



STATE OF NEW MEXICO

OFFICE OF THE STATE ENGINEER

District V Office, Aztec, NM

Tom Blaine, P.E.
State Engineer

100 Gossett Dr., Suite A
Aztec, NM 87410
(505) 334-4571

December 10, 2018

ATTN: Andrea Felix
Enduring Resources IV, LLC
332 Road 3100
Aztec, NM 87410

RE: Notice of Intention SJ-4301 PODs 1-5 to Drill Wells to Appropriate Non-potable Groundwater pursuant to NMSA 1978, Sections 72-12-25 through 72-12-28: Review of Notice of Intention and associated submittals.

Dear Ms. Felix:

On July 11, 2018, Enduring Resources IV, LLC filed *Notice of Intention to Appropriate Non-potable Groundwater at Greater Depths than 2,500 Feet Pursuant to NMSA 1978, § 72-12-26* (NOI) with the New Mexico Office of the State Engineer (OSE) for a combined diversion amount of 4,710 acre-feet per annum (afa) from proposed wells SJ-4301 PODs 1-5, to supply non-potable water for oil and gas exploration and production operations.

The points of diversion are described in the NOI as SJ-4301 / POD1 - NW/4 NE/4 of Section 16, T22N, R7W Sandoval County; SJ-4301 / POD2 - NE/4 SW/4 of Section 19, T23N, R9W San Juan County; SJ-4301 / POD3 - SE/4 SW/4 of Section 24, T23N, R9W San Juan County; SJ-4301 / POD4 - SE/4 NW/4 of Section 32, T27N, R6W Rio Arriba County; SJ-4301 / POD5 - SW/4 SE/4 of Section 20, T22N, R6W Sandoval County.

On August 27, 2018, the OSE did approve *Application for Permit to Drill an Exploratory Well* for SJ-4301 POD1, in the name of Enduring Resources IV, LLC. On September 5, 2018, Enduring Resources requested that the OSE hold on processing the remaining PODs until after POD1 was completed. This request was granted by Blaine Watson, District V Manager, on September 6, 2018.

Through subsequent filings from Enduring Resources, the OSE has received additional data and information which fulfill, or partially fulfill, the OSE filing requirements pursuant to NMSA 1978, Sections 72-12-25 through 72-12-28.

The filings include: Affidavits of Publication from the *Rio Rancho Observer* dated July 8, 15, and 22, 2018; the *Rio Grande Sun* dated July 5, 12, and 19, 2018; and the *Farmington Daily Times* June 30,

July 7 and July 14, 2018 for NOI to drill five wells, Well Nos. 1 through 5 (*i.e.*, SJ-4301 PODs 1-5), to appropriate 4,710 afa from all five wells combined; approved Exploratory Permit and Artesian Well Plan of Operations for SJ-4301-POD1; Well Record and Log with detailed lithology log and other relevant data for SJ-4301-POD1; and laboratory analysis of water chemistry for samples collected on October 27, 2018, at SJ-4301-POD1 wellhead.

Pursuant to NMSA 1978, Section 72-12-25, only appropriations from an aquifer the top of which is 2,500 feet or more below the ground surface at any location at which a well is drilled, and which contains only non-potable water (1,000 parts per million or greater dissolved solids), may proceed pursuant to NMSA 1978, Sections 72-12-25 through 72-12-28.

Enduring Resources reports for SJ-4301-POD1 indicate a total well depth of 7,400 feet below ground surface, and top of the Entrada Sandstone at 6,892 feet below ground surface. Water from the aquifer developed in the Entrada Sandstone was sampled from well SJ-4301-POD1. Upon the Final Swab run the total dissolved solids (TDS) content was reported at 9,430 milligrams per liter. Filings submitted by Enduring Resources for well SJ-4301-POD1 have demonstrated that the top of the aquifer at the well location is greater than 2,500 feet below land surface, and the dissolved solids content of the water in the aquifer is greater than 1,000 parts per million.

Based upon the data submitted thus far and made available, the State Engineer accepts, at this time, the Notice of Intention assertion that well SJ-4301-POD1 (already drilled) will appropriate water from aquifers in accordance with NMSA 1978, Sections 72-12-25 through 72-12-28. The determinations on subsequent PODs 2-5 to be drilled at a later date will be made after Enduring Resources submits the necessary and appropriate data post-drilling.

Pursuant to NMSA 1978, Section 72-12-27, Enduring Resources shall submit meter diversions and static water level measurements from well SJ-4301-POD1 and (future wells to be drilled) on a quarterly basis and water chemistry results annually to ensure the TDS concentration remains "non-potable" as defined in statute and pumping impacts are recorded. Enduring Resources will be required to report this data to the District V, OSE in Aztec in accordance with the following conditions:

1. All wells shall be equipped with OSE approved totalizing meters installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer. Records of the amount of water diverted from each well during the preceding three calendar months shall be submitted in writing to the District V office on or before the 10th day of January, April, July and October of each year. No water shall be pumped or allowed to flow from any well unless equipped with a functional totalizing meter designed to continuously and digitally record the pumping/flow rate.
2. Enduring Resources shall provide in writing the make, model, serial number, number of dials, initial meter reading, units of measure, multiplier, and the date of installation of each meter to the State Engineer.
3. Static water level in the wells shall be measured at the time of quarterly meter readings, and measurement, measuring point identification, and time / date of measurement provided to the District V office with submittal of quarterly meter readings.

4. Upon completion of PODs 2-5, representative water samples shall be collected to ensure compliance with NMSA 1978, Section 72-12-25 with regard to status as 'non-potable'. At a minimum, laboratory analyses shall include the following: pH, specific conductance, alkalinity, TDS, and major cations/anions. Analyses shall be conducted by an accredited analytical laboratory and laboratory analytical results shall be provided to OSE along with originals or copies of the full laboratory report. Field measurement of sample pH, temperature, and specific conductance is also required at the time of sampling.
5. Representative samples of water diverted shall be collected annually and analyzed by a certified laboratory for concentrations of major anions and cations, alkalinity, specific conductance, and TDS. Purge and sampling protocol in general shall follow industry standards and be acceptable to the OSE. Samples shall be taken as close to the wellhead as practicable, before the first branch of the discharge line and prior to any treatment or blending with other water sources. Field measurement of pH, temperature, and specific conductance shall be made at the time of sampling. Laboratory reports and results shall be submitted in writing to the OSE on an annual basis on or before the 10th day of January for the preceding calendar year. If the water chemistry reflects a significant change in quality of water from the initial water quality information provided for this authorization, the OSE may send notification that more frequent sampling must occur, up to quarterly analysis, from that point forward. If meter readings reflect no water was diverted during a calendar year, Enduring Resources shall inform the State Engineer in writing that no samples will be taken for that year.
6. Upon receipt of annual water chemistry measurements, the State Engineer may review the data for compliance with NMSA 1978, Sections 72-12-25 through 72-12-28. If Enduring Resources fails to meet the requirements, a permit to appropriate groundwater may be required from the State Engineer.
7. Enduring Resources shall allow the OSE representatives to access the wells and surrounding sites and make available all records for water chemistry monitoring, meter readings, and static water level measurement (NMSA 1978, Section 72-12-27) upon request.
8. Results from future well tests and logging, including pumping tests, well casing and annular cement integrity evaluations, pressure or leak tests, etc., shall be submitted to the District V office.
9. OSE shall be immediately notified should a well need repaired or plugged and Enduring shall acquire the necessary permit prior to commencing drilling activities.
10. Enduring Resources shall install adequate cathodic protection on the wells to best provide for casing longevity.
11. Prior to any diversion of groundwater as described in this letter, the well owner shall acquire valid, consumptive use water rights in the amount of 48.7 afa acceptable to the State Engineer to offset depletions on the Rio Gallina or propose an alternate method by which the depletions will be offset, either of which must be approved in writing.

12. These conditions shall be binding upon any successor-in-interest to Enduring Resources.
13. The State Engineer retains jurisdiction over this authorization.

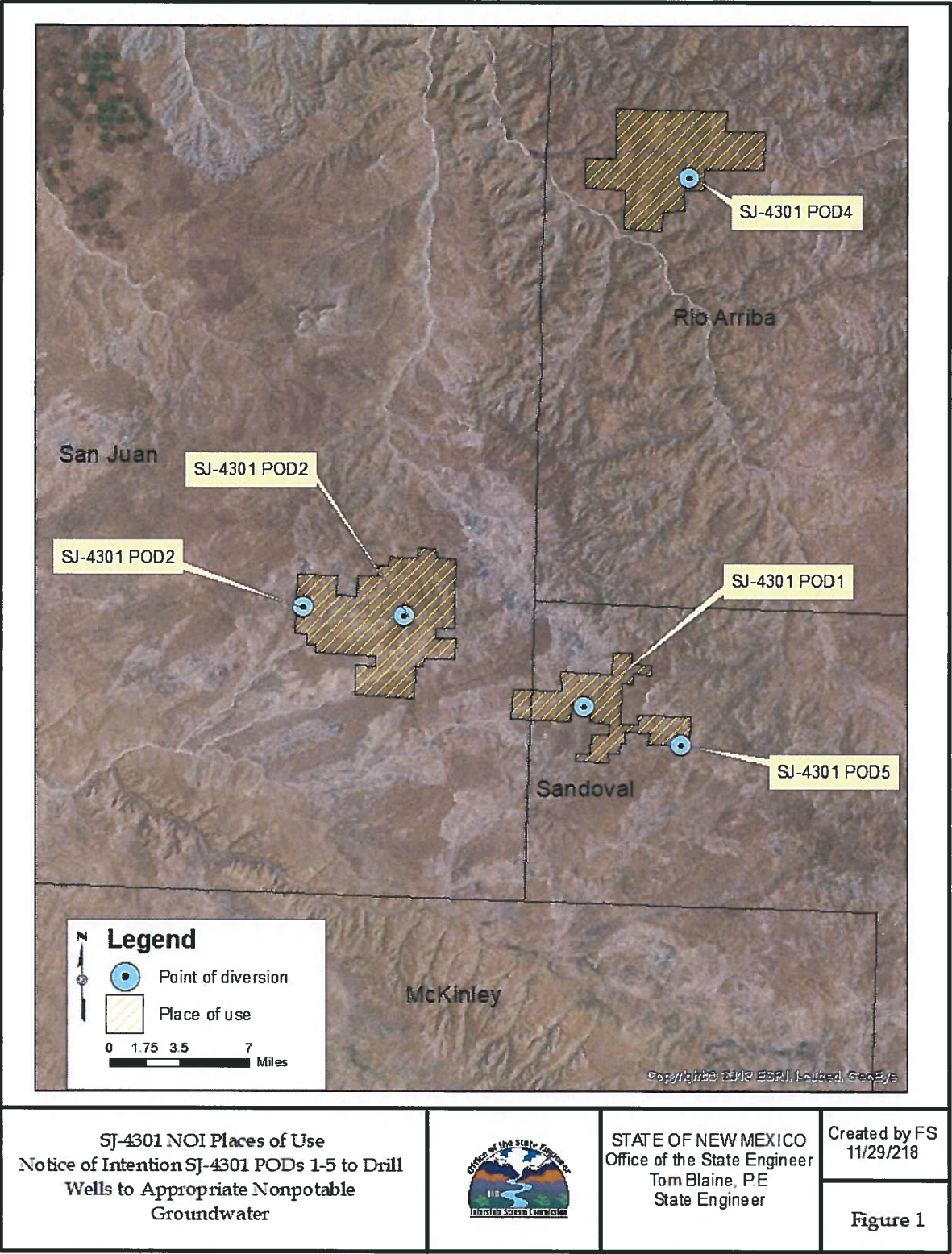
The Office of the State Engineer concludes that requiring these offsets is reasonable and protective over the fully appropriated Rio Gallina system. If you have any questions regarding the above stated requirements, please call myself, Jerri Pohl or Ghassan Musharrafieh at 505-827-6120.

Sincerely,



John T. Romero, P.E.
Director, Water Rights Division

- CC: District V Office (Water Rights Division) – Blaine Watson, District Manager
Statewide Projects – Jerri Pohl
Hydrology Bureau – Dr. Ghassan Musharrafieh, Hydrology Bureau Chief
Litigation and Adjudication Program (LAP) – Maureen Dolan, Esq., Acting ALU Managing Attorney
- Enc: Hydrology Bureau Technical Memorandum, dated November 28, 2018
Figure 1- SJ-4301 NOI Places of Use as advertised.



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 346075

CONDITIONS

Operator: NEW MEXICO ENERGY MINERALS & NATURAL RESOURCE 1220 S St Francis Dr Santa Fe , NM 87504	OGRID: 264235
	Action Number: 346075
	Action Type: [IM-SD] Well File Support Doc (ENG) (IM-AWF)

CONDITIONS

Created By	Condition	Condition Date
pgoetze	None	5/20/2024