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April 28, 2011

David Brooks, Esq. NM Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, NM 87505 **Hand Delivered**

Re:

NMOCD Case No. 14522: Application of Approach Operating LLC For A Non-Standard Oil Spacing And Proration Unit, Rio Arriba County, New Mexico.

NMOCD Case No. 14576: Application of Approach Operating LLC For an Unorthodox Well Location and Non-Standard Oil Spacing And Proration Unit, Rio Arriba County, New Mexico.

Dear Mr. Brooks:

At the hearing today on both of the Applications in the referenced cases, we introduced color copies of the Affidavits of landman Brice A. Morgan and geologist Theodore Oldham.

Enclosed are two original, notarized affidavits from each of these individuals, one for each case. These originals may be substituted for the copies in each case.

Thank you.

Very truly yours,

J. Scott Hall

JSH:kw Enclosures

CC:

Brice Morgan, Approach Resources

00275742

REPLY TO:

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Post Office Box 2307 Santa Fe, New Mexico 87504-2307 6301 Indian School Road NE, Suite 400 Albuquerque, New Mexico 87110 Telephone (505) 884-4200 • Fax (505) 888-8929

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RECEIVED

STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF APPROACH OPERATING LLC FOR AN UNORTHODOX WELL LOCATION AND NON-STANDARD SPACING AND PRORATION UNIT, RIO ARRIBA COUNTY, NEW MEXICO.

CASE NO. 14576

AFFIDAVIT OF BRICE A. MORGAN

BRICE A. MORGAN, being duly sworn, state:

- 1. I am the landman for Approach Resources Inc. and Approach Operating, LLC in the Company's Fort Worth, Texas, office. I am responsible for the Company's Rio Arriba County, New Mexico properties. I am familiar with the lands and the subject matter of this application and have direct knowledge of the matters set forth herein.
- 2. Approach Operating, LLC seeks approval of an unorthodox well location and a non-standard unit to be dedicated to the Approach Montano No. 1 Well at the following surface and bottom-hole locations:

Montano No. 1 API No. 30-39-30858 939' FNL and 207' FWL (D) Projected Section 3, T27N, R4E Rio Arriba County, New Mexico

- 3. Approach Operating, LLC owns the right to drill the well on these lands. This straight-hole well will be drilled to a depth sufficient to test the Mancos Shale formation within the boundaries of the WC Tierra Amarilla Mancos Oil Pool and is defined as a wildcat under the Division's rules. The statewide rules for wildcat oil wells currently provide that wells shall be drilled no closer than 330' to the outer boundary of a standard 40-acre spacing unit. The C-101 along with the C-102 plat showing the NW/NW spacing unit and the proposed unorthodox surface and bottom hole locations for the Montano No. 1 are attached as Exhibit A.
- 4. Approach seeks an exception from the applicable well location rules for the Montano No. 1 Well for the following reasons: (1) The well is located in an un-surveyed area within the Tierra Amarilla Land Grant. The section/township/range description of the location is based on unofficial, projected township and section lines from an adjoining survey and therefore, it is not possible to state the proximity to actual section lines or quarter-quarter subdivisions boundaries with certainty. However, the location descriptions by latitude/longitude and by reference to the New Mexico State Plane Coordinate System referenced on the C-102 are accurate. (2) The well has also been located in conformance with the Design and Operational Standards for Oil and Gas Development of Rio Arriba County Ordinance No. 2009-01. Among

other matters, these standards take into consideration terrain limitations, access roads, proximity to water features, and compatibility with existing land uses. Many of these matters are demonstrated by the enclosed aerial photo of the Montano No. 1 Well (Exhibit B).

- 5. The location for this well is not located closer than 660' to any existing well or a well that is known to be planned. Approach Operating, LLC's affiliate company, Approach Oil & Gas Inc., owns or controls 100% of the leasehold working interest in each of the adjoining spacing units toward which the location encroaches and Approach Operating, LLC would be the operator of each of those units. Further, the mineral interest ownership underlying the NW/NW of projected Section 3 and each of the spacing units toward which the well encroaches is identical. Consequently, no further notice for the NSL application is indicated under the Division's rules (See Rule 19.15.4.12.A.2).
- 6. In addition, Approach Operating, LLC also seeks approval of a $52\pm$ acre non-standard spacing and proration unit to be dedicated to the referenced well, comprised of that acreage located generally in the NW/NW of Section 3 as indicated on the attached survey plat (Exhibit C).
- 7. The statewide oil well location and acreage dedication rules that would otherwise be applicable to the WC Tierra Amarilla Mancos Oil Pool (97767) provide that oil wells shall be located on a spacing unit "...consisting of approximately 40 contiguous surface acres, substantially in the form of a square that is a legal subdivision of the United States public land survey and is a governmental quarter-quarter section or lot.". See Rule 19.15.15.9.A. Rule 19.15.15.11 B(1) authorizes administrative approval of non-standard units when necessitated by "a variation in the legal subdivision of the United States public land surveys...". Of course, the variation in this circumstance results from the application of a less than certain projected survey.
- 8. As indicated above, this well and spacing unit are located in un-surveyed areas within the Tierra Amarilla Land Grant. Therefore, the location of section lines and quarter-quarter subdivisions are only projected estimates. In this case, the proposed unit is bounded on the east by Approach's lease boundary. Further, even though the east/west width of the resulting spacing unit would be approximately 954', maintaining the non-standard unit within the confines of projected section 3 is preferable to creating a 1,320' wide unit that overlaps into section 4 so that future development patterns may remain consistent with the projected section subdivision boundaries.
- 9. Finally, the size of the proposed unit, 52 acres ±, does not exceed 130% of a standard unit and would therefore qualify for administrative approval under Rule 19.15.15.11B(1) of the Divisions rules.
- 10. Approach first sought administrative approval of this NSL and NSP by application dated July 14, 2010. However, because of the guidance received from the Division in a related case, (NSP-1942), Approach elected to file this Application under Rule 19.15.4.8. Notice of the initial application was sent to those unleased mineral interest owners in the NW/NW equivalent of Section 3 whose interests are situated outside the proposed non-standard unit. (See Exhibit D.) A number of those owners provided written waivers of objections (Exhibit E). We have received no objections to the proposed unorthodox location or the non-standard unit.

11. Exhibits A, B, C, D and E, and the attachments thereto were prepared or compiled by me or at my direction and control.

BRICE A. MORGAN

State of Texas) ss. County of Tarrant)

The foregoing instrument was acknowledged before me the <u>M</u> day of April, 2011 by Brice A. Morgan.

J. K. BRITE III
Notary Public, State of Texas
My Commission Expires
May 27, 2013

Notary Public in and for the State of Texas

STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES **OIL CONSERVATION DIVISION**

IN THE MATTER OF THE APPLICATION OF APPROACH OPERATING LLC FOR AN UNORTHODOX WELL LOCATION AND NON-STANDARD SPACING AND PRORATION UNIT, RIO ARRIBA COUNTY, NEW MEXICO.

CASE NO. 14576 28 APR 28 AM

AFFIDAVIT OF THEODORE OLDHAM

THEODORE OLDHAM, being duly sworn, state:

- I am a Senior Geologist for Approach Resources Inc. and Approach Operating, LLC in the Company's Fort Worth, Texas, office. I am familiar with the geologic interpretation of the Company's Rio Arriba County, New Mexico properties. I am familiar with the lands and the subject matter of this application and have direct knowledge of the matters set forth herein.
- Approach Operating, LLC seeks approval of an unorthodox well location and a non-standard unit to be dedicated to the Approach Montano No. 1 Well at the following surface and bottom-hole locations:

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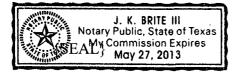
- Approach Operating, LLC owns the right to drill the well on these lands. This straight-hole well will be drilled to a depth sufficient to test the Mancos Shale formation within the boundaries of the WC Tierra Amarilla Mancos Oil Pool and is defined as a wildcat under the Division's rules. The statewide rules for wildcat oil wells currently provide that wells shall be drilled no closer than 330' to the outer boundary of a standard 40-acre spacing unit. The C-101 along with the C-102 plat showing the NW/NW spacing unit and the proposed unorthodox surface and bottom hole locations for the Montano No. 1 are attached as Exhibit A.
- 4. The Montano No. 1 Well will encounter the Mancos formation and other potential reservoir formations as indicated on the attached Structure Map (Exhibit B), Isopach Map (Exhibit C) and Type Log (Exhibit D) attached as exhibits to this affidavit. anticipated to be prospective for oil production from the Mancos formation as well as other encountered formations.

- 5.	The Exhibits attached hereto were prepared or compiled by me or at my direction and
control.	

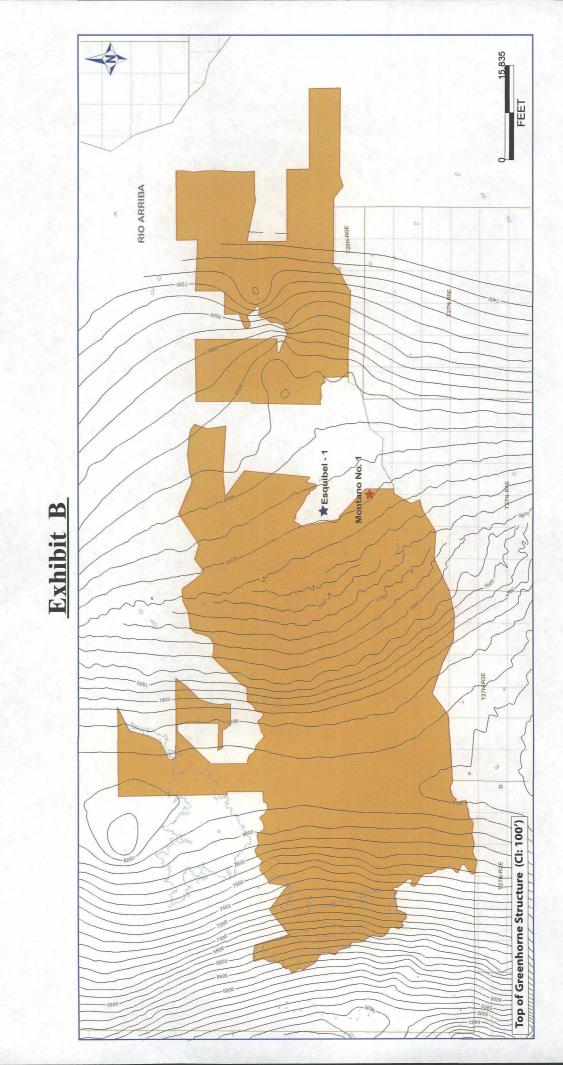
THEODORE OLDHAM

State of Texas)	
)	SS.
County of Tarrant)	

The foregoing instrument was acknowledged before me the $26\frac{1}{2}$ day of April, 2011 by Theodore Oldham.



Notary Public in and for the State of Texas



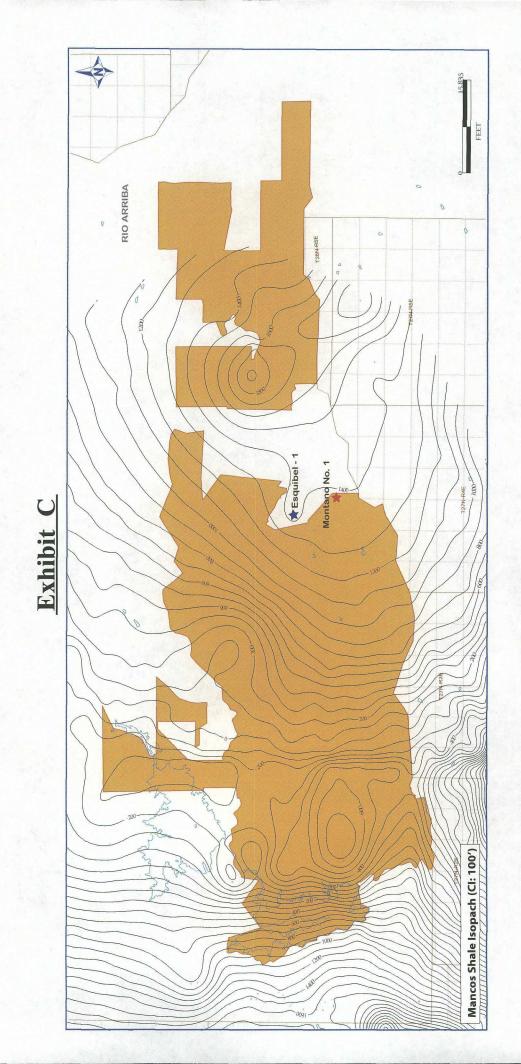
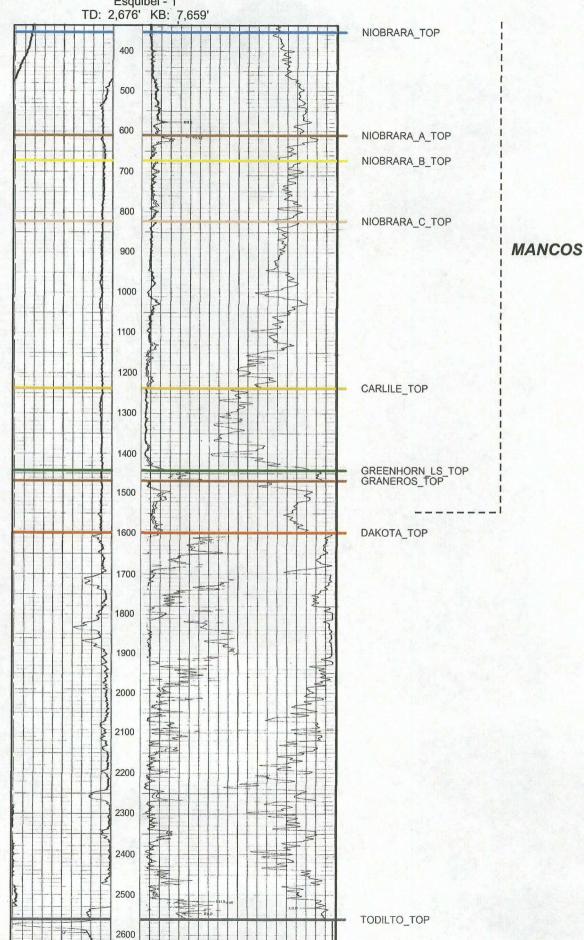


Exhibit D

TYPE LOG: COQUINA OIL CORP Esquibel - 1



ENTRADA_TOP