

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

**IN RE SPC RESOURCES, LLC**

**CASE NO. 22102**

**OIL CONSERVATION DIVISION'S APPLICATION  
TO REVOKE SPC RESOURCES, LLC'S APPLICATION  
FOR PERMIT TO DRILL CAVEMAN 402H WELL**

The New Mexico Oil Conservation Division ("Division") applies for an order revoking its approval of SPC Resources, LLC's ("SPC") Application for Permit to Drill ("Application to Drill") the Caveman 402H well.

**I. INTRODUCTION**

SPC intends to drill and complete the Caveman 402H well (API #30-015-47629) in proximity to the Carlsbad Brine Well Cavity ("Cavity"). The Cavity is an unstable geological feature created by the dissolution and extraction of brine from halite formations for sale to the oil and gas industry. Although partially stabilized by the injection of grout and sand into the southern portion of the Cavity, the northern portion remains at risk of subsidence and collapse. This non-negligible but unquantifiable risk jeopardizes public highways, a major irrigation canal, a mobile home park, private properties, and ground water in the area. The State of New Mexico has worked for years, at great public expense, to stabilize the Cavity, and SPC's plan of development for the Caveman 402H well prior to full stabilization of the Cavity threatens to negate this taxpayer-funded effort and poses an unacceptable risk of collapse, which would impair critically important infrastructure and resources in the area.

## **II. APPLICABLE LAW**

1. The Division has “jurisdiction, authority, and control over all persons, matters, or things necessary or proper to enforce effectively the provisions of [the Oil and Gas Act]....” NMSA 1978, § 70-2-6.

2. The Division is authorized to make orders “to prevent crude petroleum oil, natural gas or water from escaping from strata in which it is found into other strata.” NMSA 1978, § 70-2-12(B)(2).

3. The Division is authorized to make orders “to require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties.” NMSA 1978, § 70-2-12(B)(7).

## **III. FACTUAL BACKGROUND**

### **A. THE CAVITY**

4. The Carlsbad Brine Well was a facility that used a dissolution process to mine salt for commercial use in the oil and gas industry.

5. The Cavity is the subsurface cavern that formed as a result of mining of more than 220,000 cubic yards of salt from the Carlsbad Brine Well.

6. The Cavity lies beneath or in close proximity to the intersection of two major highways that are the principal routes for economic activity in the region, an irrigation canal that is the primary source of water for an estimated \$100 million of agriculture each year, a railroad that transports freight, potash, crude oil, and a large percentage of the frac sand used in the state, two commercial operations including one with underground fuel storage tanks, a church, a feedstore, a mobile home park, and a major ground water aquifer.

7. In 2008, the Energy, Minerals and Natural Resources Department (“EMNRD”) identified the Cavity as a potential risk for collapse, and initiated a program to characterize and monitor the Cavity.

8. In 2012, EMNRD initiated a detailed evaluation of alternatives to stabilize the Cavity.

9. In 2018, EMNRD retained AMEC Environmental & Infrastructure, Inc., now Wood Environment & Infrastructure Solutions, Inc. (Wood)), to implement the selected alternative of in-situ backfilling the Cavity with grout while simultaneously extracting brine.

10. Wood implemented the selected remedy in the southern portion of the Cavity, eliminating the immediate risk to the canal, trailer park, and church, but when Wood began to backfill the northern portion of the Cavity, it discovered a larger void with a volume of approximately 100,000 cubic yards extending beneath US 285 and less than 400 feet from US 62/180.

11. Because injecting grout into such a large void would not be cost-effective, EMNRD substituted sand for grout and continued to backfill the Cavity.

12. During the backfill process in 2020, EMNRD determined that the void would require a volume of sand that would exceed the financial resources available at the time, and suspended backfilling the void.

13. After further evaluation, EMNRD concluded that the partially filled void still posed an unacceptable risk of collapse, which could result in surface subsidence damaging a critical transportation artery and the escape of pressurized brine from the cavity into the ground water aquifer above, and decided to continue to backfill the void with sand after securing additional funds.

14. EMNRD intends to resume backfilling the void with sand in approximately September 2021 and to complete the project during the spring or early summer of 2022.

15. To date, the State of New Mexico, Eddy County, and the City of Carlsbad have invested nearly \$58M, and expect to invest an additional \$24M to stabilize the Cavity.

**B. THE CAVEMAN 402H WELL**

16. On November 5, 2020, the Division's district office in Artesia approved SPC's application to drill the horizontal oil well currently designated as "Caveman 402H".

17. The surface hole location and vertical borehole for the Caveman 402H well will be located approximately 7,200 feet from the Cavity.

18. The lateral for the Caveman 402H well will extend westward from the vertical borehole for approximately 10,500 feet at a depth of 8,797 feet beneath the surface.

19. On April 14, 2021, the Division's Cavity project manager discovered that several horizontal oil wells were planned or had been drilled in proximity to the Cavity.

20. On June 17, 2021, SPC sent a letter to the Division stating its intent to commence drilling the Caveman 402H well in late June or early July 2021 and complete it in late September or early October 2021.

21. On June 30, 2021, the Division requested that SPC temporarily suspend its plan to drill and complete the Caveman 402H well for twelve (12) months to allow EMNRD to complete the project to stabilize the Cavity.

22. On July 1, 2021, SPC refused to temporarily suspend drilling the Caveman 402H well.

23. On July 2, 2021, the Division's Director issued an emergency order suspending SPC's Application to Drill the Caveman 402H well and prohibiting SPC from taking any action to

drill or complete the Caveman 402 well in order to protect the Cavity and ENMRD's ongoing stabilization project to prevent collateral injury to life, property, environment, public infrastructure, and neighboring properties.

24. On July 16, 2021, the Division again requested that SPC temporarily suspend its plan to drill and complete the Caveman 402H well for twelve (12) months to allow EMNRD to complete the project to stabilize the Cavity, and SPC again refused the request.

25. On July 17, 2021, the emergency order expired by operation of law.

**IV. SPC'S REFUSAL TO TEMPORARILY SUSPEND ITS PLAN TO DRILL AND COMPLETE THE CAVEMAN 402H WELL JEOPARDIZES THE CAVITY, STABILIZATION PROJECT, PUBLIC INFRASTRUCTURE, AND ENVIRONMENT.**

26. Although the portions of the Cavity are more stable than before, there are substantial uncertainties regarding stability in certain areas that cannot be addressed by the monitoring data collected to date.

27. Until EMNRD completes the ongoing stabilization project, seismic activity has a non-negligible but unquantifiable potential to jeopardize the stability of the Cavity.

28. Seismic events have been detected at the Cavity, and their frequency has increased due to induced seismicity resulting from oil and gas activities.

29. Drilling and/or completing horizontal wells in the vicinity of the Cavity could establish or exacerbate conditions that, combined with subsequent seismic events, result in rock fall and rubble settlement, jeopardizing the stability of the Cavity resulting in damage to public infrastructure and contamination of a ground water aquifer.

30. Until the Cavity is stabilized, the Division cannot specify appropriate conditions that would allow SPC to drill and/or complete the Caveman 402H well in a manner that does not

increase the risk and likelihood of injury to neighboring properties, including the Cavity, public infrastructure, and environment.

WHEREFORE, the Division respectfully requests an order revoking its approval of SPC's Application to Drill the Caveman 402H well.

Respectfully submitted,



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**CERTIFICATE OF SERVICE**

I hereby certify that a copy of this pleading was mailed electronically on July 23, 2021 to:

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