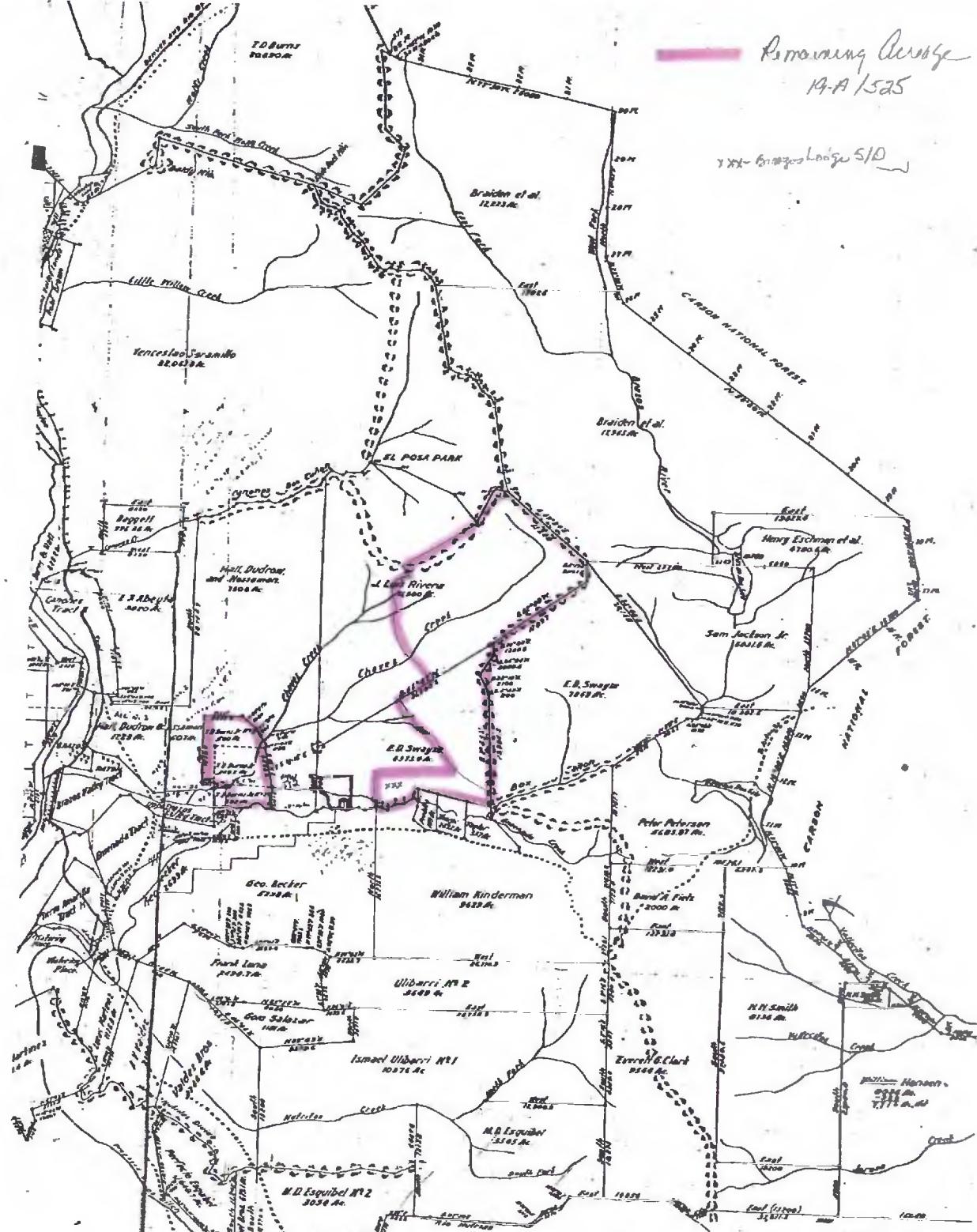


## TIERRA AMARILLA GRANT

RIO ARIBA COUNTY - NEW MEXICO

MAPPED BY KENNETH A. HERON, ENGINEER  
CHAMA, N.M.

Remaining Acreage  
19-A 1525



## TIERRA AMARILLA GRANT

RIO ARRAIA COUNTY - NEW MEXICO

MAPPED BY KENNETH A. HERON, ENGINEER  
CHAMA, N.M.

The Arlington Land Co. To The Masota Land Company

cc. 100d.

This Deed, made this fifth day of September A.D. 1913. Between:  
 The Arlington Land Company, Corporation organized and existing under  
 and by virtue of the Laws of the State of Colorado, party of the first part, and  
 The Masota Land Company, a Corporation organized and existing in accordance  
 with the Laws of the State of Colorado, party of the second part.

Witnesseth: That the said party of the first part, for and in consideration  
 of the sum of One Dollar and other valuable considerations to the said party of  
 the first part in hand paid by the said party of the second part, the receipt  
 which is hereby confessed and acknowledged, has received, retained, sold,  
 conveyed and quit-claimed and by these presents does release, sell no  
 quit-claims unto said party of the second part, its successors and assigns,

All the right, title, interest claim and demand which the said party of  
 the first part had in and to,

All ores, coal, petroleum oil, gas, Metals, Carbonaceous-Carbon  
 Wines and Valuable Mineral deposits, Lodes and Veins, found or hereafter  
 to be found, together with their dips in, on, or beneath the surface of,

All those certain lands and premises situated lying and being in the County  
 of Rio Arriba and State of New Mexico, and in the County of Arapahoe and State of  
 Colorado, bounded and described as follows to-wit:

Beginning at Mile Post No 7 on the East boundary line of the two  
 unaniMas Grant and running thence in a Northwesterly direction, coincident  
 with the east line of said Grant, to the Northeast corner of lands in Colorado,  
 heretofore conveyed to Thomas D. Burns by the party of the first part, thence  
 west along the West line of lands of the said Thomas D. Burns to the Plumb  
 River, thence in a Southerly and Easterly direction following the stream  
 of the said Plumb River until the said Plumb River intersects the South  
 boundary line of the T. D. Burns tract, thence following the boundary  
 of the said T. D. Burns tract to its points of intersection of the Northwest  
 line of lands heretofore conveyed to Venecuelas Jaramillo, thence following  
 Westerly and Southerly boundaries of the said Venecuelas Jaramillo tract to  
 the Southeast corner thereof, thence South forty-nine (49) degrees thirty-one  
 (31) minutes East about thousand two hundred and forty (11,200) feet;  
 thence Southerly and Westerly, along the crest of the divide between the  
 Brazos River and Chaves Creek to the mouth of Box Canyon, Brazos River,  
 thence Westerly along the Brazos River about twenty thousand four hundred  
 and forty (20,440) feet to stone marked "N.W. Cor. N." on the East side, whence  
 a fence, six inches diameter bars South seventy-three (73) degrees east  
 one hundred four (104) feet, at Cottonwood 15 inches diameter bars South  
 thirty-three (33) degrees forty-five (45) minutes West nine (9) feet, each blazed and  
 marked "B. T. N. W. C. R.", thence South two (2) degrees five (5) minutes east  
 fourteen thousand one hundred and ten (14,110) feet to a stone marked "S.W. C. R."  
 on South side, whence a fence 24 inches diameter bars North forty-eight (48)  
 degrees thirty-five (35) minutes West twenty (20) feet, a fence 16 inches diameter  
 bars South Sixty (60) degrees fifteen (15) minutes West twenty-one and three  
 fourths (21.8) feet, each blazed and marked "B. T. S. W. C. R." thence east-

Baldwin 3-12-71  
Book 11 page 346 - 355

John V. Burney

19A/428

Cont:

bility. Six thousand four hundred (26,400) feet to a Stake marked "S. E. Cor. R." on North Side, whereof a space 2.0 inches diameter bears North thirty-four (34) degrees fifteen (15) minutes west twenty-nine (29) feet, a space 2.0 inches diameter bears North twenty-three (23) degrees forty-five (45) minutes east thirtysix (36) feet, each Stake and Marked "B. T. S. C. H." thence Southwesterly along Coast of divide between Vaca and Nutria Creek to an intersection of the west line of the So. called H. H. Smith tract; thence Southwesterly along the west line of said Smith tract to the Southwest Corner thereof and the Southwesterly boundary line of said Pieno Amarilla Grant; thence east along the South line of said So. called Smith tract and co-incident with the South boundary line of the Pieno Amarilla Grant to the Southeast Corner of said so. called Smith tract; thence North twenty-five thousand eighty and eight tenths (25,080.8) feet coincident with the east boundary line of said so. called Smith tract; thence east to the point or place of beginning.

Excepting and Excluding, however, from the premises above contained, all those several tracts, pieces or parcels of land which are excluded and excepted from that certain deed made by Charles C. Catron to the Chama Valley Land Company dated June 17, 1909 and recorded June 22, 1909, in book 4, at Pages 119 to 150, of the records in the office of the Probate Clerk and Ex-officio recorder of the County of Rio Arriba and State of New Mexico.

Together with the right to enter in and upon said lands, to explore and prospect for such ores, coal, petroleum, oil, gas, metals, carbons or hydro-carbons, and Valuable Mineral deposits, lakes and veins; to mine, take, remove, sell and dispose of any and all ores, coal, petroleum, oil, gas, metals, carbons or hydro-carbons and Valuable mineral deposits which may be found therein; and in aid thereof and in connection therewith, to place, erect, construct and maintain such buildings, structures, Machinery, equipment, conduits, roads and railroads thereon, sink such shafts, make such excavations, remove such soil, rock or Valuable Mineral deposits and material, cut and use timber, pasture and graze such work and draft animals, occupy such portions of said premises and erect, construct, operate and maintain such ditches, canals, flumes, dams or other Water Systems, as may be necessary or useful.

Together with the right, privilege and option to the party of the second part, its successors or assigns, at its or their election to purchase any portion of the lands hereinbefore described which it may from time to time desire, which contain ores, coal, petroleum oil, gas, metals, carbons or hydro-carbons, and Valuable mineral deposits, together with sufficient land to prospect, to place and develop the same, at the rate of Ten dollars (\$10.00) for each and every acre of land so purchased, and the party of the first part, for itself, its successors and assigns, covenants that it and they will within sixty days after the selection and demand by the said party of the second part, its successors or assigns, of any of such lands, make, execute and deliver, upon full payment therefore, its due, deeds, grants and sufficient in law, to such portion or portions of the land so selected and demanded.

To Have and to Hold the same, together with all and singular the appurtenances and privileges thereto belonging or in anywise connected

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appertaining and all the estate, right, title, interest and claim whatsoever  
of said party of the first part within law or equity, to the only person now,  
benefit and beholding of the said party of the second part, its successors and  
assigns forever.

In witness whereof, the said party of the first part has caused this  
instrument to be subscribed by its president and its corporate seal to be  
hereunto affixed, attested by its Secretary the day and year first above written,

Attest: *(Seal)*  
Thomas Peebles

The Arlington Land Company.  
By Samuel S. Thorpe  
President

Secretary  
State of Minnesota }  
County of Hennepin }

On this 13<sup>th</sup> day of October A.D. 1913  
before me appeared Samuel S. Thorpe to me personally known, who being  
by me duly sworn, did say that he is the President of The Arlington  
Land Company, and that the seal affixed to said instrument is the  
corporate seal of said Corporation, and that said instrument is signed and  
sealed in behalf of said Corporation b. authority of its board of directors, and  
that said Samuel S. Thorpe does acknowledge said instrument to be the free  
act and deed of said Corporation.

Given under my hand and seal this 3<sup>rd</sup> day of October A.D. 1913

(Seal)  
My Commission Expires March 10, 1920

Nelda Helgendorf  
Notary Public

STATE OF NEW MEXICO,  
COUNTY OF RIO ARRIBA }  
FILED FOR RECORD THE 15<sup>th</sup> DAY OF NOV.  
A.D. 1913 AT 7 O'CLOCK P.M.  
RECORDED Nov. 7-1913 A.D. 1913  
IN VOL. 171 PAGES 111  
*M. A. Gonzales*

By M. Garcia Deputy CLERK & RECORDER

The Arlington Land Company To The Mosota Land Company  
Deed

This Deed, Made this twenty-first day of January A.D. 1914. Between The Arlington Land Company, a Corporation organized and existing under and by virtue of the laws of the State of Colorado, party of the first part, and The Mosota Land Company, a Corporation organized and existing under and by virtue of the laws of the State of Colorado, party of the first part, and The Mosota Land Company, a Corporation organized and existing under and by virtue of the laws of the State of Colorado, party of the second part, Witnesseth:

That the said party of the first part, for and in consideration of the sum of One Dollar and other Valuable Consideration to the said party of the second part, the receipt of which is hereby confessed and acknowledged, has released, sold, conveyed and quit claimed and by these presents does remise, release all and quit claim unto said party of the second part, its successors and assigns forever,

All the right title, interest, claim and demand which the said party of the first part has in and to:-

First: All mcs, coal, petroleum, oil, gas, metals carbons or hydro-carbons, mines and valuable mineral deposits, beds and veins, found or here after to be found, together with their dips in, or beneath the surface of,

All those certain lands and premises situated, lying and being in the County of Rio Arriba and State of New Mexico, bounded and described as follows, to wit:

Beginning at the Southeast corner of a tract of land deeded to me, Jenaro Jaramillo by the grantor herein mentioned, and running thence South forty-five (45) degrees thirty-four (34) minutes east eleven thousand two hundred and forty (11,240) feet, then Northward and Westward along crest of the divide between the Brazos River and Cherry Creek to the mouth of Box Canon in the Brazos River; thence Westward along the Brazos River about twenty thousand four hundred and forty (20,440) feet to a stone marked "N.W. Cor. H." on east side, whence a pine tree sixteen (16) inches diameter bears South seventy-three (73) degrees east one hundred and four (104) feet, a Cottonwood fifteen (15) inches diameter bears South thirty-three (33) degrees forty-five (45) minutes West twenty-nine (29) feet, each blazed and marked "B.T.N.W.C.K"; thence Westward along said Brazos River to its intersection with the east line of a tract designated as "F" n<sup>o</sup> Lands in the Brazos Valley" and excluded in the deed given to the Chamal Valley Land Company, dated June 12, A.D. 1909 herein after referred to, thence Northward and Westward, coincident with the boundary of tracts "F" and "P" of said excluded lands to the South boundary of tract "B" thereof; thence westward, coincident with the south line of said tract "B" to the east line of the Chamael Enclosed Wagons road, a granite stone marked "B.T." on north side and "A.B.T." on southern side whence a pine twenty-four (24) inches diameter bears North fifty-five (55) degrees east fifty-two (52) feet, a pine eighteen (18) inches diameter bears South fifty-five (55) degrees west nine and fourteen (9.14) feet, thence South twenty-four (24) degrees

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Minutes east seven hundred and forty-eight (748) feet; thence South fourteen (14) degrees eleven (11) Minutes east three hundred and forty-five (345) feet, a granite stone marked "S.W. B. T." on North side; thence east-eighty-thous and five hundred seventy-six and six tenths (8,576.6) feet, a sandstone marker "S.E. A. B. T." thence North twenty-thous and seven hundred forty-four and Nineteenth (20,744.9) feet, to the south line of the Venesellos Jaramillo tract; as aforesaid, at or near the mouth of Box Cañon of Canonas Creek, at Sandstone 6'4" x 18" marked "N.E. A. B. T.", whence a cottonwood eighteen (18) inches diameter bears North fifty-eight (58) degrees thirty (30) Minutes west thirty-four (34) feet, as far as the (30) inches diameter bears South sixty-eight (68) degrees thirty (30) Minutes east seventy-four (74) feet, thence easterly coincident with the south boundary of the Jaramillo tract aforesaid, to place of beginning. All courses mentioned, true Magnetic Variation fourteen (14) deg. no thirty (30) minutes east.

Excepting and excluding from the premises above conveyed all those several tracts, pieces or parcels of land which are excluded and excepted from that certain deed made by Charles C. Patron to the Chama Valley Land Company, dated June 12, 1909, and recorded June 23, 1909, in Book 4 at pages 119 to 120, of the records in the office of the probate clerk and ex officio recorder of the County of Rio Arriba and State of New Mexico.

Together with all the rights to enter in and upon said lands; to explore and prospect for such ores, coal, petroleum, oil gas, metals, carbons or hydro-carbons, and valuable mineral deposits, lodges and veins; to mine, take, remove, sell and dispose of any and all ores, coal, petroleum, oil, gas, metals, carbons or hydro-carbons and valuable mineral deposits which may be found therein; and in aid thereof and in connection therewith, to place erect, construct and maintain such buildings, structures, machinery, equipment, conduits, roads and railroads thereon, sink such shafts, make such excavations, remove such soil, rock or valuable mineral deposits and material, cut and use such timber, pasture and graze such work and draft animals, occupy such portions of said premises and erect, construct, operate and maintain such ditches, canals, flumes, dams or other water systems as may be necessary or useful.

Second: The right, privilege and option to the party of the second part, its successors and assigns, at its or their election, to purchase in fee simple absolute all or any portion of the premises herein before described which it may from time to time desire, which contain ores, coal, petroleum, oil, gas, metals, carbons or hydro-carbons, and valuable mineral deposits, and sufficient land to prospect, explore and develop the same, at the rate of ten dollars (\$10.00) per each and every acre of land so purchased, and the party of the first part, for itself, its successors and assigns, conveys to that

## RELEASE AND QUITCLAIM

This Release and Quitclaim is made and entered into effective the 1<sup>st</sup> day of December 2006, by and between UNITED STATES TRUST COMPANY, N.A. and FREDERICK F. MOON, as co-trustees of the Trust under the will of John E. Andrus (the "Andrus Trust"), 114 West 47<sup>th</sup> Street New York, New York 10036, and \_\_\_\_\_

, whose address is \_\_\_\_\_

### RECITALS

- A. WHEREAS, that certain Mineral Deed from Arlington Land Company to Mosota Land Company, dated September 5, 1913, filed November 21, 1913 in Book 19-A, Page 428 of the real property records of Rio Arriba County, New Mexico, covering real estate located in Rio Arriba County, New Mexico. ("Arlington Deed")
- B. WHEREAS, that certain Mineral Deed from Arlington Land Company to Mosota Land Company, dated January 21, 1914, filed February 23, 1914, in Book 19-A, page 525 of the real property records of Rio Arriba County, New Mexico. ("Mosota Deed")

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) and Other Good and Valuable Consideration paid to the Andrus Trust by \_\_\_\_\_,

the receipt and sufficiency of which is hereby acknowledged by the Andrus Trust, the Andrus Trust, for itself and its successors and assigns, does hereby release and quitclaim to \_\_\_\_\_,

and to their heirs and assigns, which the Andrus Trust may have in all ores, coal, petroleum, oil, gas, metals, carbons or hydro-carbons, mines and valuable mineral deposits, lodes and veins found or hereafter to be found, together with their dips in, on, or beneath the surface of Exhibit "A" and any and all right, title and interest, claims and demand created by virtue of the following reservation contained in the Arlington and Mosota Deeds, stated above;

"Together with the right to enter in and upon said lands; to explore and prospect for such ores, coal, petroleum, oil, gas, metals, carbons or hydro-carbons and valuable mineral deposits, lodes and veins; to mine, take, remove, sell and dispose of any and all ores, coal, petroleum, oil , gas, metals, carbons or hydro-carbons, and valuable mineral deposits which may be found therein; and in aid thereof and in connection therewith, to place, erect, construct and maintain such buildings, structures, machinery, equipment, conduits, roads and railroads thereon, sink such shafts, make such excavations, remove such soil, rock or valuable mineral deposits and materials, occupy such portions of said premises, and erect, construct, operate and maintain such canals, flumes, dams or other water systems as may be necessary or useful."

and any and all right, title and interest, claims and demand created by virtue of the following surface option provision which reads as follows:

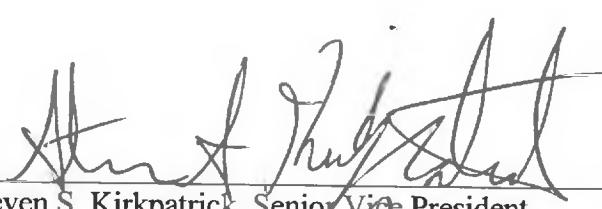
"Together with the right, privilege and option to party of the second part, it's successors or assigns, at its or their election to purchase any portion or portions of the lands hereinbefore described which it may from time to time desire, which contain ores, coal, petroleum, oil, gas, metals, carbons or hydrocarbons and valuable mineral deposits, together with sufficient land to prospect, explore and develop the same, at the rate of Ten Dollars (\$10.00) for each and every acre of land so purchased, and the party of the first part for itself, its successor and assigns, covenants that it and they will within sixty days after the selection and demand by the said party of the second part, its successors or assigns, of any such lands, make, execute and deliver, upon full payment therefore its deed or deeds, good and sufficient in law, to such portion or portions of the lands so selected and demanded."

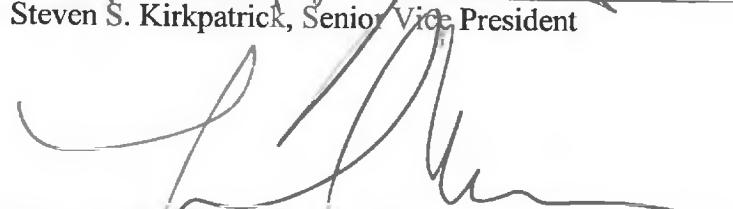
insofar as said provision affects the lands described as attached hereto and made a part hereof. Said Exhibit "A" legal description of the surface property is for the purpose of mineral rights tract identification only and is not to be construed as acknowledging, conveying or in any way imparting surface rights or ownership.

United States Trust Company, N.A. and Frederick F. Moon execute this Release and Quitclaim solely in their capacities as Trustees Under the Will of John E. Andrus aforesaid and not in their individual or individual corporate capacities.

WITNESS their hands and seals effective the day and year first above written.

United States Trust Company, N.A., As Co-trustee under the Will of John E. Andrus

By:   
Steven S. Kirkpatrick, Senior Vice President

  
FREDERICK F. MOON  
As Co-trustee under the Will of John E. Andrus

(Buyer)

STATE OF New York }  
COUNTY OF New York } SS

The foregoing instrument was acknowledged before me this 9th day of November, 2006 by Steven S. Kirkpatrick, a Senior Vice President of United States Trust Company, N.A., a National Association, on behalf of the corporation, as a Trustee Under the Will of John E. Andrus.

Frances M. Duman  
NOTARY PUBLIC

My commission expires:

December 20, 2009

Frances M. Duman  
Notary Public, State of New York  
No. 01 DO8035026  
Qualified in Bronx County  
Commission Expires Dec. 20, 2009

STATE OF Maine }  
COUNTY OF Knox } SS

The foregoing instrument was acknowledged before me this 13 day of November, 2006 by Frederick F. Moon, as a Trustee Under the Will of John E. Andrus, proven to be the person described and who executed same in his authorized capacity.

Carol R. Rackliff  
NOTARY PUBLIC

My commission expires:

CAROL R. RACKLIFF  
Notary Public • State of Maine  
My Commission Expires June 19, 2013

STATE OF \_\_\_\_\_ }  
                    } SS  
COUNTY OF \_\_\_\_\_ }

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_,  
2006 by \_\_\_\_\_.

My commission expires:

NOTARY PUBLIC

## ***Exhibit "A"***

All of the Mineral Estate as described in Deed from the Arlington Land Company to the Mosota Land Company, dated September 5, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico on November 21, 1913 in **Book 19-A, page 428**; and

All of the Mineral Estate as described in Deed from the Arlington Land Company to the Mosota Land Company, dated January 21, 1914 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico on February 23, 1914 in **Book 19-A, page 525**;

Which are all a part of the Tierra Amarilla Grant also known as private land claim number three, patent issued to Francisco Martinez on February 21, 1881, which patent was recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, Book 15-A at pages 102 et seq., and which premises is also depicted on the Map by Kenneth A. Heron, Engineer and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico in Book A-89, page 61-62 as the following tracts:

**As covered in Deed 19-A, page 428;**

1. The T.D. Burns Tracts containing 14,730 acres and 20,890 acres, more or less, and the Ed Sargent Tract containing 20,232.4 acres as described in Deed from the Arlington Land Company to Thomas D. Burns, dated November 18, 1912 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on February 13, 1913 in Book 19-A, page 161;
2. The Venceslao Jaramillo Tract containing 32,069.8 acres, more or less, as described in Deed from the Arlington Land Company to Venceslao Jaramillo, dated May 1, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on October 1, 1913 in Book 19-A, page 331;
3. The Braiden, et. al Tract containing 12,223 acres, more or less, as described in Deed from the Arlington Land Company, dated November 1, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on February 24, 1917 in Book 20-A, page 427;
4. The Braiden, et. al Tract containing 17,965 acres, more or less, as described in Deed from the Arlington Land Company to the Brazos Cattle Company, dated February 1, 1917 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 13, 1917, in Book 19-A, page 449;
5. The Henry Eschman et al. Tract containing 4,780.6 acres, more or less, as described in Deed from the Arlington Land Company to T.W. Taylor, dated December 29, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 16, 1914, in Book 19-A, page 573;
6. The Sam Jackson, Jr. Tract containing 6,031.4 acres, more or less, as described in Deed from the Arlington Land Company to Sam Jackson Jr., dated March 7, 1915 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on March 18, 1916, in Book 20-A, page 289;
7. The E.D. Swayze Tract containing 7,849 acres, more or less, as described in Deed from the Arlington Land Company to the E.D. Swayze, dated May 1, 1918 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 26, 1918, in Book 21-A, page 18;
8. The Peebles, Thorpe and Taylor Tracts containing 795.2 acres, more or less, as described in Deed from the Mosota Land Company to the Arlington Land Company, dated June 8, 1914 and recorded

in the Office of the County Clerk, Rio Arriba County, New Mexico, on October 25, 1929 in Book 24, page 288;

9. The William Kinderman Tract containing 9,623 acres, more or less, as described in Deed from the Arlington Land Company to William Kinderman, dated October 1, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 23, 1914 in Book 19-A, page 585;
10. The Peter Peterson Tract containing 5,683.87 acres, more or less, as described in Deed from the Arlington Land Company to Peter Peterson, dated January 13, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on January 19, 1914, in Book 19-A, page 465;
11. The David A. Fietz Tract containing 2,000 acres, more or less, as described in Deed from the Arlington Land Company to Joseph J. Fettes, et al., dated November 28, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 24, 1914, in Book 19-A, page 597;
12. The N.N. Smith Tract containing 8,736 acres, more or less, as described in Deed from the Arlington Land Company to N.N. Smith, dated December 9, 1912 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on January 23, 1914 in Book 19-A, page 479;
13. The Everett G. Clark Tract containing 9,544 acres, more or less, as described in Deed from the Arlington Land Company to James F. Hutchinson, dated April 2, 1917 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 30, 1917 in Book 20-A, page 477-480.

**EXCEPTING AND EXCLUDING, HOWEVER, FROM THE ABOVE-DESCRIBED PROPERTY,  
THE FOLLOWING TRACTS.**

- A. The T.D. Burns Tracts containing 14,730 acres and 20,890 acres, more or less, and the Ed Sargent Tract containing 20,232.4 acres as described in Deed from the Arlington Land Company to Thomas D. Burns, dated November 18, 1912 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on February 13, 1913 in Book 19-A, page 161;
- B. The Venceslao Jaramillo Tract containing 32,069.8 acres, more or less, as described in Deed from the Arlington Land Company to Venceslao Jaramillo, dated May 1, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on October 1, 1913 in Book 19-A, page 331;
- C. The Braiden, et. al Tract containing 12,223 acres, more or less, as described in Deed from the Arlington Land Company, dated November 1, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on February 24, 1917 in Book 20-A, page 427, including but not limiting to the following conveyances:
  - a. 51.42 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Ronald Schalla and Blanche Schalla, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on September 6, 2002 in Book 167, page 217-220;
  - b. 680.08 acres, more or less, as described in Corrected Warranty Deed from the John E. Andrus Trust to Tommy J. Stuckey and Donna J. Stuckey, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 7, 2004 in Book 496, page 196-199;

- c. 1,163.20 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to ABV Ranch Properties, LLC, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on January 21, 2003 in Book 428, page 430-435;
  - d. 9.92 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to John G. Salazar and Barbara A. Montano, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 30, 2003 in Book 447, page 468-472;
  - e. 2,817.21 acres more or less, as described in Release and Quitclaim from the John E. Andrus Trust to ABV Ranch Properties, LLC, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on August 5, 2003 in Book 456, page 984-989;
  - f. 7,613.683 acres, more or less, as described in Corrected Special Warranty Deed from the John E. Andrus Trust to ABV Ranch Properties, LLC, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 7, 2004, in Book 496, page 189-195;
- D. The Henry Eschman et al. Tract containing 4,780.6 acres, more or less, as described in Deed from the Arlington Land Company to T.W. Taylor, dated December 29, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 16, 1914, in Book 19-A, page 573;
- E. The Brazos Reservoir Tract containing 86.3 acres, more or less, as described in Quitclaim Deed from the Penn Building Company to Brazos Cattle Company, dated March 29, 1946 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 29, 1946, in Book 19-A, page 428;
- F. The Henry Eschman et al. Tract containing 4,780.6 acres, more or less, as described in Deed from the Arlington Land Company to T.W. Taylor, dated December 29, 1913 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 16, 1914, in Book 19-A, page 573;
- G. The Higel Tract containing 96.40 acres, more or less, as described in Deed from the Penn Building Company to Luis Higel, dated March 29, 1946 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 29, 1946, in Book 27-A, page 225;
- H. The Peebles, Thorpe and Taylor Tracts containing 795.2 acres, more or less, as described in Deed from the Mosota Land Company to the Arlington Land Company, dated June 8, 1914 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on October 25, 1929 in Book 24, page 288,
- I. The N.N. Smith Tract containing 8,736 acres, more or less, as described in Deed from the Arlington Land Company to N.N. Smith, dated December 9, 1912 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on January 23, 1914 in Book 19-A, page 479;
- J. The Everett G. Clark Tract containing 9,544 acres, more or less, as described in Deed from the Arlington Land Company to James F. Hutchinson, dated April 2, 1917 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 30, 1917 in Book 20-A, page 477-480, including but not limiting to the following conveyances:
- a. 1998.36 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Vaughn A. Johnson and Karen C. Johnson, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, May 1, 2002 in Book 391, page 25-30;
  - b. 151.57 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to T & B Crawford Family Limited Partnership, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on August 6, 2002 in Book 167, page 11-14;

- c. Approximately 2000 acres, more or less, as described in Special Warranty Deed from the John E. Andrus Trust to Lynx Production Company, Inc, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, March 28, 2006 in Book 529, page 2278;
- K. 802.95 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Bernice T. Torres, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 16, 2006 in Book 529, page 3730;
- L. 455.97 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to J & C LTD. Co., recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on August 6, 2002 in Book 167, page 32-35;
- M. 380 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Martin Torres and Elma C. Torrez, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on October 30, 2002 in Book 417, page 180-183;
- N. 541.01 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Virginia L. Bell, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on January 21, 2003 in Book 428, page 436-440;
- O. 1,100 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Leone Peterson Lundgren and Ellen Peterson Mortensen, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on November 27, 2002 in Book 421, page 125-129;
- P. 679.42 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Mack M. Crowther and Luella G. Crowther, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on may 30, 2003 in Book 447, page 464-467;
- Q. 663.69 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Patricia A. Cornia and William Dee Cornia, Jr., recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on August 5, 2003 in Book 456, page 972-978;

**As covered in Deed 19-A, page 525;**

- 1. The E.D. Swayze Tract containing 4,973.4 acres as described in Deed from the Arlington Land Company to E.D. Swayze, dated May 1, 1918 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 26, 1918 in Book 21-A, page 18;
- 2. The J. Luis Rivera Tract containing 11,500 acres as described in Deed from the Arlington Land Company to J. Luis Rivera, dated February 12, 1914 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on October 3, 1916 in Book 20-A, page 344;
- 3. The Hall, Dudrow and Nossaman Tract containing 11,338 acres as described in Deed from the Arlington Land Company to Hall, Dudrow and Nossaman, dated November 21, 1917 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on January 26, 1918 in Book 20-A, page 640-648;
- 4. The T.D. Burns, Jr. Tracts containing 1,332.2 acres as described in Deed from the Arlington Land Company to T.D. burns, Jr., dated September 10, 1914 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on November 3, 1914 in Book 20-A, page 100-102;

**EXCEPTING AND EXCLUDING, HOWEVER, FROM THE ABOVE-DESCRIBED PROPERTY,  
THE FOLLOWING TRACTS.**

- A. The Hall, Dudrow and Nossaman Tract containing 11,338 acres as described in Deed from the Arlington Land Company to Hall, Dudrow and Nossaman, dated November 21, 1917 and recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on January 26, 1918 in Book 20-A, page 640-648;
- B. 2229.44 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Pinorealosa Corporation , recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on August 6, 2002 in Book 167, page 24-31;
- C. 3.35 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Thomas D. Anderson and Ann K. Anderson , recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on August 6, 2002 in Book 167, page 15-18;
- D. 2.907 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to David J. DeVries and Kathleen M. Atencio, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on June 11, 2002 in Book 166, page 552-556;
- E. 1.95 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Geraldine Causey, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on June 11, 2002 in Book 166, page 557-560;
- F. 2 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Carl and Maria Bettinger, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 23, 2002 in Book 166, page 507-510;
- G. 11.29 acres, more or less, as described in Warranty Deed from the John E. Andrus Trust to Shane B. Brashar, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 1, 2002 in Book 391, page 20-24;
- H. 10.48 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Barbara Fisher Yuhr, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on March 20, 2003 in Book 437, page 413-416;
- I. 24.217 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to David and Diana Mattoon Management Trust, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 1, 2002 in Book 391, page 46-50;
- J. 23.753 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to David A. and Claudia S. Ladensohn, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 23, 2002 in Book 166, page 524-528;
- K. 24.3 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to David A. and Claudia S. Ladensohn, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on June 19, 2006 in Book 529 page 4763;

- L. 10.57 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to David E. & Marci L. Palm, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on February 23, 2006 in Book 529, page 1404;
- M. 157.16 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to George Randolph Bevis Management Trust, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 9, 2004 in Book 492, page 276-280;
- N. 156.26 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Craig and Kacie Nelson Trust, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on March 16, 2006 in Book 529, page 1983;
- O. 1,459.962 acres, more or less, as described in Release and Quitclaim from the John E. Andrus Trust to Mundy Ranch, Inc., recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on May 1, 2006 in Book 529, page 3275;
- P. 152.59 acres more or less, as described in Release and Quitclaim from the John E. Andrus Trust to John J. Teahan and Victoria A. Teahan, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 28, 2006 in Book 529, page 3217;
- Q. 3,420 acres, more or less, as described in Specialty Warranty Deed from the John E. Andrus Trust to Vernon L. Ryan and Diana H. Ryan, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on April 19, 2006 in Book 529, page 2897;
- R. 54.43 acres, more or less, as described in Specialty Warranty Deed from the John E. Andrus Trust to Jim E. Cowan and Marsha G. Cowan, recorded in the Office of the County Clerk, Rio Arriba County, New Mexico, on August 22, 2001 in Book 355, page 58-61;

Said legal descriptions of the surface property are for the purpose of mineral rights tract identification only and are not to be construed as acknowledging, conveying or in any way imparting surface rights or ownership.

# Lierle Public Relations

## U.S. Lease Price Report

**U.S. LEASE PRICE REPORT** July – August, 2006, Page 10. REGION #4 TEXAS GULF COAST cont'd.

State	County	Bonus in \$\$ per Acre			Royalty Range		Rental Range \$/Acre/Yr.		Lease Term Years	
		Sub.	Act	Low	High	Most Common	Low%	High%	Low	High
TX	WALLER			75.00	500.00	125.00	16.67	25.00	5.00	30.00
TX	WASHINGTON			60.00	350.00	125.00	16.67	20.00	5.00	10.00
TX	WEBB			75.00	250.00	75.00	16.67	25.00	5.00	10.00
TX	WHARTON			50.00	150.00	90.00	16.67	25.00	5.00	10.00
TX	WILLACY			50.00	100.00	65.00	16.67	25.00	5.00	10.00
TX	WILLIAMSON			10.00	25.00	15.00	12.50	16.67	1.00	2.00
TX	WILSON			100.00	400.00	150.00	18.75	25.00	2.00	5.00
TX	ZAPATA			100.00	200.00	125.00	16.67	25.00	5.00	10.00
TX	ZAVALA			20.00	206.00	30.00	12.50	18.75	1.00	5.00
<b>REGION #5 WEST TEXAS</b>										
NM	NE	CHAVES		25.00	395.00	75.00	16.67	18.75	1.00	1.00
NM	NW	CHAVES		25.00	395.00	75.00	16.67	18.75	1.00	1.00
NM	SE	CHAVES		2.00	1250.00	300.00	16.67	18.75	1.00	1.00
NM	SW	CHAVES		10.00	395.00	17.50	12.50	12.50	1.00	1.00
NM		CURRY		10.00	50.00	30.00	12.50	12.50	1.00	1.00
NM	S/2	DE BACA		10.00	50.00	25.00	12.50	18.75	1.00	1.00
NM	N/2	DE BACA		10.00	50.00	25.00	12.50	18.75	1.00	1.00
NM		DONA ANA		25.00	640.00	15.00	12.50	12.50	1.00	1.00
NM	EAST	EDDY		2.00	2100.00	500.00	18.75	25.00	1.00	2.00
NM	WEST	EDDY		50.00	1200.00	100.00	12.50	18.75	1.00	1.00
NM		GUADALUPE		1.00	25.00	7.00	12.50	12.50	1.00	1.00
NM	S/2	LEA		15.00	2770.00	350.00	18.75	25.00	1.00	2.00
NM	N/2	LEA		15.00	640.00	90.00	18.75	18.75	1.00	1.00
NM		LINCOLN		1.00	15.00	10.00	12.50	12.50	1.00	1.00
NM		OTERO		5.00	15.00	10.00	12.50	12.50	1.00	1.00
NM		RIO ARriba		5.00	189.00	100.00	12.50	12.50	1.00	1.00
NM	S/2	ROOSEVELT		2.00	175.00	75.00	18.75	25.00	1.00	1.00
NM	N/2	ROOSEVELT		3.00	75.00	50.00	12.50	18.75	1.00	1.00
NM		SANDOVAL		2.00	46.00	15.00				
NM		SAN JUAN		5.00	480.00	20.00	12.50	12.50	1.00	1.00
NM		QUAY		1.00	150.00	25.00	12.50	16.67	1.00	1.00
TX		ANDREWS		35.00	1118.50	300.00	18.75	25.00	1.00	1.00
TX		ARMSTRONG		1.00	3.00	2.00	12.50	12.50	1.00	1.00
TX		BAILEY		10.00	45.00	10.00	12.50	18.75	1.00	1.00
TX		BORDON		35.00	85.00	45.00	18.75	25.00	1.00	1.00
TX		BREWSTER		2.00	20.00	10.00	12.50	18.75	1.00	1.00
TX		BRISCOE		2.00	40.00	25.00	12.50	16.67	1.00	1.00
TX		BROWN		7.50	25.00	12.50	12.50	18.75	1.00	1.00
TX		CALLAHAN		25.00	50.00	30.00	12.50	18.75	1.00	2.00
TX		CARSON		20.00	50.00	35.00	12.50	18.75	1.00	1.00
TX		CASTRO		1.00	5.00	3.00	12.50	12.50	1.00	1.00
TX		COCHRAN		15.00	45.00	25.00	12.50	18.75	1.00	1.00
TX		COKE		35.00	100.00	50.00	16.67	18.75	1.00	1.00
TX	N/2	COLEMAN		25.00	60.00	35.00	12.50	20.00	1.00	1.00
TX		COLLINGSWORTH		1.00	50.00	10.00	12.50	12.50	1.00	1.00
TX		COMANCHE		10.00	20.00	15.00	12.50	18.75	1.00	1.00
TX		CONCHO		15.00	50.00	25.00	12.50	18.75	1.00	1.00
TX		CORYELL		5.00	5.00	5.00	12.50	12.50	1.00	1.00
TX		COTTLE		10.00	25.00	20.00	12.50	12.50	1.00	1.00
TX		CRANE		50.00	668.00	150.00	18.75	25.00	1.00	1.00
TX		CROCKETT		32.00	511.00	150.00	12.50	25.00	1.00	1.50
TX		CROSBY		15.00	45.00	35.00	12.50	18.75	1.00	1.00
TX		CULBERSON		1.00	382.00	180.00	12.50	18.75	1.00	1.00
TX		DALLAM		1.00	5.00	5.00	12.50	12.50	1.00	5.00
TX		DAWSON		45.00	95.00	45.00	18.75	25.00	1.00	1.00
TX		DEAF SMITH		1.00	15.00	5.00	12.50	12.50	1.00	5.00
TX		DICKENS		25.00	45.00	25.00	12.50	18.75	1.00	1.00
TX		DONLEY		1.00	10.00	5.00	12.50	12.50	1.00	5.00
TX		EASTLAND		30.00	900.00	40.00	12.50	25.00	1.00	0.50
TX		ECTOR		125.00	250.00	175.00	20.00	25.00	1.00	1.00
TX		EL PASO		2.00	20.00	10.00	12.50	18.75	1.00	1.00
TX		ERATH		50.00	500.00	350.00	15.00	23.00	1.00	2.00
TX	W/2	FISHER		15.00	35.00	30.00	12.50	18.75	1.00	1.00
TX	E/2	FISHER		15.00	35.00	30.00	12.50	18.75	1.00	1.00
TX		FLOYD		10.00	35.00	25.00	12.50	18.75	1.00	1.00
TX		GAINES		12.50	135.00	50.00	12.50	25.00	1.00	1.00
TX		GARZA		45.00	100.00	70.00	18.75	25.00	1.00	1.00
TX		GLASSCOCK		80.00	900.00	200.00	18.75	25.00	1.00	1.00
TX		GRAY		15.00	50.00	30.00	12.50	18.75	1.00	1.00
TX		HALE		10.00	40.00	20.00	12.50	18.75	1.00	1.00
TX		HALL		1.00	20.00	15.00	12.50	12.50	1.00	1.00
TX		HAMILTON		25.00	350.00	250.00	12.50	22.00	1.00	1.00
TX		HANSFORD		40.00	75.00	50.00	12.50	18.75	1.00	1.00
TX		HARTLEY		10.00	40.00	10.00	12.50	18.75	1.00	1.00
TX		HASKELL								

Original Deed  
Book 19A page 428  
11/21/1913

	Deed Ref.	File #	Heron Plat Tract Description	Original Acreage	Release/Expired Acreage	Remaining Acreage
Tract 1	19-A/161		TD Burns	14730	-14730	
	19-A/161		TD Burns	20232.4	-20232.4	
	19-A/161		TD Burns	20890	-20890	
			Total	55852.4	-55852.4	0.00
Tract 2	19-A/331		V. Jaramillo	32069.8	-32069.8	0.00
Tract 3	20-A/427		Braiden	12223.00		
		M046	ABV Ranch Properties		-1163.20	
		M053	ABV Ranch Properties		-2817.21	
		M054	ABV Ranch Properties		-7613.69	
		M045	Stuckey		-680.08	
		M035	Schalla		-51.42	
		M950	Salazar/Montoya		-9.92	
			Total	12223.00	-12335.52	-112.52
Tract 4	19-A/449		Braiden	17965.00		
		M034	Jicarilla		-4194.87	
			Brazos Cattle Co.		-86.30	
			Total	17965.00	-4281.17	13683.83
Tract 5	19-A/573		Taylor (Eschman, et al)	4877.00	-4780.60	
	27-A/225		Higel		-96.40	
			Total	4877.00	-4877.00	0.00
Tract 6	20-A/289		Jackson	6031.40		6031.40
Tract 7	21-A/18		Swayze	7849.00		7849.00
Tract 8	24/288		Peebles, Thorpe and T	795.2	-795.2	0
Tract 9	19-A/585		Kinderman	9629.00		
		M030	Medina		-455.97	
		M038	Torres, Martin		-380.00	
		M065	Torres, Bernice		-802.95	
		M047	Bell		-541.01	
			Total	9629.00	-2179.93	7449.07
Tract 10	19-A/465		Peterson	5683.87		
		M044	Lundgren		-1100.00	
			Total	5683.87	-1100.00	4583.87

Original Deed  
Book 19A page 428  
11/21/1913

	Deed Ref.	File #	Heron Plat Tract Description	Original Acreage	Release/Expired Acreage	Remaining Acreage
Tract 1	19-A/161		TD Burns	14730	-14730	
	19-A/161		TD Burns	20232.4	-20232.4	
	19-A/161		TD Burns	20890	-20890	
			Total	55852.4	-55852.4	0.00
Tract 2	19-A/331		V. Jaramillo	32069.8	-32069.8	0.00
Tract 3	20-A/427		Braiden	12223.00		
		M046	ABV Ranch Properties		-1163.20	
		M053	ABV Ranch Properties		-2817.21	
		M054	ABV Ranch Properties		-7613.69	
		M045	Stuckey		-680.08	
		M035	Schalla		-51.42	
		M950	Salazar/Montoya		-9.92	
			Total	12223.00	-12335.52	-112.52
Tract 4	19-A/449		Braiden	17965.00		
		M034	Jicarilla		-4194.87	
			Brazos Cattle Co.		-86.30	
			Total	17965.00	-4281.17	13683.83
Tract 5	19-A/573		Taylor (Eschman, et al)	4877.00	-4780.60	
	27-A/225		Higel		-96.40	
			Total	4877.00	-4877.00	0.00
Tract 6	20-A/289		Jackson	6031.40		6031.40
Tract 7	21-A/18		Swayze	7849.00		7849.00
Tract 8	24/288		Peebles, Thorpe and T	795.2	-795.2	0
Tract 9	19-A/585		Kinderman	9629.00		
		M030	Medina		-455.97	
		M038	Torres, Martin		-380.00	
		M065	Torres, Bernice		-802.95	
		M047	Bell		-541.01	
			Total	9629.00	-2179.93	7449.07
Tract 10	19-A/465		Peterson	5683.87		
		M044	Lundgren		-1100.00	
			Total	5683.87	-1100.00	4583.87

	Deed Ref.	File #	Heron Plat Tract Description	Original Acreage	Release/Expired Acreage	Remaining Acreage
Tract 11	19-A/597	M051 M052	Fietz	2000.00		
			Crowther		-679.42	
			Cornia		-663.69	
			<b>Total</b>	2000.00	-1343.11	656.89
Tract 12	19-A/479		Smith	8736.00	-8736.00	
Tract 13	20-A/477	M060	Clark	9544.00		
			Lynx (Vaughn-Crawford)		-9544.00	
			<b>Total</b>	9544.00	-9544.00	0.00
						<b>40141.54</b>

Entries in **Blue** are properties released from the mineral reservation prior to Listing Agreement  
Entries in **Red** are properties release from the mineral reservation during the Listing Agreement

# MINERAL INTEREST TIERRA AMARILLA GRANT

## ABSTRACT

This report is an overview of the regional geology and description of potential exploration interest and/or economic value for mineral ownership located in the Tierra Amarilla Grant (TA Grant). The TA Grant is located in north central New Mexico (Figure 1) in Rio Arriba County, astride the Chama Basin and along the northwestern end of the Tusas Mountains. The mineral ownership available is located throughout the TA Grant, as shown more precisely in Figure 2. The geologic location of mineral interests will typify the future exploration attention and feasible potential. The following discussion and maps will categorize these mineral interests as to their potential for oil & gas, coal and or minerals. Industrial minerals such as gravel, limestone, fossils, quarry rocks, etc. have not been evaluated.

## INTRODUCTION

There are currently no operating hydrocarbon wells, coal mines and/or mineral quarries in the TA Grant. This condition does not indicate the lack of potential, merely economic apprehension. Deeded mineral interest in the TA Grant has been privately held for several years, which could have discouraged exploration interest in the past. Large mineral positions such as the one being appraised can defer companies from looking at regions based solely on the difficulty to lease and secure enough position to launch an exploration play. Control of these mineral interests could change or impact exploration interest in the region. Deeded mineral ownership is perpetually held, unlike leased federal, state or deeded interests. Long-term, future potential could be dictated by factors presently unidentified. Unknown factors include commodity demand and price, new technologies to extract products and/or innovative exploration concepts that open areas to re-examination. This appraisal will view current exploration philosophies for evaluating mineral interest. One must keep in mind, however, that additional value could be based on long-term ownership and/or the value to an individual surface owner or environmental group purchasing interest to circumvent exploration activity. This intrinsic value is implied, but will not be described in this report. Assessment will focus on oil & gas, coal and /or minerals.



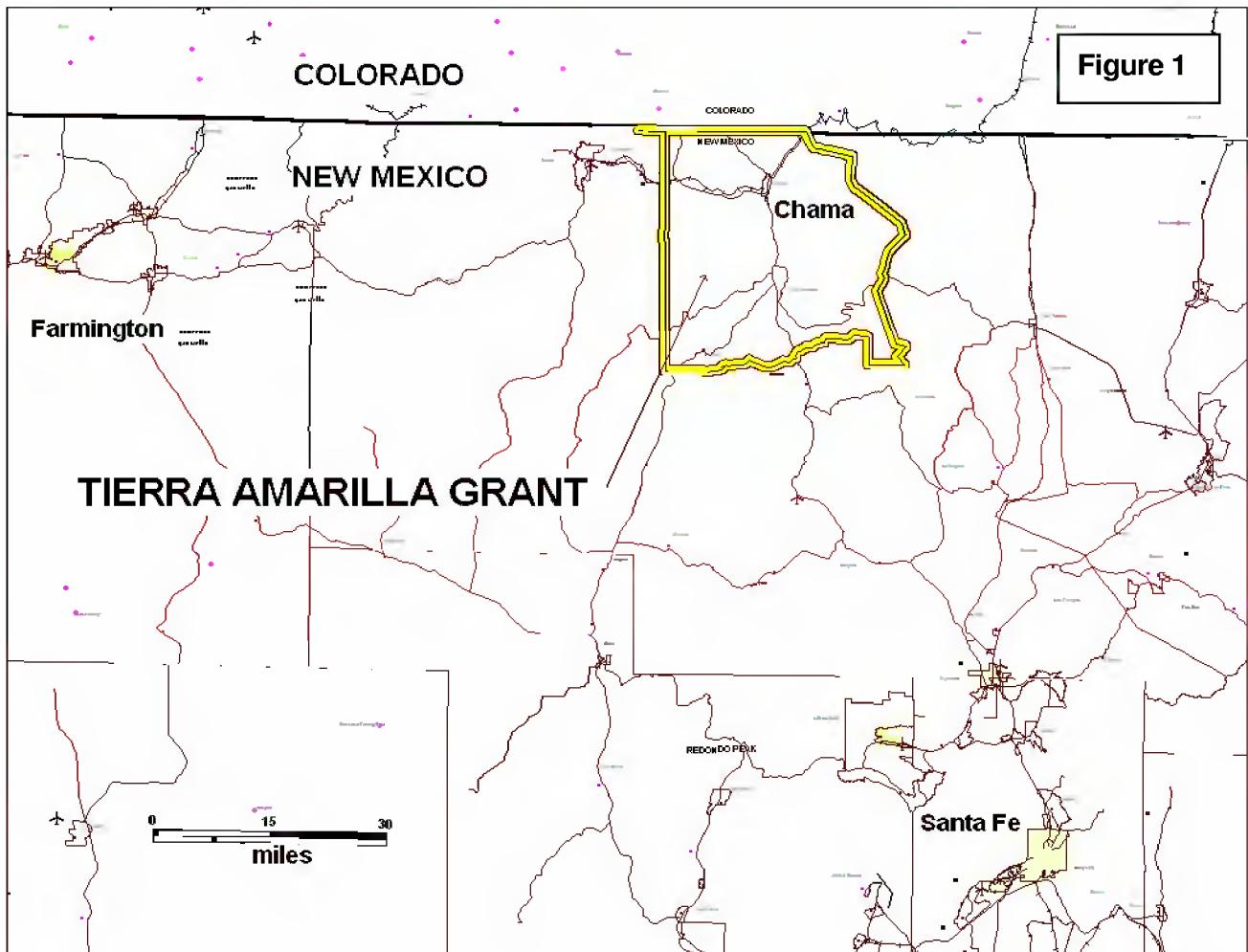
**Geopinion, Inc.**

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Salt Lake City, Utah 84109

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Report prepared by:  
John D. Adamson  
Geologist

March 2002



## MINERAL INTEREST

The mineral interest offered for sale is best described by mapped outlines indicated on Figure 2. Mineral interest differences and a brief description of the offering and auction is explained by attached exhibits A and B from United Country / Northern New Mexico Real Estate, Inc.

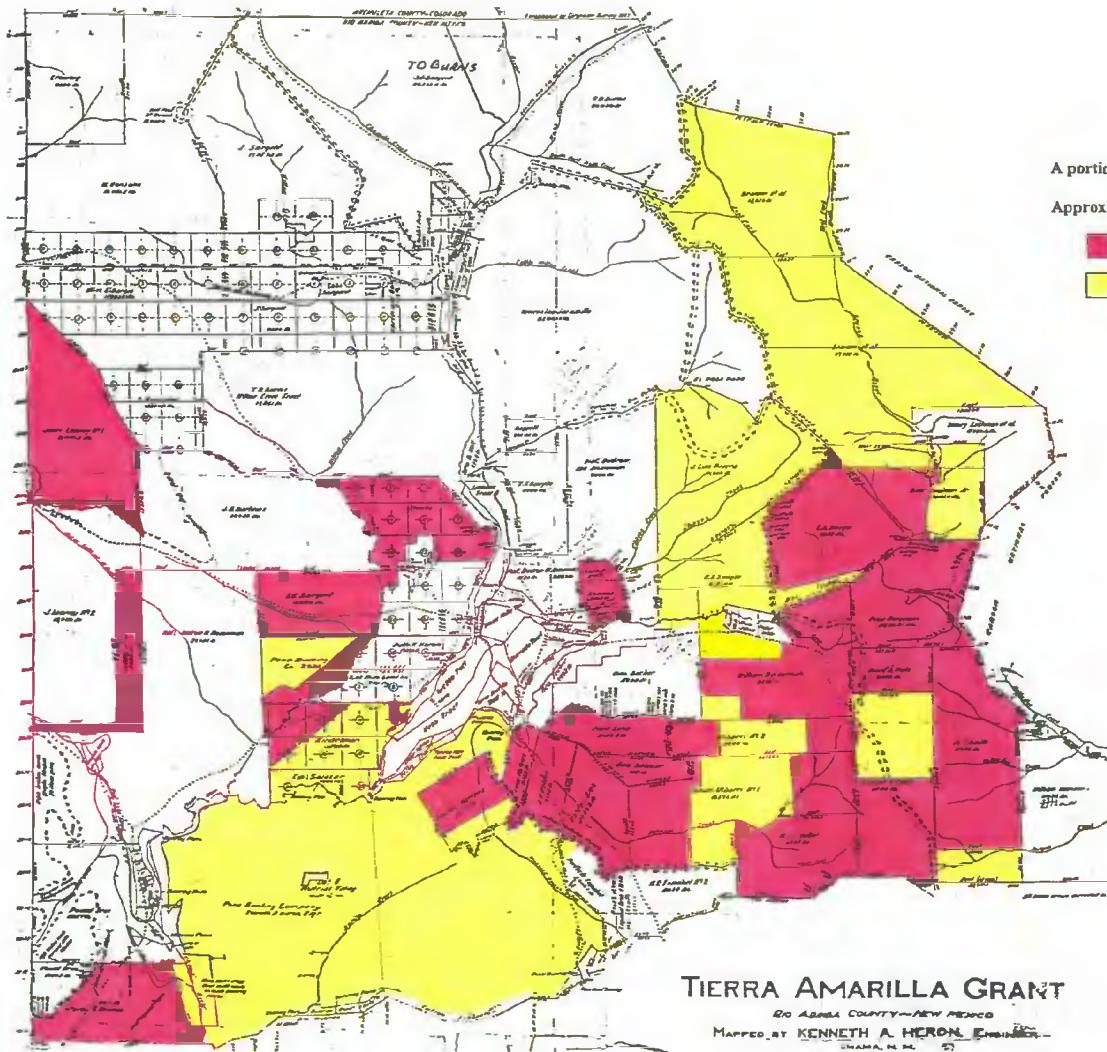
## REGIONAL GEOLOGY

The Chama Basin, previously mentioned, dominates the TA Grant and is superimposed on a larger structural terrace, which is part of the larger Archuleta anticlinorium. Northwest-trending folds and faults dominate the structural features. The western edge of Chama Basin is controlled by these faults, forming a structural uplift that separates the Chama Basin from the San Juan Basin to the

west. This basin plunges north into Colorado, becoming buried by San Juan Mountain Tertiary rocks. A major west-trending transverse structure called the Brazos fault zone runs 50 miles from the Brazos Box westward into the San Juan Basin. South of this zone the basin becomes a shallow, broad, north-trending syncline. The central part of the Chama Basin has low structural relief dipping up to near vertical, nearby faults and Proterozoic rocks of the Tusas Mountains. Structural relief from the Chama syncline to the Tusas Mountains can be up to 5000 feet.

The Tusas Mountains are a northwest trending portion of the Brazos Uplift. Proterozoic crystalline and supracrustal rocks make up the uplift, which is flanked and mantled by Tertiary and Quaternary volcanics as well as the clastic sedimentary section. Northwest-trending faults again dominate the structure in these layered

**Figure 2**



metamorphic rocks and igneous intrusions. For reference, Figure 3 is a portion of the Aztec Quadrangle Geologic Map prepared in 1987 by Manley, Scott and Wobus.

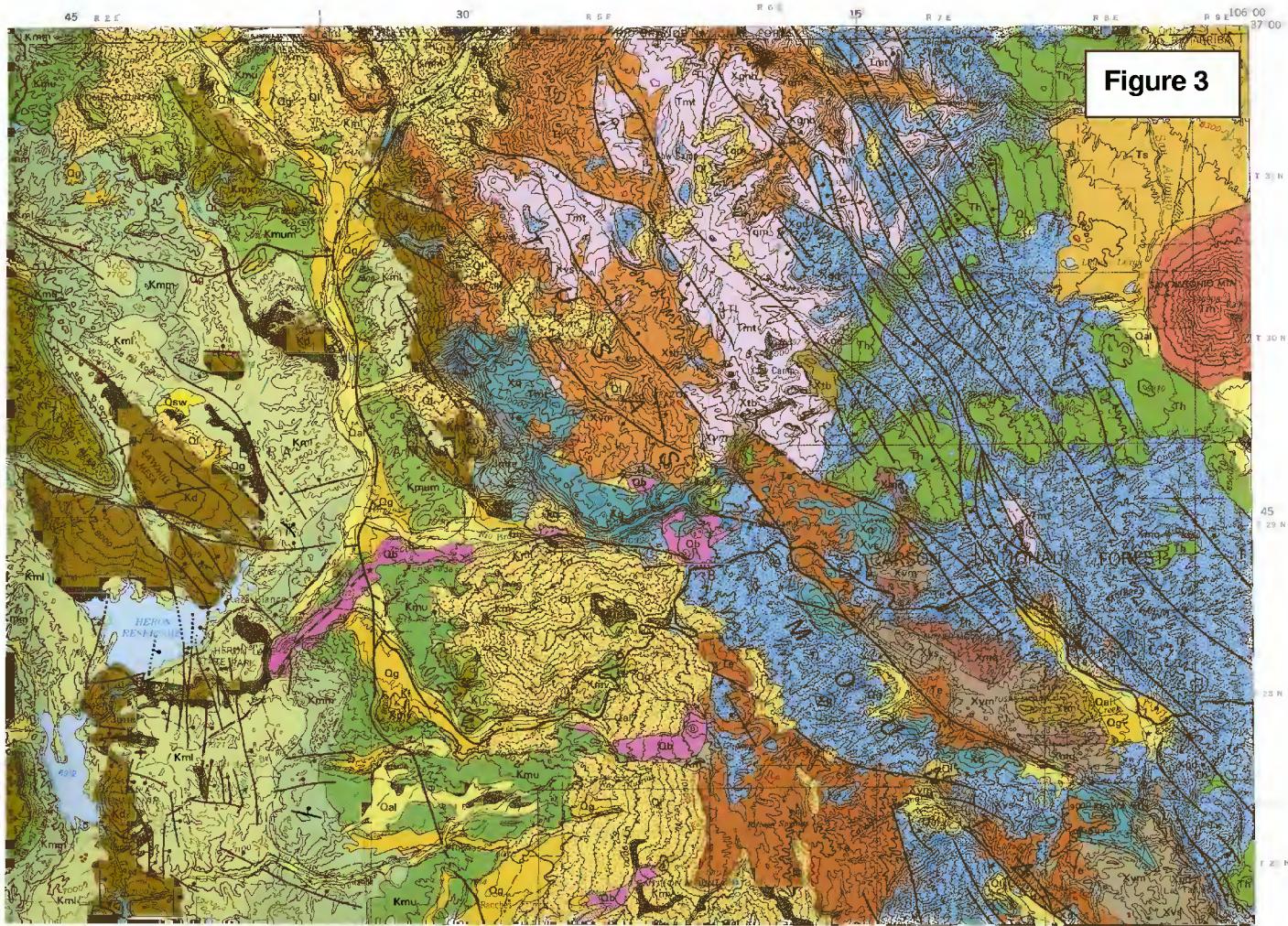
### POTENTIAL EXPLORATION INTEREST

#### OIL AND GAS

New Mexico has been a major oil and natural gas producing state since oil and natural gas were first discovered in the state during the early 1920's.

Drilling and production information, pulled together from various state agencies, indicates that no wells have been drilled in the TA Grant for oil and gas. The nearest production,

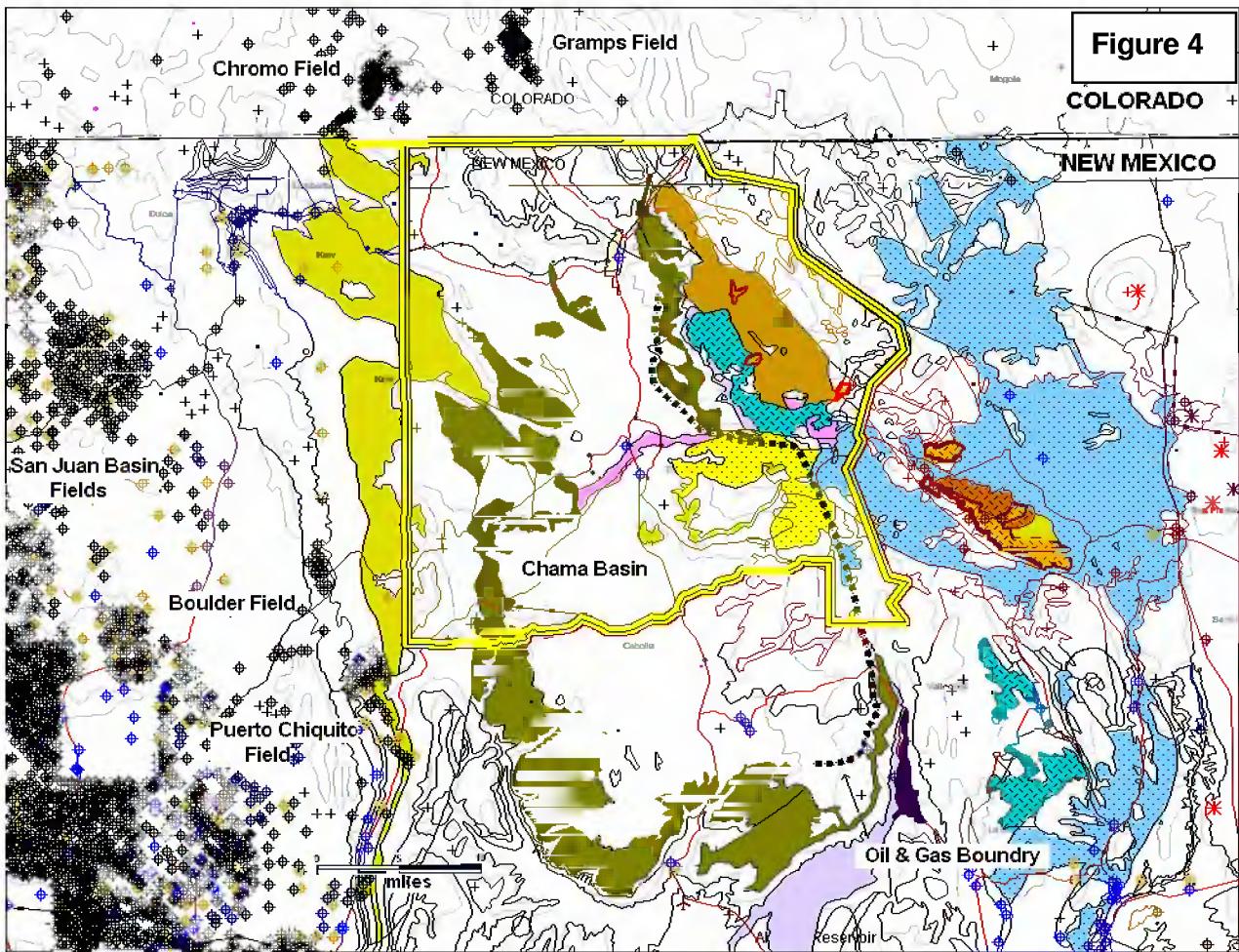
however is only 15 miles northwest of Chama, located in the northwest portion of the Chama Basin in Colorado. The "Gramps" Field was discovered in 1936 and has produced in excess of 15 million barrels from the Niobrara shale and Dakota sandstones at about 1,100 feet. The reservoir is developed in fractured shale and sandstone associated with a faulted anticline. Another old field in the Chama Basin, the "Chromo" Field, lies 18 miles northwest of Chama and produces from fractured reservoirs in the Basal Carlile silty zone, gradational zone into the underlying Tocito siltstone, and Cretaceous Greenhorn limestone. Cumulative production reported in 1960 was 120,000 barrels; in the year 2000, production was reported at 463 barrels. Additional producing fields are located on the



eastern margin of the San Juan Basin off the structural Archuleta Anticlinorium uplift that separates the Chama Basin from the San Juan Basin. Two nearby fields are named the "Puerto Chiquito" and "Boulder" Fields, producing oil from fractured Mancos Formation in structurally controlled reservoirs.

A simplified geologic map is used to look at the potential sedimentary section preserved and capable of trapping hydrocarbons (Figure 4). This sedimentary section consists of Pennsylvanian to Cretaceous rocks, which can be identified on the basin's eastern edge. Figures 5 and 6 represent composite stratigraphic columns of rock units exposed in the Chama Quadrangle and Chaves Box. The obvious potential reservoir rocks indicated in these columns are sandstones of the Dakota, Entrada and Pennsylvanian formations. Additional zones of interest, based on local

production, could be fractured reservoirs, the Greenhorn limestone, erratic sandstone and siltstones of the Morrison and limestone in the Pennsylvanian section. The section from the base of the Dakota to Proterozoic rocks is about 1,800 feet in thickness. Along the eastern basin edge, on Figure 4, is a dashed boundary line indicating the approximate limit of sedimentary section capable of trapping hydrocarbons before leaking out to the outcrop. Mineral interest east of this line has no hydrocarbon potential. Figure 7 indicates the mineral interests expected to have hydrocarbon potential. Conventional prospect potential west of this line will be anticlines, faults and faulted anticlines with Dakota, Entrada and/or Pennsylvanian sandstones. Figure 8 illustrates these major potential structural features. Other more speculative prospects expected are fractured formation reservoirs, siltstones, angular unconformity



traps of sedimentary section under mantled volcanics, stratigraphic traps in the Pennsylvanian section and/or a Pennsylvanian erosion remnant, trapping hydrocarbons within the basin.

Under similar geological situations, this terrace area above the prolific hydrocarbon rich Sand Wash Basin, can contain similar potential as demonstrated by the shallow "Gramps" Field, where the wells have averaged over 200,000 barrels. The large mineral interest positions being offered will have minimum well permitting, and environmental constraints that could currently generate exploration drilling interest for hydrocarbons.

## COAL

Coal potential is also confined to the basin sediments and has only been described in the

Mesaverde Formation, locally preserved in small areas (Figure 9). Mesaverde outcrops on the west edge of the TA Grant have been mined in nearby Monero, New Mexico for local consumption. The Mesaverde in the San Juan Basin is typically divided into three named units, in ascending order as follows: Point Lookout Sandstone, Menefee Formation and La Ventana Tongue of the Cliff House Sandstone. In the Chama area this threefold subdivision cannot be recognized because the coal bearing Menefee Formation pinches out northeast of the Monero coalfield (Muehlberger 1967). Bulletin 89, Geology of Chama Quadrangle, reports some 12 measured sections in the area with 3 sections describing the Mesaverde Formation. Only one coal is reported with approximately 5 feet in thickness in the Tecolote Mesa section on the west edge of the TA Grant (Figure 10). Other local sites 3 to 6 miles southeast of Tierra Amarilla

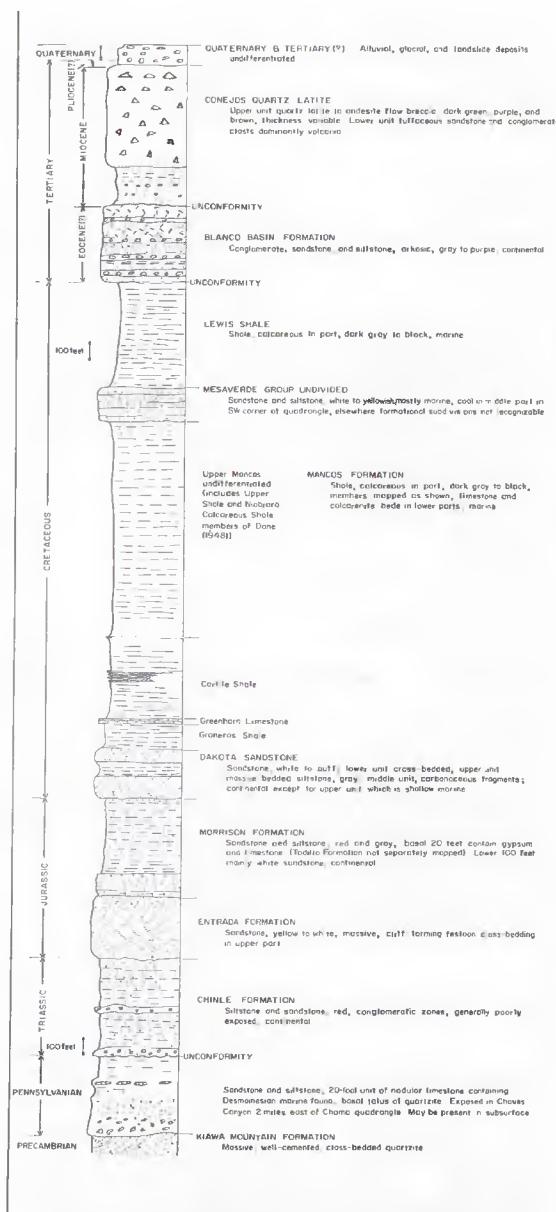
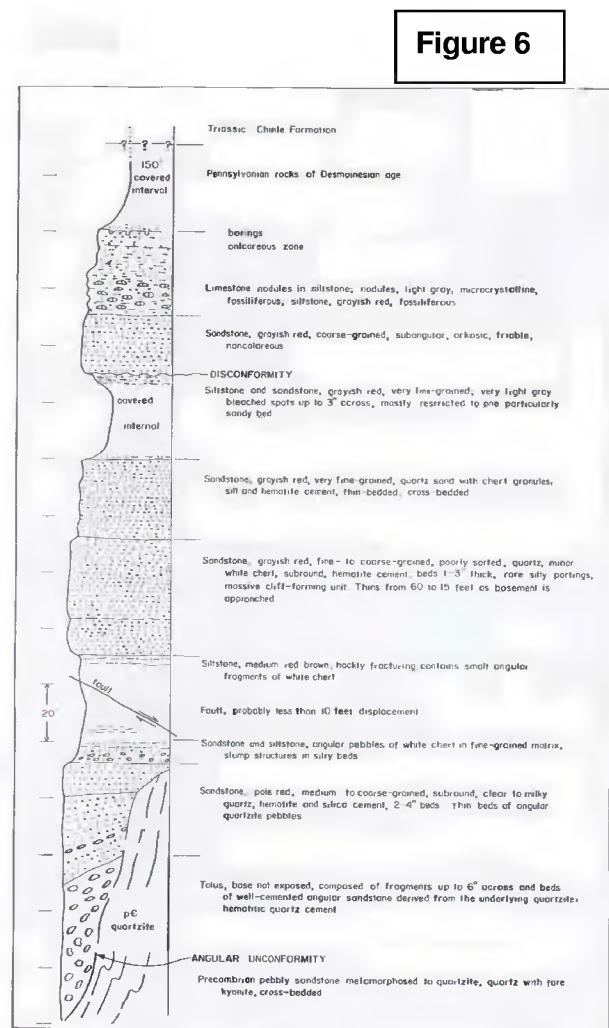
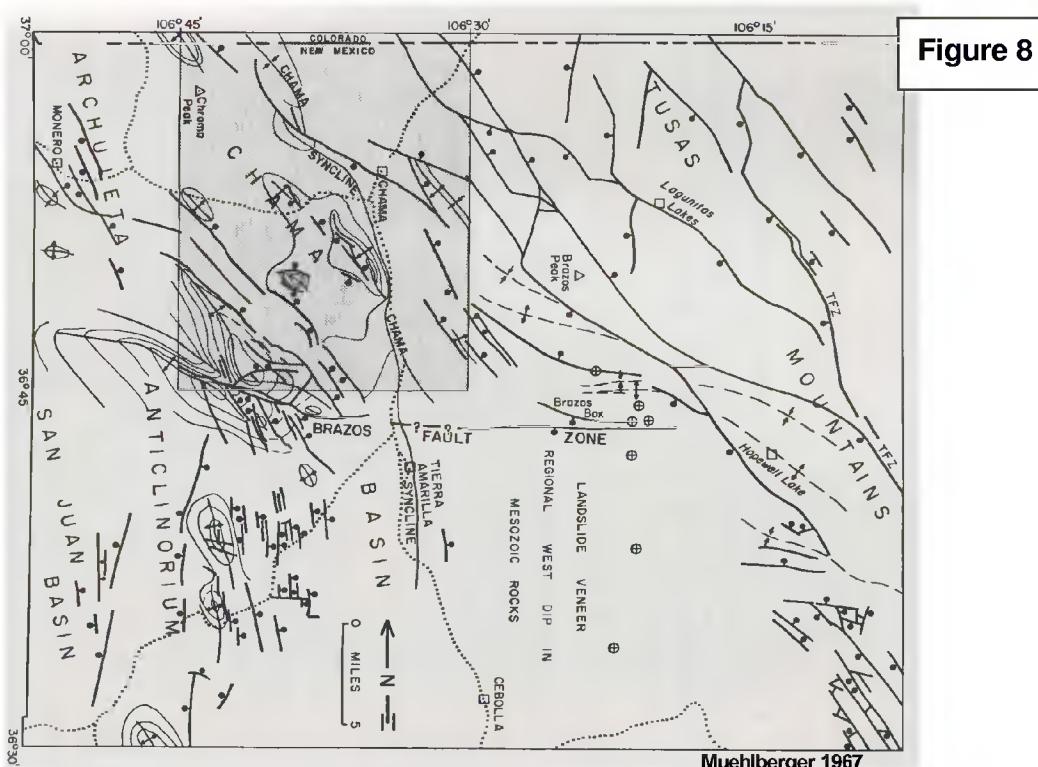
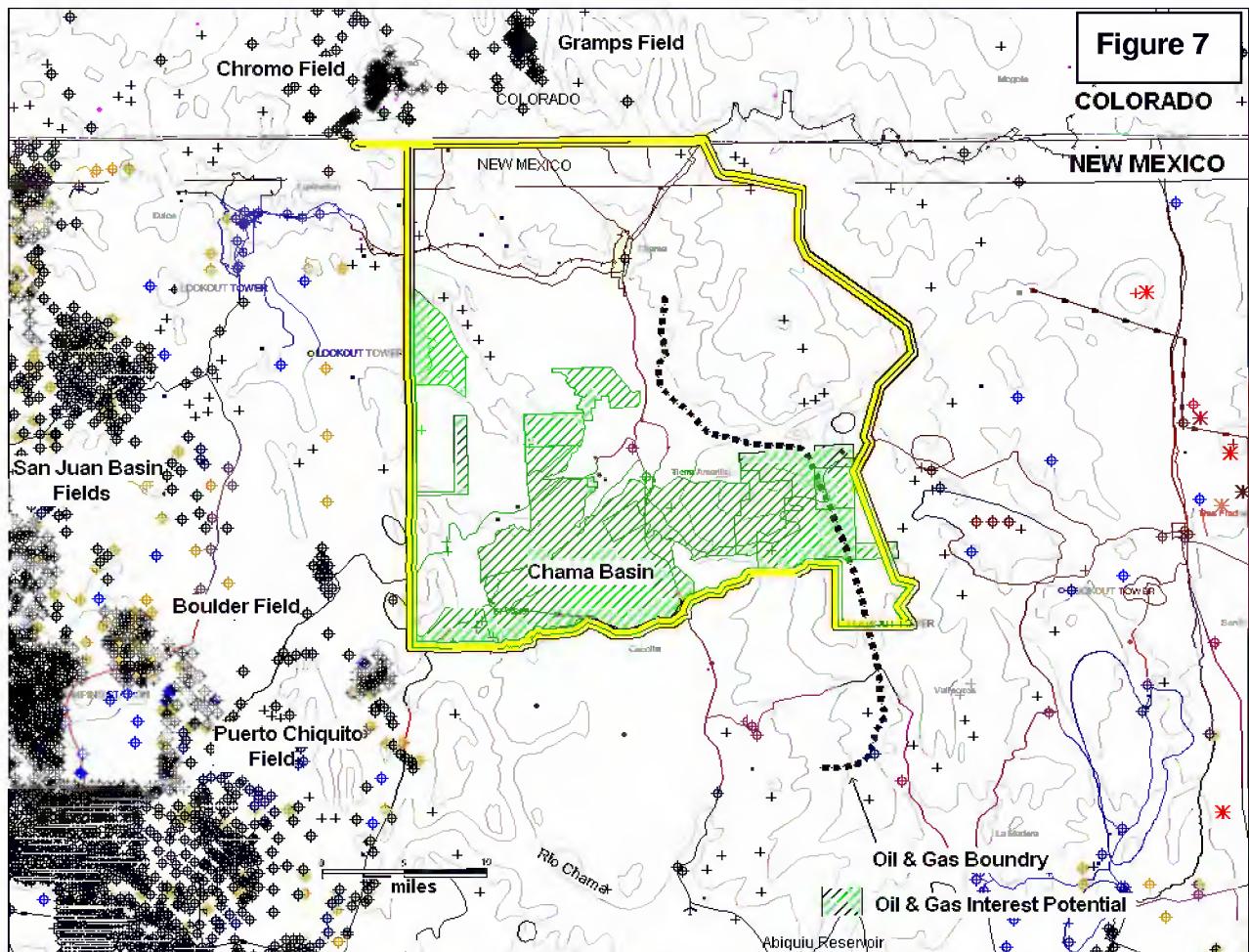


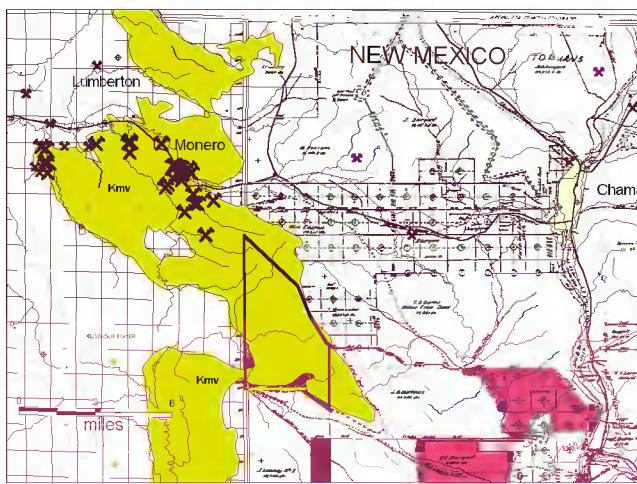
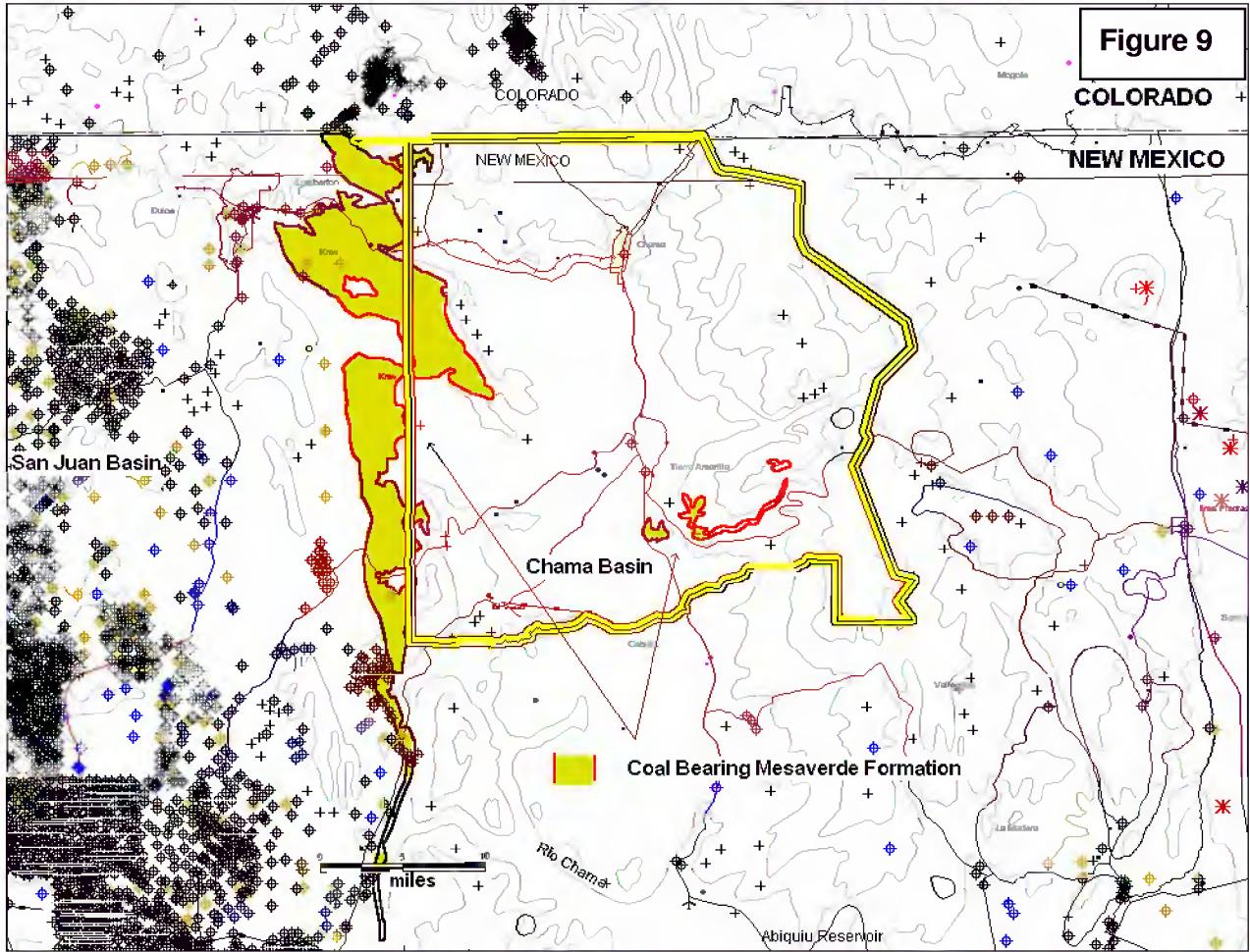
Figure 5



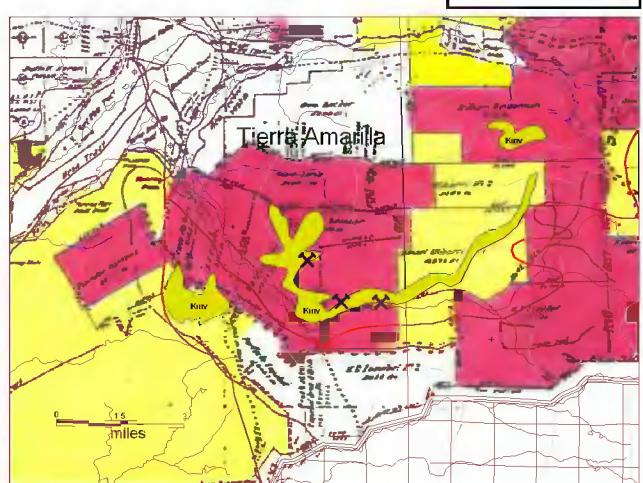


## **MINERAL INTEREST – TIERRA AMARILLA GRANT**

**GEOPINION, INC.**



**Figure 10**



indicate surface mining sites, but no reports have been found to describe the resource (Figure 11). Mine potential for coal is not expected on available mineral interests, but small amounts could be extracted for individual use, therefore value could exist for nearby surface owners. Field examination will be necessary to further evaluate these small isolated deposits.

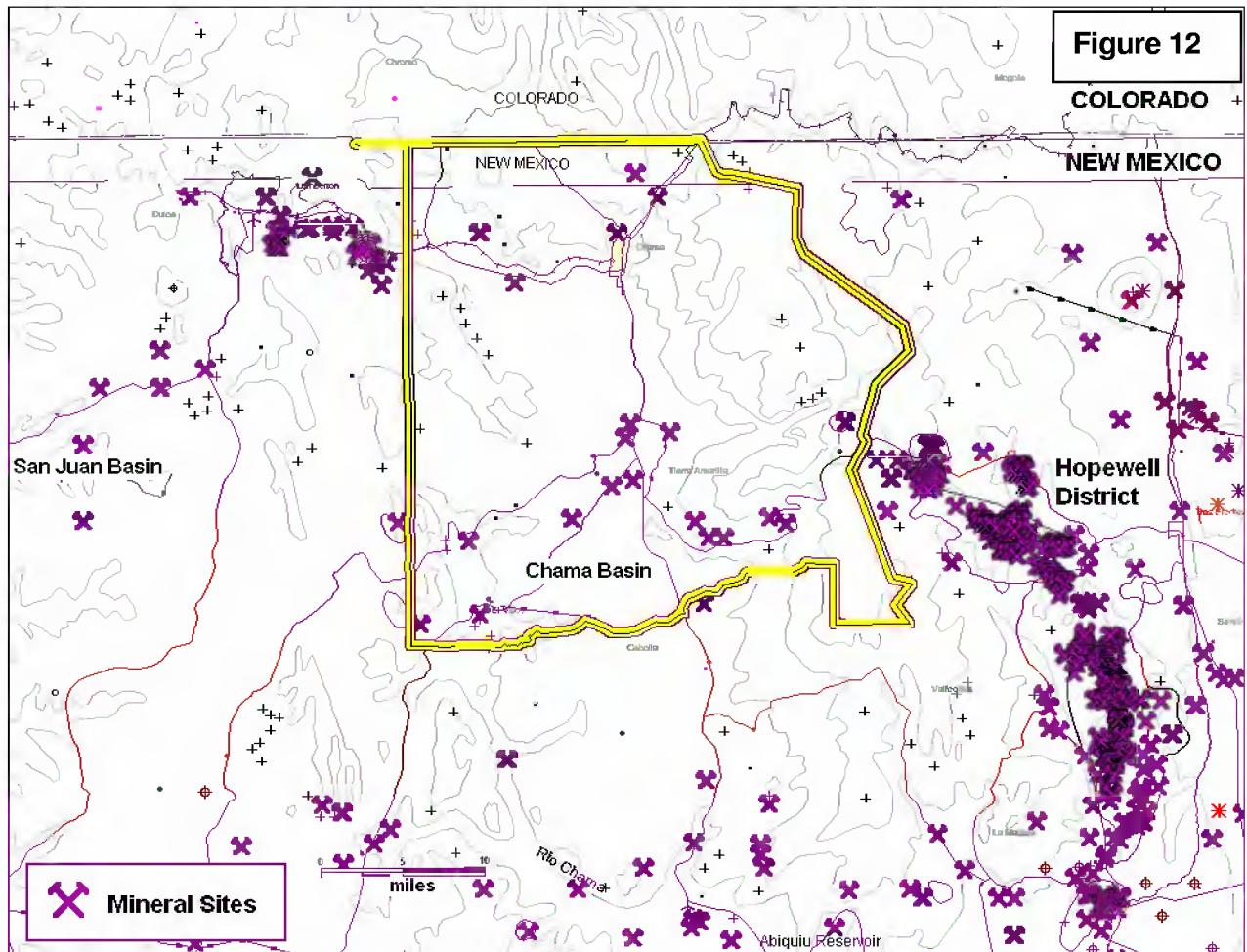
## MINERALS

The complexity of the Proterozoic rocks in the Tusas Mountains makes it difficult to evaluate the economic mineral potential. This complexity, associated with large mineral ownership in an under-explored region, is exactly what intrigues and compels companies to explore. The main emphasis for mineral interest potential will focus on metamorphic and intrusive rock types with which mineral deposits are generally associated. Mineral sites, past production and exploration areas are indicated on Figure 12 by the crossed pick symbols. Some of these symbols also represent coal workings and the industrial mineral sites not evaluated in this report.

The nearest minerals found, adjacent to the offered mineral interests, are in the Hopewell district just east of the TA Grant. This district history dates back to 1890 when the Croesus Mine was patented, the Jaw Bone Mine patented in 1900 & 1905, the Red Jacket Mine in 1913, Mineral Point Mine in 1914 and the Iron Mountain Mine, not dated. Mineral commodities in this area are reported as gold, silver, copper, lead, zinc, iron and manganese. No data has been found that reports quantities produced. The gangue or mineral aggregates from these mines have been described as quartz, chlorite, siderite, iron oxides, hematite, diorite porphyry, schist, phyllite and tourmaline. The past descriptions of these deposits have classified them as irregular load (vein) and bedded deposits, which may not be consistent with current thinking. Recent field mapping, geochronology and petrologic analysis in the Tusas Mountains, have provided new constraints on the evolution of the Proterozoic rocks. These studies and re-evaluation of the

diverse volcanogenic environments of the gold deposits may imply that the configuration may not be classical structurally controlled veins, but exhalative, sea floor vent deposits represented in the Proterozoic metasedimentary and metavolcanic rocks. These sub sea exhalative or black smoker vents can be the source to produce massive sulfide deposits.

These Proterozoic rocks forming the core of the Tusas Mountains are also described as bimodal metavolcanic and volcaniclastic metasedimentary rocks, vitreous quartzite and interlayered pebble conglomerates and several small quartz diorite to granite stocks (Wobus 1984). It has been suggested that these rocks may have been generated by the opening and closing of successive back-arc basins underlain by continental crust. Figure 13 is a simplified geologic map of the Tusas Mountains indicating the location of the potential mineral bearing metavolcanics and associated supracrustal metasedimentary rocks. Figure 14 by Wobus (1984) illustrates the same area showing Proterozoic rocks associated with structural features. The major fault highlighted where Proterozoic rocks are exposed at the surface, runs northwest from Kiowa Mountain, west of Brazos Peak to Chama, New Mexico. This fault and others could have provided the long-lived structural permeability necessary for sustained hydrothermal discharge in the area, which is believed to be the prerequisite for the formation of potential subaqueous exhalative deposits. In fact, Wobus (1984) reported, "The metabasalt locally contains well-preserved pillow structures in the Brazos Peak 15-minute quadrangle northwest of the Tusas Range". These deposits are interpreted to be products of submarine hydrothermal discharge and may also represent a subaqueous counterpart to subaerial epithermal precious metal deposits. These deposits called volcanogenic or volcanic-associated massive sulfide deposits (VMS) are major sources of copper and zinc, with a lesser extent of lead, silver, gold, cadmium, selenium, tin, bismuth and other amounts of minor metals.



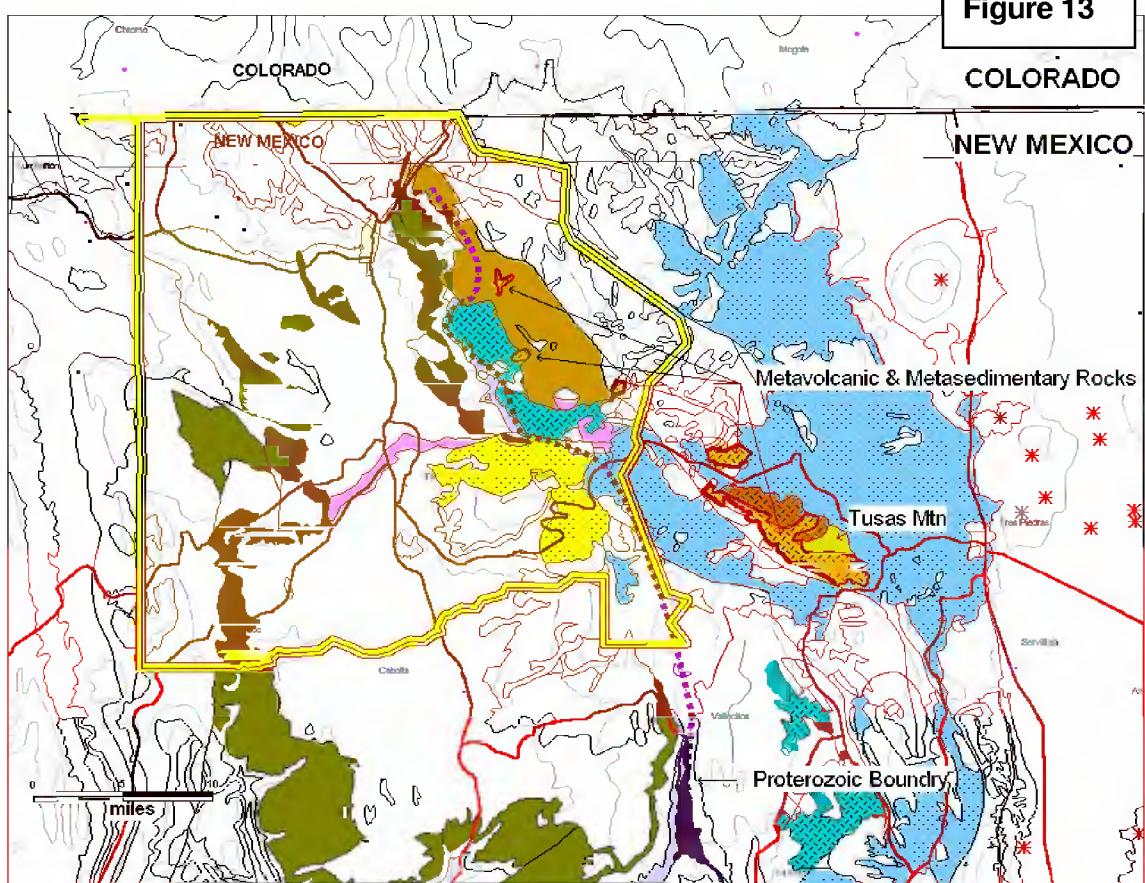
The key to understanding the area's potential will be updated mapping of the disconformable alteration zones (pipes) that mark the conduit for ascending hydrothermal fluids forming the deposits, and regionally extensive stratabound semiconformable alteration zones within the stratigraphic succession hosting the deposits. Semiconformable alteration zones provide the evidence of widespread, vigorous hydrothermal alteration, and exploration should focus in these areas. Figure 15 represents the available mineral interests that could be explored for these type of deposits.

Additional mineral potential could exist for placer gold deposits in alluvium material on the core and western flank of the Tusas Mountains. Locals have narrated stories about panning for gold in area streams, but no

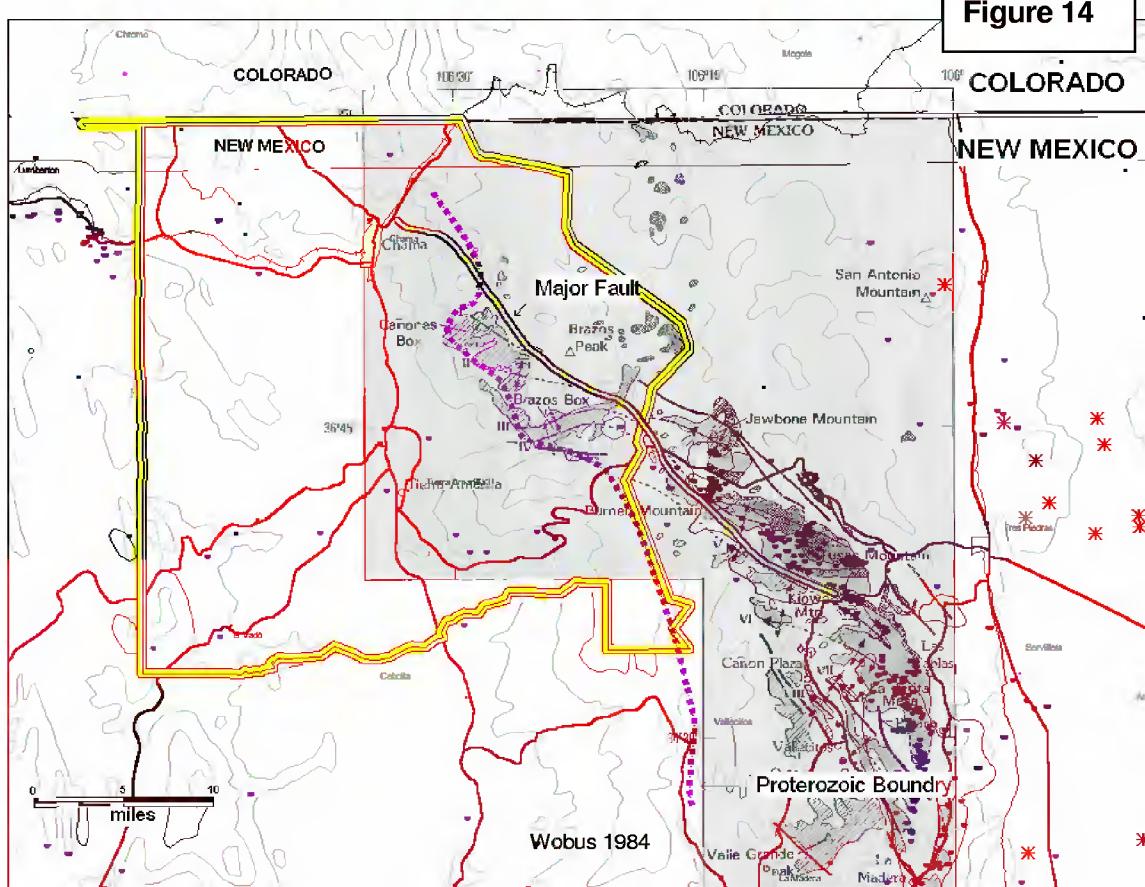
documentation of discovery is reported or recorded. Based on the geology of the alluvium source, it is highly probable to expect potential for placer gold in these regions. Figure 16 indicates available mineral interests either in the range and/or on the western flank where this potential might exist.

In the early 1950's intensive exploration for uranium deposits occurred with claims staked on sparse showings in the Dakota and Chinle formations. Locals have also talked about drilling taking place in the 70's for similar interests. Uranium prices and the lack of adequate water sources hindered any production or development; therefore no value is presently placed on these speculative deposits.

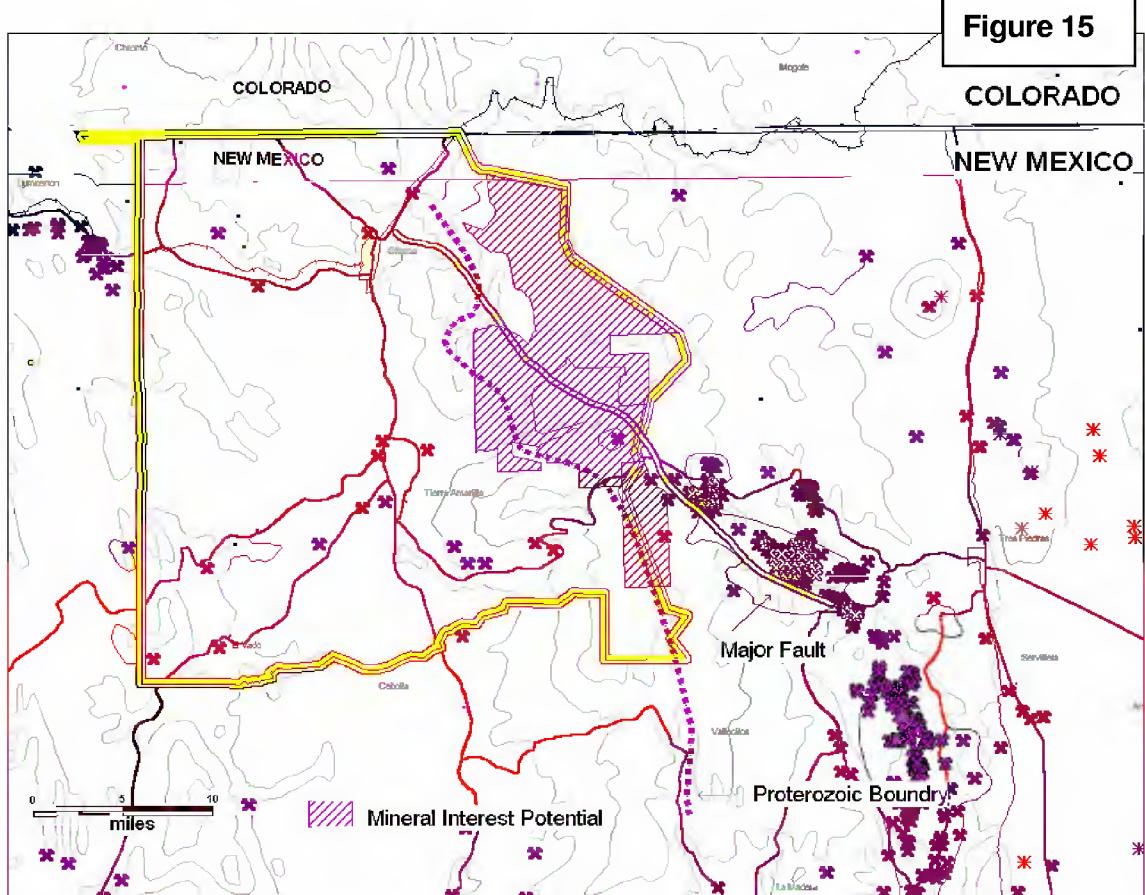
**Figure 13**



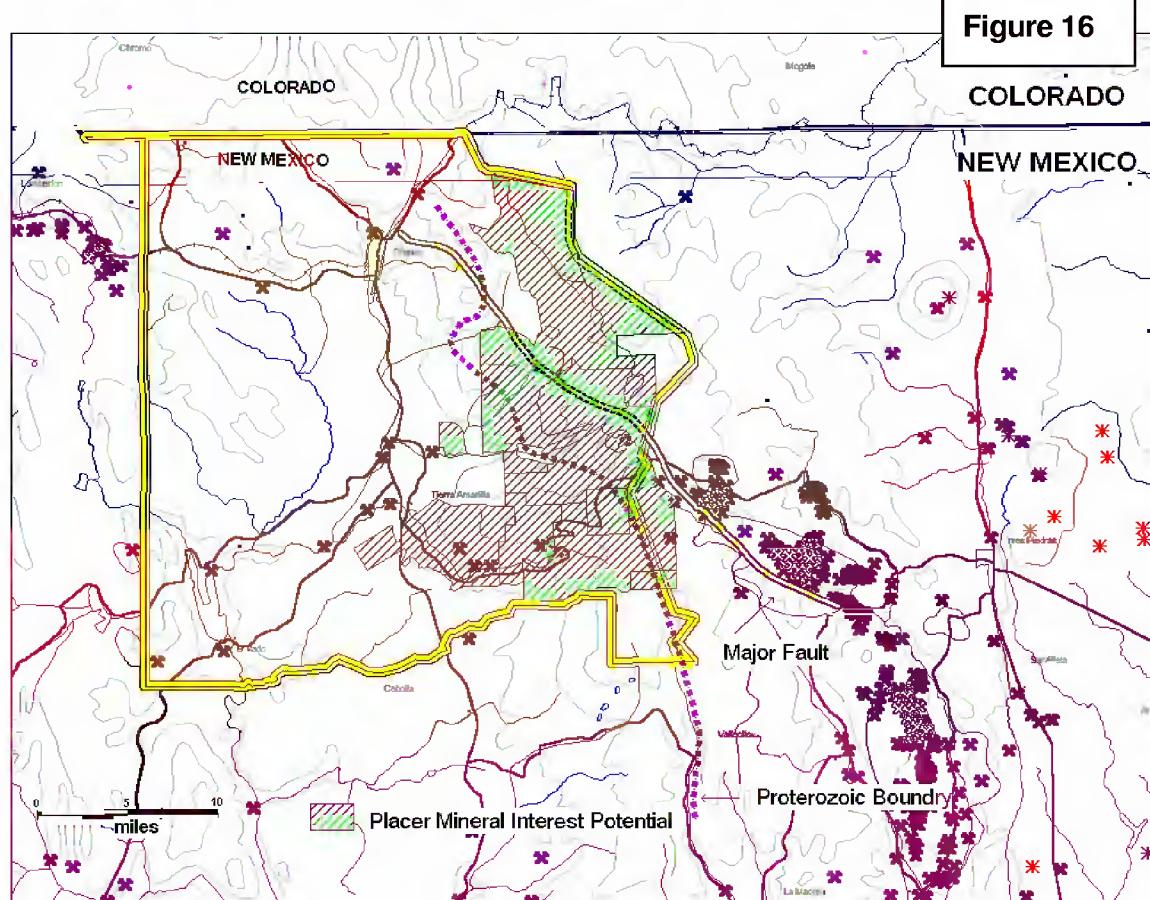
**Figure 14**



**Figure 15**



**Figure 16**



## ECONOMIC VALUE

The economic value of the offered mineral interests is ultimately based on production of oil, gas and/or mineral products. Because there are currently no products in production, economic potential can only be described by typical oil and gas wildcat acreage costs, and the value of a typical mineral deposit companies would be willing to look for.

Mineral interest value, as regards to oil and gas potential, can be based on an industry scenario for evaluating wildcat leasing costs. Typical oil and gas rights in the west are leased from the federal government, state lands, Indians or private fee ownership. The majority of land is federal, which can be leased for a minimum of \$1.50 per acre yearly rental for the first five years and \$2.00 per acre after that until production begins or the 10-year term expires. Once a lease is producing, you must pay a royalty of 12.5 percent of the value or the amount of production removed or sold from the lease. If a lease were taken to term the total acreage cost would be \$17.50 per acre.

These federal lands are offered in a competitive oral auction where the minimum bid to open is \$2.00 per acre plus the first years rental. Total lease term costs therefore would be \$19.50 per acre. Competitive interest in acreage often takes bonuses from \$2.00 to \$5.00 per acre for wildcat plays and developed prospects can command \$25.00 to \$50.00 per acre. Typical prospect generators acquire acreage at the low end, develop the play and sell interest for the higher acreage prices requiring a drilling commitment. Based on these discussions it would seem reasonable to assume that purchasing deeded mineral interests, with no expiration term or royalty burden, could command at least \$15.00 per acre for potential oil and gas acreage.

Mineral interest value is more difficult to predict because historical cost information for acquiring acreage is not available. The usual corporate framework for meeting commercial development is a project value over \$100 million.

The labor cost to stake a lode mineral claim 600 feet by 1500 feet (~20.66 acres), with the annual assessment fee of \$100 per claim or site to the BLM, puts mineral lease values over \$5 per acre. There is also a \$10.00 nonrefundable service charge to record each new location and an affidavit of annual assessment work (per claim/site) of \$5.00. All total, just fees to the government to maintain a claim for 5 years would be \$20.81 per acre.

The maximum size of a placer claim is 20 acres per locator. Placer claims will cost the same to maintain as the lode claims.

95% of the volcanogenic massive sulfide deposits found worldwide are smaller than 3 million tons. These deposits are big exploration risks, but produce considerable rewards. Several of the big deposits found in the past have been company makers. The value of the mineral found in these deposits is around \$200 per ton. The exploration interest would be to find a  $\frac{1}{4}$  by  $\frac{1}{4}$  mine site containing some 20 million tons, with a potential worth of \$4 billion dollars. Surprisingly these underground deposits have a small environmental footprint or impact and could feasibly be operated in current times. Several positive aspects are obvious as a result of owning deeded mineral interest. The large acreage position available would be an attractive position to own when looking for this needle in the haystack.

## CONCLUSION

Mineral interests in the Tierra Amarilla Grant unquestionably have the potential for future economic value, should exploration commence. Oil & gas, and/or metallic mineral potential is present but has had little, if any, past exploration history. I believe that untested conceptual frontiers exist for developing oil and gas drilling prospects, selectively mineable stratiform mineral deposits in Proterozoic sedimentary rocks and paleoplacer gold deposits in the Tierra Amarilla Grant. The complexity of the rocks, and the large mineral ownership available (195,000 acres), creates

an attractive arena in this under-explored region, and should motivate an exploration program. Current industry emphasis is placed on enhancing exploration success by searching in untested geologic environments in which the presence of oil, gas and/or minerals had not been previously recognized or the significance of its presence, where recognized but not comprehended. Purchase of mineral interest ownership in the Tierra Amarilla Grant is highly recommended. Long-term outlook for oil & gas production and/or precious metals mining is very optimistic.

This appraisal makes no assurance that production, revenue; mineral reserves or estimated values of any magnitude will be recoverable. It should be pointed out that discussion and figures presented are a prediction and not a guarantee of the conclusions reached.


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Muehlberger, William R. 1968, Geology of Brazos Peak Quadrangle, New Mexico, State Bureau of Mines and Mineral Resources New Mexico Institute of Mining & Technology Campus Station, Geologic Map 22

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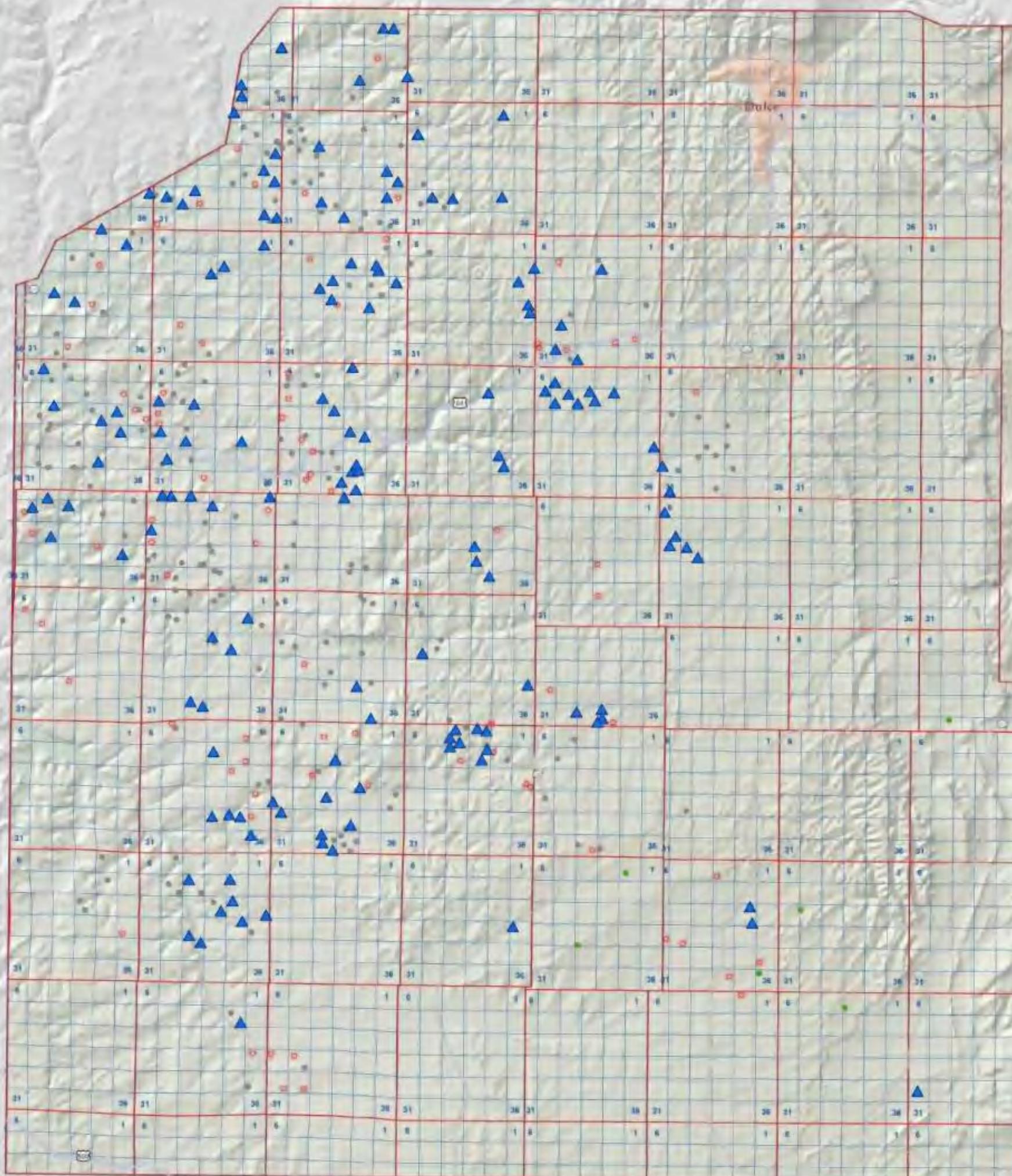


This map is provided as an overview of the property's location within the county. The location represented on this map is approximate.  
Please refer to the Seller's Documents for Legal description.

107°15'0"W

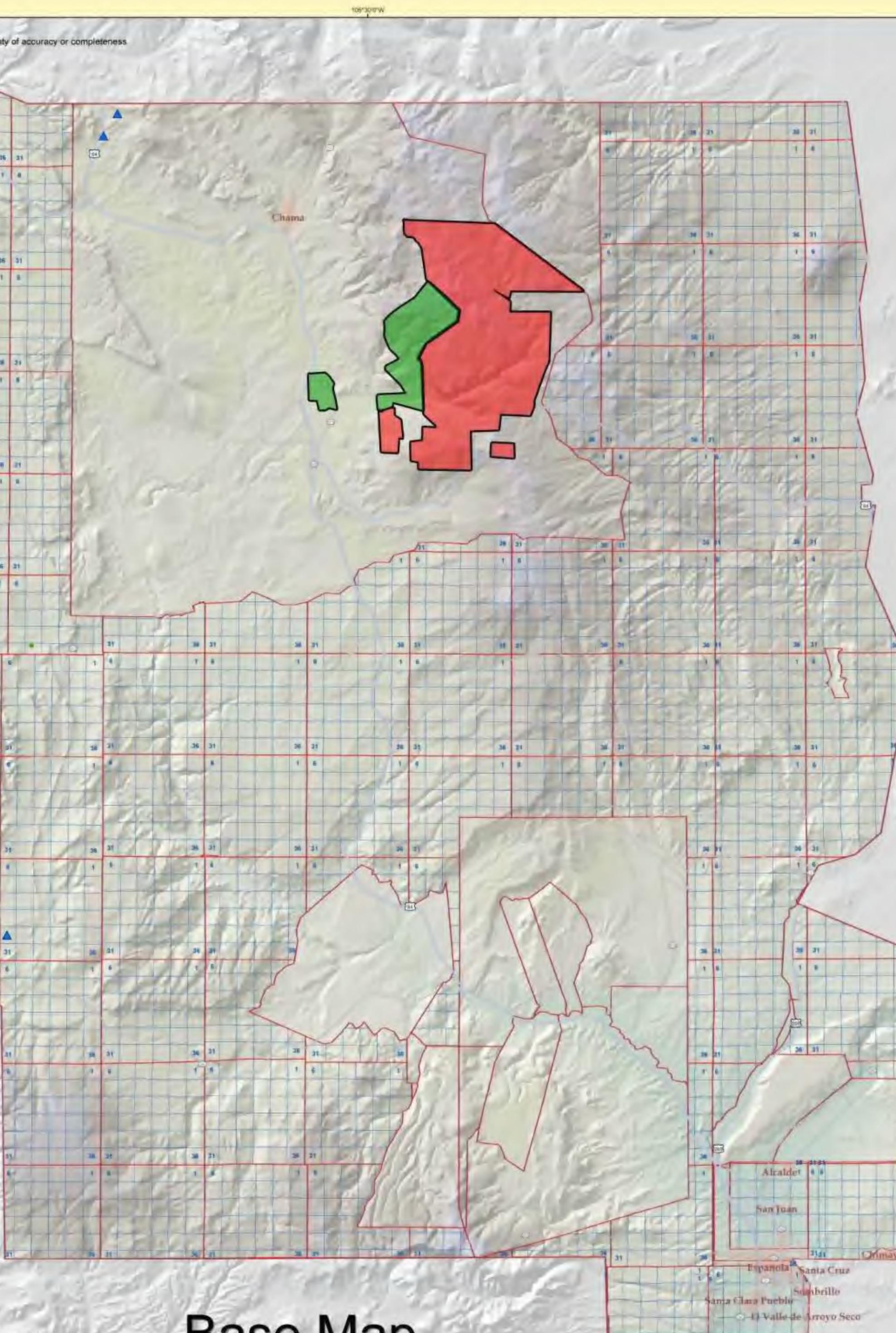
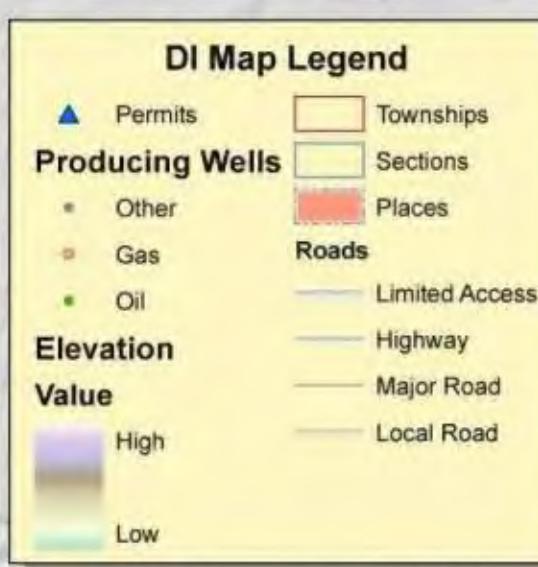
107°30'W

107°45'W



Approx Area of Tract Outlined in Seller's File named  
'Area Maps - Pg1' located in the Due Diligence  
Section under 'Maps/Plats'

Approx Area of Tract Outlined in Seller's File named  
'Area Maps - Pg2' located in the Due Diligence  
Section under 'Maps/Plats'



## Base Map Rio Arriba, New Mexico

Permit activity recorded by DI between 12/05/2005 and 12/12/2006  
Producing wells - as of June, 2006

20 Miles



This map is provided as an overview of the property's location within the county. The location represented on this map is approximate.  
Please refer to the Seller's Documents for Legal description.

