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IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF COCONINO

THE CITY OF FLAGSTAFF,

Plaintiff,

v.

DESERT MOUNTAIN ENERGY CORP.,

Defendant.

No.: CV 2020-00624

**PLAINTIFF'S EMERGENCY
APPLICATION FOR TEMPORARY
RESTRAINING ORDER AND
PRELIMINARY INJUNCTION WITH
NOTICE**

[EXPEDITED RELIEF REQUESTED]

[ORAL ARGUMENT REQUESTED]

17 Plaintiff City of Flagstaff ("City" or "Plaintiff"), hereby moves pursuant to Ariz. R.
 18 Civ. P. 65 for immediate issuance of a temporary restraining order and preliminary
 19 injunction, in the forms submitted herewith, prohibiting Defendant Desert Mountain Energy
 20 Corp. ("DME" or "Defendant") from commencing construction or, if already commenced,
 21 halting construction or other operations of a well for the purpose of engaging in mining
 22 activities (the "Well") until such time as it demonstrates compliance with all voluntarily-
 23 assumed and legally-mandated conditions necessary to confirm that DME's construction
 24 practices and operations will not degrade C aquifer water quality, thereby ensuring the
 25 safety of the City's future municipal drinking water supply.

26 Due to the urgency and concerns that construction may be on-going despite notice
 27 from the City of its objections and the request for assurances sought by this Application,
 28 the City seeks entry of the attached proposed Temporary Restraining Order with notice.

1 The City has provided a copy of this Application by hand delivery to the statutory agent
2 identified in DME's public filings. This Application is supported by the allegations in the
3 Verified Complaint filed herewith, the *Declaration of Mark Nicholls in Support of*
4 *Plaintiff's Application for Temporary Restraining Order and Preliminary Injunction With*
5 *Notice* ("**Nicholls Dec.**"), attached hereto as **Exhibit 1**, the *Declaration of Bradley Hill in*
6 *Support of Plaintiff's Application for Temporary Restraining Order and Preliminary*
7 *Injunction With Notice* ("**Hill Dec.**"), attached hereto as **Exhibit 2**, and upon the following
8 Memorandum of Points and Authorities.

9 MEMORANDUM OF POINTS AND AUTHORITIES

10 I. INTRODUCTION

11 In March 2019, in response to concerns expressed by the citizens of the City
12 regarding the safety of water supplies if DME undertakes helium and hydrocarbon mining
13 activities, DME's then-CEO represented that DME "won't do a well for helium if there's
14 any danger of contaminating the water supply at all," further remarking "It's just not going
15 to happen." Hill Dec. at ¶ 19 and Exhibit C thereto. Since that time, and without notifying
16 the City despite its known concerns and objections to its activities, DME secured a permit
17 to undertake helium and hydrocarbon mining activities within *two miles* of a well field that
18 the City has invested millions of dollars in developing as a future source of municipal water
19 supply. Documents the City has since obtained via public sources confirm that the proposed
20 Well is upgradient of the City's well field and Defendant DME apparently believes that it
21 is authorized to contaminate water below its own self-created "base treatment level," thus
22 heightening the City's concerns that the planned drilling threatens the quality of the City's
23 future domestic water supply.

24 A press release recently issued by DME indicates that it intends to commence
25 construction on the Well in December 2020. By correspondence dated December 7, 2020,
26 the City notified DME of its objections to the proposed Well and advised that it would
27 initiate legal action if it did not receive additional information and assurances from DME
28

1 that it has ensured protection of the City's water supply as it previously pledged to the public
2 in March 2019.

3 As of the filing of this Application, DME has not responded to the City's
4 correspondence. Having failed, despite attempt, to secure assurances of proper safety
5 protocols from DME, the City must apply to this Court for emergency injunctive relief
6 prohibiting commencement or, if already underway, halting construction of the Well to
7 ensure that the City's future municipal supply is not irreversibly contaminated.

8 **II. FACTUAL AND PROCEDURAL BACKGROUND**

9 **A. The City Has Invested Millions Over More Than A Decade Developing** 10 **The Only Feasible Water Supply In The Region For Its Future** 11 **Population At Red Gap Ranch.**

12 The City, with more than 75,000 residents, is the largest community in Northern
13 Arizona. It also hosts more than 5,000,000 tourists annually. The City has enjoyed
14 economic and population growth for several decades. Hill Dec. at ¶ 4. It anticipates
15 reaching a population of approximately 150,000 full-time residents within the next fifty
16 (50) years or so. Hill Dec. at ¶ 5.

17 To accommodate the municipal needs of its continued and anticipated population
18 growth, including providing safe drinking water supplies for residents and visitors, in 2005
19 the City purchased 8500 deeded acres of land and several thousand acres of State Land's
20 grazing leases along the I-40 corridor approximately 40 miles east of the City's incorporated
21 limits. Hill Dec. at ¶ 6. The City's plans to use the land, which is commonly referred to as
22 "Red Gap Ranch," as a future source of municipal water supply has been a frequent subject
23 of attention in the press and in the community. Hill Dec. at ¶ 7.

24 The City is recognized as a leader in Arizona with respect to its water conservation
25 and reclaimed water reuse measures. The City intends to continue to implement and
26 improve upon those measures to decrease its municipal water needs, but projections indicate
27 that its growing population will nonetheless need additional water supplies. Hill Dec. at
28 ¶ 8. That is why the City purchased Red Gap Ranch nearly fifteen (15) years ago and has
invested millions of dollars in developing Red Gap Ranch for its intended purpose as a

1 municipal water supply. The City's plans for Red Gap Ranch are to drill multiple wells
2 into the Coconino aquifer (the "C aquifer") to withdraw groundwater, which will then be
3 conveyed via pipeline and introduced into the City's existing municipal water infrastructure
4 system. Hill Dec. at ¶ 9.

5 The City has completed certain aspects of its plans for Red Gap Ranch. They
6 completed Phase I of an engineering analysis towards confirming the feasibility of the
7 project in 2009, drilled multiple water supply wells in 2011, secured a Designation of
8 Adequate Water Supply from the Arizona Department of Water Resources in 2013, entered
9 into an agreement in 2016 with the Arizona Department of Transportation to advance the
10 process of approving a water pipeline within the I-40 right of way, and completed multiple
11 water quality analyses to confirm that the water underlying Red Gap Ranch continues to be
12 suitable as a drinking water source. Hill Dec. at ¶ 10. A Phase II engineering analysis is
13 slated for completion within the next year, as are other on-going measures by the City
14 towards its continued planning to use Red Gap Ranch as a municipal water supply in the
15 future. Hill Dec. at ¶ 11.

16 Hydrogeologic analysis and other regional land ownership restrictions confirm that
17 the area in and around Red Gap Ranch is the only feasible source of water suitable for
18 municipal use in the region that is available to the City in the future. Hill Dec. at ¶ 12.
19 Maintenance of Red Gap Ranch's water quality, including ensuring it remains free from
20 harmful or toxic substances that will render it inadequate for human consumption or cause
21 the City to incur potentially exorbitant treatment costs, is crucial to the City's future water
22 security. Hill Dec. at ¶ 13.

23 **B. DME Assures The City That It Will Consult With It And Ensure Safe**
24 **Operations To Protect The City's Municipal Water Supplies From**
25 **Contamination**

26 In early 2019, after representatives of Desert Mountain Energy Corp. (DME)
27 approached the City for permission to cross Red Gap Ranch for the purpose of exploring
28 whether it could mine for helium on nearby lands owned by the Arizona State Lands
Department ("ASLD"), the City entered a License for Access and Seismic Testing on Red

1 Gap Ranch (the “DME License Agreement”) and a Memorandum of Understanding with
2 DME (the “DME MOU”). Hill Dec. at ¶ 14 and Exhibits A and B thereto.

3 By the DME License Agreement, the parties acknowledged that the lands comprising
4 “Red Gap Ranch” were acquired by the City “for their water rights.” By the DME License
5 Agreement, the City authorized DME to cross Red Gap Ranch via designated rights of way
6 to complete its due diligence on neighboring ASLD lands and authorized DME to conduct
7 limited seismic testing on City lands as long as DME bore the costs of such testing and
8 provided the City with the results of that testing. Hill Dec. at ¶ 15. The DME MOU required
9 DME to consult with and work cooperatively with the City regarding its activities with
10 respect to helium or hydrocarbon mining. The parties also noted that the City encouraged
11 access to areas in the region that may have helium resources *except* in the vicinity of federal
12 or state parks or other highly sensitive areas, including areas with water resources. Hill
13 Dec. at ¶ 16.

14 From the point of view of the City’s then-Water Services Director, Mr. Bradley Hill,
15 the two agreements allowed the City to ensure that it was notified of DME’s activities and
16 could verify that those activities would not threaten the quality of or the City’s ability to
17 access the waters underlying Red Gap Ranch. Hill Dec. at ¶ 17. During interactions with
18 DME representatives in 2019, City representatives repeatedly expressed the City’s interest
19 in protecting Red Gap Ranch from water quality or water accessibility issues resulting from
20 DME’s proposed operations. Hill Dec. at ¶ 18.

21 Following public outcry regarding the potential threats posed by DME’s anticipated
22 mining operations, the City subsequently determined not to proceed with the DME MOU
23 or the License Agreement. In March 2019, then-Chief Executive Officer of DME, Mr.
24 Olian Irwin, is quoted by Scott Buffon of the Arizona Daily Sun stating that DME “won’t
25 do a well for helium if there’s any danger of contaminating the water supply at all,” further
26 remarking “It’s just not going to happen.” Hill Dec. at ¶ 19 and Exhibit C thereto.
27 Thereafter, the City did not hear further from DME regarding any plans to proceed with
28 mining activities near Red Gap Ranch.

1 **C. DME Misrepresents Local Support In Its Well Application,**
2 **Surreptitiously Secures The Well Permit And Indicates Its Intent To**
3 **Proceed With Construction Without Advising The City.**

4 Via publicly available documents, in late November 2020, the City discovered that
5 DME had secured Well permit No. 1255, which allows it to drill a well labeled Desert
6 Mountain 26-1 State (the “Well”) within two miles of Red Gap Ranch for the purpose of
7 mining helium. Well permit No. 1255 was issued by the Arizona Oil and Gas Conservation
8 Commission (“AOGCC”) on November 18, 2020. Hill Dec. at ¶ 21 and Exhibit D thereto.

9 Via its Well Permit Application issued to the AOGCC on or about November 2,
10 2020, DME also represents in the Application that it has met with and “local leaders” and
11 “legislators” regarding its project and has been “welcomed” and encouraged by those
12 representatives. See Well Permit Application, Justification letter to M. Hodan, Director of
13 AOGCC, at p. 2, attached hereto as **Exhibit 3**. DME does not identify the governments or
14 local leaders that it met with, but it has not met with representatives of the City with respect
15 to the Well despite its knowledge of the City’s *objections* to its operations being in such
16 proximity to the City’s drinking water supplies. DME thus represents local government
17 support of its project to AOGCC, despite that it neglected to consult with the City and is
18 aware of the multiple concerns of the City regarding any well or mining operations near
19 Red Gap Ranch. Hill Dec. at ¶ 18.

20 DME’s Well Permit Application also makes reference to seismic testing that it has
21 completed. Per the DME Licensing Agreement, DME was to provide the City with any
22 seismic testing that it completed on Red Gap Ranch. The City has not received any seismic
23 or other geologic data from DME. Although the City issued notice of termination of the
24 DME License Agreement, it did not terminate by its terms for another six (6) months. The
25 City reasonably believes that DME entered Red Gap Ranch on or about May – June 2019
26 and completed seismic testing while the License Agreement was still in effect.
27 Notwithstanding DME’s entering Red Gap Ranch for seismic testing, DME failed to share
28 the information with the City to obfuscate its on-going plans to conduct mining activities
 near the City’s municipal water supply well field.

1 **D. DME’s Well And Intended Operations Threaten To Cause Irreparable**
2 **Injury To The City By Creating An Avenue For Introduction Of**
3 **Pollutants Into The City’s Future Municipal Water Supply.**

4 **1. DME’s “Base Treatable Water” Calculation Indicates An Intent**
5 **To Contaminate Below That Level.**

6 Per documents that the City has been able to obtain to date, DME intends to drill an
7 exploratory well down to the “base treatable water” of the C aquifer. Nicholls Dec. at ¶ 8,
8 Exhibit 1. It is unclear how DME derived the depth of “base treatable water” within the C
9 aquifer. Nicholls Dec. at ¶ 9. The implication of this depth determination seems to be that
10 DME intends to (or at least believes it can) contaminate waters within the C aquifer below
11 that “base treatable water” level it has identified. Nicholls Dec. at ¶ 10.

12 **2. DME’s Well Is Upgradient Of Red Gap Ranch Wellfield.**

13 As noted above, the C aquifer is the location of the City’s municipal wells at Red
14 Gap Ranch. Hill Dec. at ¶ 22. Based upon the stated location of the intended Well, any
15 pollutants or toxic substances introduced into the Well—now or in the future—or released
16 by operations of the Well into the C aquifer will be upgradient of Red Gap Ranch. Hill
17 Dec. at ¶ 23; *see also* Nicholls Dec. at ¶ 12. Thus, any harmful constituents, pollutants or
18 toxic chemicals introduced into the Well will migrate towards the municipal well fields
19 located at Red Gap Ranch. Hill Dec. at ¶ 24; *see also* Nicholls Dec. at ¶ 13.

20 **3. DME’s Disclosed Construction Methods Allow For Introduction**
21 **of Toxic Or Harmful Substances Into Aquifers, Including the C**
22 **Aquifer That Supplies Red Gap Ranch.**

23 By its own documents, DME intends to drill to a total depth of 2000 feet and cement
24 the entire length of the casing. Nicholls Dec. at ¶ 14. DME would then use a perforating
25 tool to punch holes through the Well casing in the zones that appear most promising for
26 production of helium gases. Nicholls Dec. at ¶ 15. Although DME represents that the Well
27 casing will be sealed through the Kaibab, Coconino, and Supai formations, which are the
28 primary water bearing formations, significant risks remain with construction and inadequate
 maintenance or use of toxic constituents in the mining process once perforations are
 completed along the Well casing. These activities can allow a variety of contaminants to

1 be introduced into the C aquifer (and the other aquifers through which DME's well will
2 traverse) while the Well is under construction and during its period of use. Nicholls Dec.
3 at ¶ 16. Wells of this type are frequently in operation for decades. Nicholls Dec. at ¶ 17.

4 **4. DME's Disclosed Extraction Methods Allow For Introduction of**
5 **Toxic Or Harmful Substances Into Aquifers, Including the C**
6 **Aquifer That Supplies Red Gap Ranch.**

7 DME plans to drill using the air rotary method, with the addition of drilling fluid
8 additives, which are essentially "misting" agents to assist in lifting cuttings if
9 necessary. Nicholls Dec. at ¶¶ 18-19. The air rotary method disclosed by DME allows it
10 to commence operations quickly if the Well strikes a deposit of the helium it wishes to
11 extract, but the method that DME has selected also creates that risk that if it encounters
12 highly fractured zones or large quantities of water, DME may have to change drilling
13 methods, which would include altering its drilling fluid additives. Nicholls Dec. at ¶ 20.

14 The misting agents are usually detergent based foaming compounds. Nicholls Dec.
15 at ¶ 19. Given that the boring will penetrate a drinking water aquifer, the drilling fluids,
16 including the foaming agent should be a National Sanitation Foundation ("NSF") certified
17 product to ensure it is safe for drinking water use. Nicholls Dec. at ¶ 21. The same
18 requirement should apply if they have to switch drilling fluids due to formation conditions
19 - all drilling fluids should be certified to NSF Standard 60. Nicholls Dec. at ¶¶ 21-22.
20 Unfortunately, nothing in DME's publicly available documents represents or guarantees
21 that DME will only use NSF Standard 60 drilling fluids. Nicholls Dec. at ¶ 23.

22 Moreover, DME represents itself to be a concern with experience in drilling oil wells,
23 which frequently use diesel fuels or diesel fuel additives as drilling fluids. Nicholls Dec. at
24 ¶ 24. Groundwater impacted with additives may not be safe or suitable for human
25 consumption or other municipal uses. Nicholls Dec. at ¶ 25. Even if it does not use diesel
26 fuel constituents, other drilling fluids like brine degrade water quality, potentially rendering
27 it unfit for human consumption.

28

1 If DME does not use NSF Standard 60 certified drilling fluids, it could contaminate
2 the C aquifer. Nicholls Dec. at ¶ 26. As the Well is within two miles of the City's Red
3 Gap Ranch wells, and is up-gradient of the Red Gap Ranch wells, it is highly likely that any
4 such contaminants would migrate to the City's municipal supply wells, and result in water
5 unfit for human consumption. Nicholls Dec. at ¶ 27.

6 Should DME's air rotary method result in the need to change drilling additives, it is
7 unclear whether DME would disclose its changed chemical additives, or whether it would
8 secure a permit from the AOGCC or the Arizona Department of Environmental Quality
9 ("ADEQ"). It does not appear that DME has sought any such permits, and although it has
10 indicated that it does not intend to use "fracking" additives, it has not pledged that it will
11 *not* use them. Nicholls Dec. at ¶ 28. To the contrary, DME's reference in its application
12 to "base treatable water" appears to indicate that DME is making a distinction regarding the
13 lowermost extent of potential drinking water, which implies that DME inaccurately believes
14 it is authorized to pollute water below this depth.¹ Nicholls Dec. at ¶ 29.

15 **III. LEGAL ARGUMENT**

16 The standard for obtaining emergency injunctive relief has been set forth by the
17 Supreme Court of Arizona in *Smith v. Arizona Citizens Clean Elections Commission*, 212
18 Ariz. 407, 132 P.3d 1187 (2006); *see also* *Burton v. Celentano*, 134 Ariz. 594, 595, 658 P.
19 2d 247, 248 (App. 1982). In *Smith*, the Arizona Supreme Court identified the following
20 elements that must be established by a party seeking injunctive relief:

- 21 (1) A strong likelihood of success on the merits;
- 22 (2) Irreparable harm if the stay is not granted;
- 23 (3) The harm to the requesting party outweighs the harm to the
24 party opposing the stay; and

25
26 ¹ Arizona considers all saturated formations to be drinking water aquifers, so DME
27 should apply for an Arizona Aquifer Protection Permit. It is concerning that DME
28 apparently does not understand this obligation, but intends to commence construction this
month.

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(4) Public policy favors the granting of the stay.

212 Ariz. at 410.

Furthermore, the *Smith* Court indicated that the scale upon which these factors are weighed is not absolute and the factors should not be applied by counting the number of factors on each side of the balance. The Court stated as follows:

Rather, the moving party may establish either (1) probable success on the merits and the possibility of irreparable injury; or (2) the presence of serious questions and that the balance of hardships tips sharply in favor of the moving party. [] The greater and less reparable the harm, the less the showing of a strong likelihood of success on the merits need be. Conversely, if the likelihood of success on the merits is weak, the showing of irreparable harm must be stronger.

Id. at 411 (internal citations omitted). As further detailed below, the City is entitled to the temporary restraining order and preliminary injunction it seeks by this Application.

A. The City Has A Strong Likelihood of Success On The Merits, And Has Demonstrated The Possibility Of Irreparable Injury.

In this case, City has a strong likelihood of success on the merits and the extent of harm is both great and irreparable. By its separately-filed Complaint, the City alleges a claim for misrepresentation or fraudulent omissions and asks this Court to invalidate the Well Permit because DME falsely represented to the AGOCC in order to justify issuance of the Well Permit that it had support of “local leaders” and “legislators.” Indeed, DME intentionally failed to consult with the City and was well-aware of the City’s objections to having a helium mining well located near its future public water supplies at Red Gap Ranch. *Compare* Exhibit 3 hereto *with* Hill Dec. at ¶¶ 17-19. Additionally, DME has falsely represented, or, at a minimum, made a negligent misrepresentation in its Well Permit Application that it will not engage in “large” hydraulic fracturing. It has not, however, warranted that it will not engage in well stimulation during the course of its operations, and any discharges into the C aquifer require an Aquifer Protection Permit (“APP”) pursuant to A.R.S. §§ 49-241, *et seq.*

1 Where, as here, a permit is not legitimately issued due to falsehoods or inaccuracies
2 within the submissions to the issuing agency, the permit should be revoked. *Rivera v. City*
3 *of Phoenix*, 186 Ariz. 600, 602, 925 P.2d 741, 743 (App. 1996). As DME’s own
4 representations in the press reveal it knows of the objections of “local leaders” and further
5 because its “base treatment level” indicates that it intends to discharge into an aquifer
6 despite its representations that it does not intend to engage in fracking, the City has shown
7 a likelihood of success on its claims for misrepresentation and declaratory relief.

8 In addition, or in alternative, to its likelihood of success on the merits of its
9 misrepresentation claims, the City is also likely to succeed on its declaratory relief claim
10 seeking a declaration from this Court that DME must secure an APP from ADEQ, including
11 completing the required public notice and comment period, before it introduces any
12 constituents into the Well that may degrade C aquifer water quality. DME appears to
13 believe that it is authorized to introduce potentially harmful drilling additives or other
14 constituents so long as it does so beneath its own self-devised “base treatable water level.”
15 Nicholls Dec. at ¶ 29. This is mistaken, as Arizona does not recognize such a standard, and
16 instead mandates an APP for any planned well stipulation involving the types of
17 constituents that DME may use. *See* Arizona Administrative Code R12-7-117 (an APP is
18 required if any well stimulation is planned).

19 The City is additionally likely to prevail on its breach of contract claim. As noted
20 above, in its Well Permit Application packet, DME makes reference to “seismic” and other
21 geologic data that it has collected. *See* Well Permit Application, Justification letter at p. 2,
22 Exhibit 3. The DME License Agreement, which was in effect through the fall of 2019,
23 required DME to share the results of any seismic testing it completed on Red Gap Ranch in
24 exchange for waiver of the City’s licensing fees. *See* DME Licensing Agreement, Exhibit
25 B to Hill Dec. The City understands that DME completed seismic testing on Red Gap
26 Ranch in the spring or summer of 2019, but failed to share that seismic data in breach of
27 the DME Licensing Agreement. This breach is material not only due to the City being
28 deprived of the benefit of its bargain via the loss of licensing fees, but also because DME’s

1 subterfuge allowed it to further conceal its on-going plans to engage in mining activities
2 that threaten the City's future municipal water supplies.

3 The City has thus established a likelihood of success on one or more of the counts of
4 its Complaint. The City need only demonstrate a likelihood of success as to one of its
5 claims in order to secure the injunctive relief sought by this Application. *See Compass*
6 *Bank v. Hartley*, 430 F. Supp. 2d 973, 983 (D. Ariz. 2006) ("Plaintiff alleges additional
7 counts including breach of loyalty provisions, implied covenant of good faith and fair
8 dealing, violations of the Trade Secrets Act, A.R.S. § 44-401, Conversion, Tortious
9 Interference with Contract, and Unjust Enrichment. *See* Complaint. The Court need not
10 address the validity of each and every claim. Rather, for purposes of determining Plaintiff's
11 likelihood of success on the merits, it is sufficient that the Court finds that Plaintiff is likely
12 to succeed on the breach of contract claims.").

13 The second consideration under *Smith*—the possibility of irreparable injury—is
14 easily established here. The City has a duty to supply its citizens with safe drinking water
15 and water for other municipal uses. That the City has a protectable interest in fulfilling its
16 duties to its residents is demonstrated in the terms of the injunctive relief statute itself, which
17 prohibits injunctive relief against a public official seeking to enforce the laws of the State
18 of Arizona for the public benefit. *See* A.R.S. § 12-1802(4); *cf. Wallace v. Shields*, 175 Ariz.
19 166, 174, 854 P.2d 1152, 1160 (Ct. App. 1992) (observing that a plaintiff could not
20 reasonably expect injunctive relief regarding government's threatened removal of property
21 if the property at issue turned out to be stolen).

22 DME's misrepresentations in its Well Permit Application and its apparent intended
23 failure to comply with its obligations to obtain an APP as well as its breach of its obligations
24 to provide the City with seismic testing completed on Red Gap Ranch deprives the City of
25 its protectable interest in fulfilling its statutory duties to the public. Under Arizona law,
26 "once a protectable interest is established, irreparable injury is presumed to follow if the
27 interest is not protected." *Phoenix Orthopaedic Surgeons, Ltd. v. Peairs*, 164 Ariz. 54, 59,
28 790 P.2d 752, 757 (Ct. App. 1989), disapproved on other grounds by *Valley Med.*

1 *Specialists v. Farber*, 194 Ariz. 363, 372, 982 P.2d 1277, 1286 (1999) (“Because the trial
2 court found that POS had a protectable interest, irreparable injury can be presumed.”).
3 Since DME’s conduct threatens the City’s protectable interest in ensuring safe drinking
4 water for its residents and ensuring compliance with State laws, the Court should presume
5 irreparable harm.

6 As detailed above, contamination of the C-aquifer will cause irreparable harm.
7 Additionally, the City cannot simply abandon the millions of dollars it has invested in
8 developing Red Gap Ranch and purchase a different property to develop as a municipal
9 water supply; Red Gap Ranch is one of the few areas in the entire region susceptible to
10 water development. Hill Dec. ¶¶ 9-12. Should DME be allowed to proceed with
11 construction or commence operations without adequate assurances that it is both capable
12 and willing to implement all reasonable precautions needed to guard against contamination
13 of the C aquifer, the City—and the tens of thousands of residents and millions of tourists
14 who rely upon it for clean, safe drinking water—will be irreversibly and irreparably injured.
15 Irreparable injury is established.

16 **B. The City Has Established That Serious Questions Exist Regarding The**
17 **Security Of Its Water Supply If DME Is Allowed To Continue Unchecked**
18 **And That The Balance Of Hardships Tips Sharply In Favor Of The City.**

19 The City also satisfies the second, alternative set of criteria required for issuance of
20 injunction relief—that serious questions exist and the balance of hardships tip in the City’s
21 favor. *Smith*, 212 Ariz. at 410. The City seeks to protect the irreversible contamination of
22 the future water supply of majority of the regions’ populace. Presently, DME has
23 represented, falsely, that it has consulted in “local leaders” and “legislators” who
24 proclaimed support for the project, despite its knowledge that the City does not support
25 DME’s allegedly “encouraged” project as it is presently described.

26 DME also publicly represented that it does not intend to pursue any wells that could
27 result in contaminated drinking water supplies. *See Exhibit C to Hill Dec.* If that is the
28 case, then why fail to notify the City of its plans? Why hide the seismic test results? Why
not apply for an APP? And why does it believe it needs a “base treatable water level”?

1 DME's "base treatable water" representation implies that DME has no intention of
2 ensuring the safety of municipal water supplies, and instead believes that it is allowed or
3 authorized to contaminate water below this self-imposed standard. The C aquifer is a
4 massive aquifer that underlies most communities in Northern Arizona and serves as a
5 drinking water source for hundreds of thousands of people, including the City. Thus, in
6 addition to the City's concern regarding the integrity of Red Gap Ranch's water supply, the
7 entire region must know:

8 (1) What does DME mean by the "base treatable water" level?,

9 (2) How did DME derive the "base treatable water" level?,

10 (3) Does DME intend to inject constituents beneath the "base treatable water" level,

11 (4) What drilling additives and/or constituents does DME intend to inject/introduce,

12 and

13 (5) How does the "base treatable water" level impact its decision with respect to
14 those drilling additives and/or constituents?

15 These and other serious questions exist regarding the risks and harms resulting from
16 DME's contemplated project in the event relief is not requested.

17 The harm to the City significantly outweighs any potential harm to DME. DME
18 cannot argue that it will be harmed by being required to adhere to its representations in the
19 press and in its Well Permit Application that it does not intend to engage in operations that
20 threaten the City's water supplies, which includes foregoing the introduction of "fracking"
21 constituents into the Well. Given its public assurances, DME should not object to
22 warranting and representing that it will only use NSF Standard 60 drilling fluids in its
23 operations; nor should it object to securing an APP or enter a monitoring plan in light of its
24 intention to conduct mining operations that may involve discharges into the C aquifer.

25 The balance of interests favor granting injunctive relief. Groundwater impacted with
26 the additives the City is concerned may be introduced by DME will render the water unsafe
27 or not suitable for human consumption or other municipal purposes. Nicholls Aff. at ¶¶ 21-
28 27. If a financially-motivated mining interest such as DME is allowed, without disclosure,

1 oversight or regulation, to introduce toxic or otherwise harmful constituents into a Well
2 situated within two miles of the future municipal water supply of the majority of the region's
3 population, uncertainty is created, risk is increased, and the stability of a safe, clean drinking
4 water supply to tens of thousands of people is irreparably jeopardized. DME should not be
5 allowed to proceed without first demonstrating satisfaction with its own voluntary
6 representations regarding protection of municipal water supplies, as well as complying with
7 Arizona law regarding discharges into aquifers.

8 **C. No Bond Required.**

9 Pursuant to Rule 65(c), the City, as an Arizona municipality, is not required to post
10 a bond to secure the relief requested herein. Ariz. R. Civ. P., Rule 65 ("The State of Arizona
11 and its agencies, counties, municipalities, and other governmental entities - and their
12 respective officers - are not required to give security.").

13 **IV. CONCLUSION**

14 For the reasons set forth herein, the City respectfully requests that the Court set a
15 hearing and enter a Temporary Restraining Order as soon as practicable and, after hearing,
16 enter a preliminary and (if necessary) permanent injunction requiring DME to:

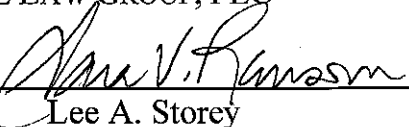
- 17 a. Halt any construction of the Well until or unless it obtains an aquifer
18 protection permit;
- 19 b. Halt any construction of the Well until or unless DME certifies, warrants
20 and represents that it will use only NSF Standard 60 drilling additives in its
21 Well and other mining operations;
- 22 c. Certifies, warrants and represents that it will not use, inject or otherwise
23 introduce any "fracking" or other chemicals, constituents or other materials
24 into the Well that may degrade the existing water quality underlying Red
25 Gap Ranch; and
- 26 d. Enters into an oversight and monitoring plan with the City and other
27 necessary parties to ensure the foregoing representations for the life of the
28 DME project.

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Proposed forms of Temporary Restraining Order and Preliminary Injunction are submitted herewith.

DATED this 11th day of December 2020.

TSL LAW GROUP, PLC

By: 

Lee A. Storey
Alex M. Arboleda
Ethan B. Minkin
Sara V. Ransom
Attorneys for City of Flagstaff

Exhibit 1

1 Lee A. Storey (011989)
2 Alexandra M. Arboleda (016673)
3 Ethan B. Minkin (019022)
4 Sara V. Ransom (024099)
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12 sara@tsllawgroup.com
13 *Attorneys for the City of Flagstaff*

14 **IN THE SUPERIOR COURT OF THE STATE OF ARIZONA**

15 **IN AND FOR THE COUNTY OF COCONINO**

16 THE CITY OF FLAGSTAFF,

17 Plaintiff,

18 v.

19 DESERT MOUNTAIN ENERGY CORP.,

20 Defendant.

No.:

**DECLARATION OF MARK D.
NICHOLLS IN SUPPORT OF
COMPLAINT FOR INJUNCTIVE
RELIEF AND APPLICATION FOR
TEMPORARY RESTRAINING
ORDER AND PRELIMINARY
INJUNCTION WITH NOTICE**

21 1. I am a Hydrogeologist for Haley & Aldrich, a national engineering and
22 geotechnical firm.

23 2. I earned my Bachelor of Science in Geology and hold a master's degree in
24 Geology with emphasis on hydrogeology, both from Brigham Young University.

25 3. The City of Flagstaff ("City") has provided me with the following information
26 related to this litigation, all of which I have reviewed: Well Permits 1250, 1251, and 1255,
27 each issued by the Arizona Oil and Gas Conservation Commission ("AOGCC"), to Desert
28 Mountain Energy Corp. ("DME") and the DME website. I have also reviewed the Arizona
Department of Environmental Quality ("ADEQ") website information pertaining to helium
gas extraction in Arizona, draft Aquifer Protection Permits ("APP") No. P-512364, and P-
513196 pertaining to proposed helium gas extraction operations in Arizona, AOGCC Rules

1 pertaining to well stimulation, United States Environmental Protection Agency (“USEPA”)
2 website pertaining to the Underground Injection Control (“UIC”) program, and the Baroid
3 Industrial Drilling Products website.

4 4. I understand that this proceeding is being filed on an emergency basis, so my
5 analysis is preliminary in nature, dependent upon the information I have been able to access
6 to date and is subject to change.

7 5. Based upon the information I have seen to date, and as further detailed in this
8 Declaration, the City’s concerns that DME’s planned drilling poses a current and on-going
9 threat to the quality of its future drinking water supplies underlying the property generally
10 referred to as the Red Gap Ranch are justified.

11 6. I have 24 years of experience in hydrogeology, including representing clients
12 in the water supply and mining industries. A current copy of my curriculum vitae detailing
13 my representative experience is attached hereto as **Exhibit A**.

14 7. I have never heard of DME in my years of experience, nor am I familiar with
15 any of the principals identified on the documents provided to me by the City to date.

16 8. Per documents that I have been able to review to date, DME intends to drill
17 an exploratory well down to, and below, the point they define as the “base treatable water”
18 in the C aquifer.

19 9. It is unclear how DME derived the depth of “base treatable water” within the
20 C aquifer.

21 10. The implication of this depth determination seems to be that DME intends to
22 (or at least believes it can) contaminate waters within the C aquifer below that “base
23 treatable water” level it has identified.

24 11. The C aquifer serves many water users throughout the region and will supply
25 water to the City’s intended municipal wells at Red Gap Ranch.

26 12. Based upon the stated location of the intended DME Well, any pollutants or
27 toxic substances introduced into the well—now or in the future—or released by operation
28 of the well into the C aquifer will be upgradient of Red Gap Ranch.

1 13. Any constituents, pollutants or toxic chemicals introduced into the well will
2 migrate towards the existing wells located at Red Gap Ranch, which are intended for the
3 City's future municipal use.

4 14. Per its Well Permit, DME intends to drill the exploratory well to a total depth
5 of approximately 2,000 feet and cement the entire length of the casing.

6 15. DME would then use a perforating tool to penetrate the well casing and
7 cement seal in the zones that appear most promising for production of helium gas.

8 16. Although DME represents that the well casing will be sealed through the
9 Kaibab, Coconino, and Supai formations, which are the primary water bearing formations,
10 well construction problems, inadequate maintenance or use of toxic constituents in the
11 production process once perforation is completed can allow a variety of contaminants to be
12 introduced into the C aquifer (and the other aquifers penetrated by DME's well) while the
13 well is under construction or during gas production.

14 17. Wells of this type, if successful, are frequently in operation for decades.

15 18. DME plans to drill using the air rotary method, with the addition of drilling
16 fluid additives for "misting" to assist in lifting drill cuttings.

17 19. Misting agents used for drilling are commonly composed of detergent based
18 foaming compounds.

19 20. The air rotary method disclosed by DME allows it to commence operations
20 quickly if the well strikes a deposit of the helium it wishes to extract, but the method that
21 DME has selected also creates that risk that if it encounters highly fractured zones or large
22 quantities of water, other drilling fluids or additives may be required to enhance circulation
23 or prevent loss of circulation.

24 21. Given that the boring will penetrate a drinking water aquifer, the drilling
25 fluids, including the selected misting agent should be a National Sanitation Foundation
26 ("NSF") certified product to ensure it is safe for drinking water use.

27 22. The same requirement should apply if they have to switch drilling fluids due
28 to formation conditions - all drilling fluids should be certified to NSF Standard 60.

1 23. Unfortunately, nothing in the information obtained by the City and provided
2 to me to date represents or guarantees that DME will only use NSF Standard 60 drilling
3 fluids.

4 24. Moreover, DME represents itself to be a concern with experience in drilling
5 oil wells, which operations commonly employ drilling fluid additives that are not suitable
6 for use in drinking water aquifers.

7 25. Groundwater impacted with such additives may not be safe or suitable for
8 human consumption or other municipal uses.

9 26. If DME does not use NSF Standard 60 certified drilling fluids and additives,
10 it could contaminate the C Aquifer.

11 27. As the well is within two miles of the City's Red Gap Ranch wells, and up-
12 gradient of the Red Gap Ranch wells, it is possible that any such contaminants could migrate
13 to the City's wells, which are intended to satisfy its future municipal supply.

14 28. DME has not provided with their application or accompanying materials, any
15 analysis of potential groundwater quality impacts, chemical characteristics of planned
16 drilling fluids, or information describing how they plan to protect drinking water aquifers.

17 29. DME has indicated that it does not intend to conduct hydraulic fracturing
18 (commonly referred to as "fracking") requiring the use of fracking solution additives, but it
19 has not pledged that it will *not* conduct fracking or use-related solutions. DME's reference
20 in its application to "base treatable water" appears to indicate that DME is making a
21 distinction regarding the lowermost extent of potential drinking water, which implies that
22 DME inaccurately believes it is authorized to pollute water below this depth.

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30. Once chemical constituents used to drill, develop, or operate the well enter the C Aquifer, they may be difficult to isolate and extract. Thus, if a harmful or toxic substance is introduced, it will intermingle with the water within the aquifer and, if introduced in sufficient quantities, may impact water quality.

In accordance with Arizona Rules of Civil Procedure, Rule 14, I declare under penalty of perjury that the foregoing is true and correct.

DATED: *12/8/2020*



MARK NICHOLLS

Exhibit A



MARK D. NICHOLLS, R.G., P.G., C.H.G.

Haley & Aldrich Inc.
400 East Van Buren Street
Suite 545
Phoenix, Arizona 85004

EDUCATION

M.S., Hydrogeology, Brigham Young University, 1998
B.S., Geology, Brigham Young University, 1995

PROFESSIONAL REGISTRATION

2003 / CA: Professional Geologist (Reg. No. 7530)
2005 / CA: Certified Hydrogeologist (Reg. No. 835)
2003 / AZ: Registered Geologist (Reg. No. 39869)
2015 / MO: Registered Geologist (Reg. No. 2015014902)
2015 / KS: Professional Geologist (Reg. No. 881)

Mr. Nicholls has practiced hydrogeology in the southwestern U.S. for more than 20 years. During this time, he has conducted focused water resource studies, assisted with complex policy decisions, provided public testimony, and developed guidance documents to support industry organizations, state agencies, and non-governmental organizations in identifying, developing, and restoring sustainable surface and groundwater supplies in the Southwest. Mr. Nicholls has planned, supervised, conducted, and contributed to groundwater resource studies in support of both private and public sector clients engaged in *Mining, Power Generation, Manufacturing, and Water Supply*. Mr. Nicholls has directed or participated in basin scale groundwater investigations, watershed characterization, recharge site evaluation, well siting, water supply development, groundwater contamination characterization, mine permitting, compliance monitoring, nuclear repository characterization, power plant siting, and power plant discharge compliance in California, Arizona, Nevada, New Mexico, Utah and other states.

Haley & Aldrich, Phoenix, Arizona
Lead Hydrogeologist
2012 – Present

RESPONSIBILITIES (2012-2016):

Mr. Nicholls plans, directs, and supervises groundwater and watershed characterization studies, well siting and well design, water supply development studies, State and Federal mine permitting, implementation of groundwater characterization and monitoring requirements of the newly promulgated Federal Rule regarding the disposition of Coal Combustion Residuals (CCR), study of environmental impacts from industrial activities, groundwater supply evaluation, aquifer testing, spring and stream characterization, geologic mapping in support of well siting, and installation of industrial water supply wells. Responsibilities include team supervision; planning hydrogeologic studies; directing teams engaged in the preparation of project specifications and drilling contractor oversight; assembling and directing teams engaged in geologic mapping, stream, and spring flow monitoring; water source characterization; watershed mapping and other field data collection; evaluation of groundwater conditions in fractured bedrock aquifers; direct agency interaction with the United States Environmental Protection Agency (USEPA), Arizona Department of Environmental Quality (ADEQ), Arizona Department of Water Resources (ADWR), Arizona State Land Department (ASLD), United States Forest Service (USFS), Kansas Department of Health and the Environment (KDHE), California Department of Health Services (CDHS), and California State Water Resource Control Board (SWRCB).

Brown and Caldwell, Phoenix, Arizona
Principal Hydrogeologist
2006 – 2012

RESPONSIBILITIES (2006-2012)

As Brown and Caldwell Water Resource Lead, Mr. Nicholls supervised, planned, and participated in watershed characterization studies, basin scale groundwater model development, groundwater characterization studies, recharge facility siting studies, evaluation of artificial recharge facility performance, environmental impacts from artificial recharge facilities, municipal and private water supply well siting and installation, aquifer testing, State and Federal mine permitting, spring and stream characterization, geologic mapping, evaluation of environmental impacts to groundwater from industrial facilities, and stable isotope characterization of precipitation and groundwater sources. Responsibilities included team supervision; planning hydrogeologic studies; directing groundwater modeling teams engaged in the development of basin scale groundwater models in support of both State and Federal permitting for water supply development mine operations in California and Arizona; directing teams engaged in the preparation of project specifications and drilling contractor oversight; directing teams engaged in the evaluation of aquifer and vadose conditions at proposed recharge facility locations; assembling and directing teams engaged in geologic mapping, stream and spring flow monitoring, water source characterization, watershed mapping and other field data collection; evaluation of groundwater conditions in fractured bedrock aquifers; direct agency interaction with the USEPA, CDHS, ADEQ, and ADWR.

Malcolm Pirnie, Phoenix, Arizona
Senior Hydrogeologist
2005 – 2006

RESPONSIBILITIES (2005-2006):

Planned, directed, and participated in groundwater characterization studies, watershed characterization, municipal and private water supply well siting and installation, aquifer testing, spring and stream characterization, geologic mapping, and evaluation of historic water supply tunnels. Responsibilities included team supervision; planning hydrogeologic studies; preparing project specifications; drilling and geophysical contractor oversight; assembling and directing teams engaged in stream and spring flow monitoring, water source characterization, geologic mapping, and other field data collection; direct agency interaction with the CDHS and USFS. Projects included installation of municipal and private water supply wells, and evaluation of historic water supply infrastructure in the San Gabriel Mountains.

Woodward Clyde/URS, Las Vegas, Nevada; Rancho Cucamonga, California; Phoenix, Arizona
Staff Hydrogeologist
1998 – 2005

RESPONSIBILITIES (2001-2005):

Planned, oversaw, and participated in groundwater characterization studies, watershed characterization, municipal and private water supply well siting and installation, aquifer testing, recharge facility siting studies, power plant siting and permitting, spring and stream characterization, geologic mapping, and evaluation of environmental impacts to groundwater from industrial facilities. Responsibilities included team supervision; planning hydrogeologic studies; planning geophysical studies for hydrogeologic characterization; preparing project specifications; drilling and geophysical contractor oversight; assembling and directing teams engaged in stream

and spring flow monitoring, water source sampling, geologic mapping, and other field data collection; direct agency interaction with the California Energy Commission (CEC) and the California SWRCB. Projects included groundwater characterization in support of State and Federal permitting of gas fired power plants in southern California and one in southern Nevada; evaluation of the potential for artificial groundwater recharge within the upper Mojave River Basin; watershed characterization in support of private water source development; evaluation of more than 70 railroad water well locations in the California Central Valley and Mojave Desert; installation of deep groundwater monitoring wells in San Bernardino, California; evaluation of existing municipal and private water supply wells; and installation of municipal water supply wells in California and Arizona.

RESPONSIBILITIES (1998-2001):

Directed a team of geologists, engineers, and nuclear scientists in the development of geologic, hydrogeologic, water quality, and material characteristic inputs for computer models and analyses of the planned Yucca Mountain Nuclear Repository in support of Federal Nuclear Regulatory Commission (NRC) permitting of the planned facility. Mr. Nicholls' team was responsible for performing compilation, synthesis, and peer review of regional and site-specific geoscience and engineering data in support of project numerical models, and was directly responsible for identifying and qualifying geoscience and engineering data to be used as model inputs for hydrologic, vapor phase, and thermal models developed for the project. Responsibilities included team supervision, preparation of hydrogeologic reports that were peer reviewed by Sandia National Laboratory, Los Alamos National Laboratory, the U.S. Geological Survey (USGS), and non-governmental project participants; peer review of project geologic and hydrogeologic reports generated by others; direct interface with Department of Energy Office of Civilian Radioactive Waste Management (DOE-OCRWM), and the NRC regarding geoscience interpretations and data quality matters.

Mayo and Associates, Lindon Utah

Staff Hydrogeologist

1996 – 1998

RESPONSIBILITIES (1996-1998):

Planned and participated in hydrographic surveys and groundwater source studies of watersheds overlying underground coal mines and prospective coal leases in support of Federal and State mine permitting. Hydrographic surveys included geologic mapping, stream and spring mapping, stream flow monitoring, spring source characterization and monitoring, isotopic studies, water quality studies, and groundwater flow analyses. Responsibilities included planning and participation in all field survey activities, data reduction, data analysis, and reporting. Field survey activities included field mapping, underground flow sampling, flow measurement, and sampling.

Representative Projects

Mr. Nicholls has planned, directed, and performed a wide range of hydrologic analyses and environmental characterization in support of projects completed on behalf of clients in mining, power generation, manufacturing, and water supply industries. A partial list of projects is provided below:

- In-situ Copper Recovery, Florence Copper Project (FCP), APP, UIC Permitting, Design, Installation, and Testing of Injection and Recovery Wellfield, Curis Resources, Florence, AZ Hydrologic Characterization of In-Situ Copper Project, Confidential Client, Dagoon, AZ
- Freeport McMoRan Inc., Copper Queen Branch Water Quality Study Phases I & II, Bisbee, AZ
- Cucamonga Valley Water District, Thayer Tunnel Hydraulic Plug, San Bernardino County, CA
- Confidential Client, Hydrogeologic Characterization, Operating Aggregate Mine, Levine, AZ
- Proposed Aggregate Mine, Groundwater Availability and Well Siting Study, Pearblossom, CA

- Aggregate Mine Water Well Assessment, and Well Siting Study, Tucson, AZ
- Aggregate Mine Water Well Evaluation, Coolidge, AZ
- Aggregate Mine Water Well Installation, San Emidio, CA
- Heap Leach Optimization Study, Confidential Mining Client, Miami, AZ
- Hydrologic Impact and Mine Pit Dewatering Evaluation, OMYA Limestone, Superior, AZ
- Twin Springs Canyon Tunnel, Hydrologic Characterization, Monrovia, CA
- Hydrologic Characterization, Tunnel A, Deer Canyon, San Bernardino County, CA
- Department of Energy, Yucca Mountain Project, Hydrogeologic Data Evaluation for Underground Nuclear Repository, Las Vegas, NV
- Skyline Mine, West Tract Lease Hydrologic Baseline Characterization, Scofield, UT
- The Pines, Proposed Coal Tract Lease Hydrologic Baseline Characterization, Helper, UT
- Crandall Canyon, Fault Water Mitigation Study, Genwal, Helper, UT
- Artificial Recharge Facility Underground Storage Facility Expansion and APP Amendment Vidler Water, Harquahala Valley, AZ
- Sub-Basin Scale Hydrologic Study, Special Planning Area 3 (SPA 3) Water Reclamation Facility Hydrogeologic Characterization, Surprise, AZ
- Artificial Recharge Facility Design and Permitting, including APP, USF and WS Permits, City of Surprise, AZ
- Special Planning Area 1 Water Reclamation Facility Vadose Zone Recharge Well Installation, Surprise, AZ
- APP Amendment, Rainbow Valley Water Treatment Facility, City of Goodyear, AZ
- APP Amendment, Water Treatment Facility, Arizona City, AZ
- Basin Scale Groundwater Model, Indian Wells Valley Water District, Ridgecrest, CA
- Analysis of Groundwater Sustainability, Proposed San Simon Irrigation Non-Expansion Area (INA), Consortium of Farmers, San Simon, AZ
- Analysis of Groundwater Sustainability, Harquahala INA, Confidential Client, Harquahala, AZ
- Groundwater Characterization and Evaluation of Impacts to Groundwater from Placement of Coal Combustion Residuals, Coronado Generating Station, St. Johns, AZ
- Groundwater Characterization and Evaluation of Impacts to Groundwater from Placement of Coal Combustion Residuals, Navajo Generating Station, Page, AZ
- Groundwater Characterization and Evaluation of Impacts to Groundwater from Placement of Coal Combustion Residuals, Jeffrey Energy Center, St Marys, KS
- Groundwater Characterization and Evaluation of Impacts to Groundwater from Placement of Coal Combustion Residuals, Lawrence Energy Center, Lawrence, KS
- Groundwater Characterization and Evaluation of Impacts to Groundwater from Placement of Coal Combustion Residuals, Tecumseh Energy Center, Tecumseh, KS
- Groundwater Characterization and Evaluation of Impacts to Groundwater from Placement of Coal Combustion Residuals, New Madrid Power Plant, New Madrid, MO
- Groundwater System Characterization and Evaluation of Impacts to Groundwater from Placement of Coal Combustion Residuals, Thomas Hill Energy Center, Thomas Hill, MO
- Evaluation of Coal Combustion Residuals Placement Methods and Potential Impacts to Groundwater Quality, Cholla Generating Station, Joseph City, AZ
- Evaluation of Coal Combustion Residuals Placement Methods and Potential Impacts to Groundwater Quality, Four Corners Generating Station, Farmington, NM
- Supplemental Groundwater Characterization, Evaluation of Regional Ambient Groundwater Quality, Navajo Generating Station, Page, AZ

- Supplemental Groundwater Characterization, Evaluation of Regional Ambient Groundwater Quality, Coronado Generating Station, St Johns, AZ
- Supplemental Groundwater Characterization, Evaluation of Regional Ambient Groundwater Quality, Lawrence Energy Center, Lawrence, KS
- Supplemental Groundwater Characterization, Evaluation of Regional Ambient Groundwater Quality, Thomas Hill Energy Center, Thomas Hill, MO
- Evaluation of Perched Water in the Carmel Formation, Navajo Generating Station, Page, AZ. DEIS Comment Response Support, Navajo Generating Station, Page, AZ
- Hydrologic Analysis completed in support of NEPA analysis of Water Conveyance Pipeline Through the San Bernardino National Forest
- SR-85 Landfill Site, Groundwater Characterization and Monitoring, Buckeye, AZ
- Groundwater Monitoring, BNSF Railyard, Winslow, AZ
- Recharge Area Characterization, Arrowhead Tunnels 2 and 3, San Bernardino County, CA
- Hydrologic Characterization, Tunnel A, Deer Canyon, San Bernardino County, CA
- Twin Springs Canyon Tunnel, Hydrologic Characterization, Monrovia, CA
- San Bernardino Valley Municipal Water District, Deep Monitor Well Installation, San Bernardino, CA
- Confidential Client, Hydrologic Characterization of Spring Water Sources, Arizona, California, Nevada, Oregon, and Utah
- Hydrologic Analysis of Spring Water Flow and Travel Time, Using Dye Tracers, Rimforest, CA
- Basin Scale Recharge Demand Analysis, Transition Zone Study Phase I, Mojave Water Agency, Apple Valley, CA
- Basin Scale Recharge Siting Study, Transition Zone Recharge Study Phase II, Mojave Water Agency, Apple Valley, CA
- Recharge Groundwater Quality Evaluation, Artificial Recharge Facility, Vidler Water, Harquahala Valley, AZ
- Recharge Area Estimation Using Stable Isotopes and Groundwater Age Dating Methods at Spring Sites, San Bernardino and San Gabriel Mountains, CA
- Arizona Department of Transportation, Spring Characterization, Oak Creek Canyon, AZ
- U.S. Army Corps of Engineers, Spring Characterization, Brickwood Canyon, Nogales, AZ
- South Buckeye 555-11 LLC, Analysis of Adequate Water Supply, Buckeye, AZ
- Pueblo del Sol Water Company, Analysis of Adequate Water Supply, Sierra Vista, AZ
- Arrow Canyon Power Project, Garnet Valley Supplementary Water Resource Study, Apex, NV
- Tulare County, Program Environment Impact Report Phase II, Assessment of Groundwater Quality Impacts, Tulare County, CA
- Recovery Well Field Assessment, Artificial Recharge Facility, Harquahala Valley, AZ
- Burlington Northern and Santa Fe Railway Company, Central Valley Well Assessment at Historic Railway Stations and Section Houses, San Joaquin Valley, CA
- Tucson Country Club, Well Field Capacity Assessment and Well Siting Study, Tucson, AZ
- Water Supply Wellfield Siting Study, Proposed Ocotillo Power Plant, InterGen, Desert Hot Springs, CA
- Public Water Supply Well Siting Study, Morongo Band of Mission Indians, Cabazon South Well, Cabazon, CA
- Confidential Water Bottling Client, Well Siting Study, Ontario, CA
- Confidential Client, Well Siting in Support of Analysis of Assured Water Supply, Buckeye, AZ
- Well Siting Study, U.S. Air Force Tonopah Test Range, NV
- Private Industrial Water Supply Well, Confidential Food Processing Client, Riverside County, CA

- Private Water Supply Well, Microsoft Corporation, Quincy, WA
- Public Water Supply Wells, Morongo Band of Mission Indians, Cabazon North Well and Cabazon South Well, Cabazon, CA
- Irrigation Water Supply Well No. 6-13, (Replace and Abandon), Maricopa Water District, Surprise, AZ
- Irrigation Water Supply Well No. 3-36, (Site, Replace, and Abandon), Maricopa Water District, Surprise, AZ
- Irrigation Water Supply Well No. 8-25, (Replace and Abandon), Maricopa Water District, Surprise, AZ
- Public Water Supply Well, Orangewood Well, Southern California Water Company, Tustin, CA
- Water Supply Well Condition Assessment and Replacement, Well No. 23, City of Avondale, AZ
- Water Supply Well, Alamosa No.4 Well, City of Chandler, AZ
- Water Supply Well, Layton Lakes Well, City of Chandler, AZ
- Water Supply Well No. E1-B, Oro Valley Water Utility, Oro Valley, AZ
- Water Supply Well Siting and Installation, Indigo Power Plant, Wildflower Energy, North Palm Springs, CA

Expert Testimony 2014 – 2018

2014

On behalf of Florence Copper before the Arizona Office of Administrative Hearings, Case No. 12-005-WQAB. THE TOWN OF FLORENCE; SWVPGTIS MR, LLC; and PULTE HOME CORPORATION, Appellants, vs. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY, Respondent, FLORENCE COPPER INC., Intervenor.

2018

On behalf of Florence Copper before the Arizona Water Quality Appeals Board, Case No. 12-005-WQAB. THE TOWN OF FLORENCE; SWVPGTIS MR, LLC; and PULTE HOME CORPORATION, Appellants, vs. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY, Respondent, FLORENCE COPPER INC., Intervenor.

Exhibit 2

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sara@tsllawgroup.com
7 *Attorneys for the City of Flagstaff*

8 **IN THE SUPERIOR COURT OF THE STATE OF ARIZONA**

9 **IN AND FOR THE COUNTY OF COCONINO**

10
11 THE CITY OF FLAGSTAFF,

12 Plaintiff,

13 v.

14 DESERT MOUNTAIN ENERGY CORP.,

15 Defendant.

No.:

**DECLARATION OF BRADLEY M.
HILL, R.G. IN SUPPORT OF
COMPLAINT FOR INJUNCTIVE
RELIEF AND APPLICATION FOR
TEMPORARY RESTRAINING ORDER
AND PRELIMINARY INJUNCTION
WITH NOTICE**

16 1. I am the former Water Services Director for the City of Flagstaff ("City"). I
17 retired on December 2, 2019, having worked for the City for over a decade, and having
18 worked in various municipal water management positions for more than twenty-two years.

19 2. As the City's Water Services Director, I was responsible for the overall
20 management, operation, maintenance and security of the City's water supply and
21 infrastructure. I also ensured the implementation of best management practices with
22 respect to the City's water supplies for its residents, and planning for new or alternative
23 water supplies to account for future anticipated growth.

24 3. In the course of my employment with the City, I have been involved in the
25 evaluation of and investment in developing alternative or additional water supplies for its
26 current and anticipated population.

27 4. The City, with more than 75,000 residents, is the largest community in
28 northern Arizona. It also hosts more than 5,000,000 tourists annually.

1 5. The City has enjoyed economic and population growth for several decades.
2 It anticipates reaching a population of approximately 150,000 full-time residents within the
3 next fifty (50) years or so.

4 6. To accommodate the municipal needs of its continued and anticipated
5 population growth, including providing safe drinking water for residents and visitors, in
6 2005 the City purchased 8500 deeded acres of land and several thousand acres of State
7 Lands grazing leases along the I-40 corridor approximately 40 miles east of the City's
8 incorporated limits.

9 7. The City plans to use the land, which is commonly referred to as "Red Gap
10 Ranch," as a future source of municipal water supply which has been a frequent subject of
11 attention in the press and in the community.

12 8. The City is recognized as a leader in Arizona with respect to its water
13 conservation and reclaimed water reuse measures. I understand that the City intends to
14 continue to implement and improve upon those measures to decrease its municipal water
15 needs, but projections indicate that its growing population will nonetheless need additional
16 water supplies.

17 9. That is why the City purchased Red Gap Ranch nearly fifteen (15) years ago
18 and has invested millions in developing Red Gap Ranch for its intended purpose as a
19 municipal water supply. The City's plans for Red Gap Ranch are to drill multiple wells
20 into the Coconino aquifer (the "C aquifer") to withdraw groundwater, which will then be
21 conveyed via pipeline and introduced into the City's existing municipal water infrastructure
22 system.

23 10. The City has completed certain aspects of its plans for Red Gap Ranch. They
24 completed Phase I of an engineering analysis towards confirming the feasibility of the
25 project in 2009, drilled wells in 2011, secured a Designation of Adequate Water Supply
26 from the Arizona Department of Water Resources in 2013, entered into an agreement in
27 2016 with the Arizona Department of Transportation to advance the process of approving a
28 water pipeline within the I-40 right of way, and completed multiple water quality analyses

1 to confirm that the water underlying Red Gap Ranch continues to be suitable as a drinking
2 water source.

3 11. A Phase II engineering analysis is slated for completion within the next year,
4 as are other on-going measures by the City towards its continued planning to use Red Gap
5 Ranch as a municipal water supply in the future.

6 12. Hydrogeologic analysis and other regional land ownership restrictions
7 confirm that the area in and around Red Gap Ranch is the only feasible source of
8 groundwater suitable for municipal use in the region that is available to the City in the
9 future.

10 13. Maintenance of Red Gap Ranch's water quality, including ensuring it remains
11 free from harmful or toxic substances that will render it inadequate for human consumption
12 or cause the City to incur potentially exorbitant treatment costs is crucial to the City's future
13 water security.

14 14. In early 2019, after representatives of Desert Mountain Energy Corp. (DME)
15 approached the City for permission to cross Red Gap Ranch for the purpose of exploring
16 whether it could mine for helium on nearby lands owned by the Arizona State Lands
17 Department ("ASLD"), the City entered a License for Access and Seismic Testing on Red
18 Gap Ranch (the "DME License Agreement") and a Memorandum of Understanding with
19 DME (the "DME MOU"). A true and correct copy of the DME MOU is attached hereto as
20 **Exhibit A**. A true and correct copy of the DME License Agreement is attached hereto as
21 **Exhibit B**.

22 15. By the DME License Agreement, the parties acknowledged that the lands
23 comprising "Red Gap Ranch" were acquired by the City "for their water rights." By the
24 DME License Agreement, the City authorized DME to cross Red Gap Ranch via designated
25 existing roads and new paths to complete its due diligence on neighboring ASLD lands and
26 authorized DME to conduct limited seismic testing on City lands and provide the City with
27 the results of that testing in exchange for a waiver of the license fee.

28 16. The DME MOU required DME to consult with and work cooperatively with

1 the City regarding its activities with respect to helium or hydrocarbon mining and to share
2 all available technical and geological data. The parties also noted that the City encouraged
3 access to areas in the region that may have helium resources *except* in the vicinity of federal
4 or state parks or other highly sensitive areas, including areas with water resources.

5 17. From my point of view as the Water Services Director at the time, the two
6 agreements allowed the City to ensure that it was notified of DME's activities and could
7 verify that those activities would not threaten the quality of or accessibility to groundwater
8 underlying Red Gap Ranch.

9 18. During my interactions with DME representatives in 2019, City
10 representatives repeatedly expressed the City's interest in protecting Red Gap Ranch from
11 water quality or water accessibility issues resulting from DME's proposed operations.

12 19. In March 2019, then-Chief Executive Officer of DME, Mr. Olian Irwin, is
13 quoted by Scott Buffon of the Arizona Daily Sun stating that DME "won't do a well for
14 helium if there's any danger of contaminating the water supply at all," further remarking
15 "It's just not going to happen." A true and correct copy of the article containing Mr. Irwin's
16 statement is attached hereto as **Exhibit C**.

17 20. By the time of my retirement in December 2019, to my knowledge the City
18 had never received any seismic testing results or the results of any geological testing or
19 analysis from DME.

20 21. Via publicly available documents, in late November 2020, the City
21 discovered that DME had secured rights to drill an exploratory well within two miles of
22 Red Gap Ranch (the "Well"). The Well is for the purpose of exploring the mining of
23 helium, and may be drilled to a proposed depth of 2,000 feet, which is within and may be
24 below the C aquifer. A true and correct copy of the Well Permit No. 1255, which authorizes
25 the Well, is attached hereto as **Exhibit D**.

26 22. The C aquifer is the location of the City's municipal wells at Red Gap Ranch.

27 23. Based upon the stated location of the Well, any harmful constituents,
28 pollutants or toxic substances introduced into the Well or released by the operation of the

1 Well will be upgradient of Red Gap Ranch.

2 24. Any harmful constituents, pollutants or toxic chemicals introduced into the
3 Well will migrate towards the City's wells located at Red Gap Ranch.

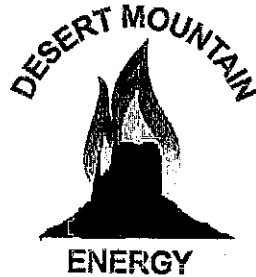
4 In accordance with Arizona Rules of Civil Procedure, Rule 14, I declare under
5 penalty of perjury that the foregoing is true and correct.

6 DATED:

7 
8 _____
9 BRADLEY M. HILL, R.G.

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Exhibit A



January 22, 2019

MEMORANDUM OF UNDERSTANDING

MUTUAL COOPERATION AND STRATEGIC DEVELOPMENT OF HELIUM AND HYDROCARBON RESOURCES IN THE GREATER FLAGSTAFF REGION AND IN COCONINO COUNTY, ARIZONA

WHEREAS, the CITY OF FLAGSTAFF ("Flagstaff") is the largest city in Northern Arizona and serves as the regional, cultural and county seat for Coconino County, and comprises over 64 square miles at the base of the San Francisco Peaks;

WHEREAS, Flagstaff is a governmental, educational, economic, cultural and Community center for Northern Arizona and Coconino County;

WHEREAS, Flagstaff desires to encourage appropriate economic development in order to create cash flow for Flagstaff and local communities, with a view toward furthering local education, job creation, increasing local and regional infrastructure and generally increasing the well-being of the people;

WHEREAS, Flagstaff desires to maintain and preserve the beautiful Northern Arizona landscape and environment as a long-term legacy, whilst at the same time encouraging reasonable, appropriate economic development that is mindful of preserving the environment and not impinging significantly on the rights and customs of local indigenous communities; and

WHEREAS, DESERT MOUNTAIN ENERGY CORP. ("DME"), a public energy company with offices in Phoenix, AZ that is focused on development of helium and hydrocarbon resources in Arizona, via an outlook using renewable resources where economically feasible, has an experienced and highly qualified technical team of professionals and senior management who are familiar with exploration, drilling, production and distribution of helium, oil & gas resources; and

WHEREAS, DME has identified potential targets for exploration and development of helium and hydrocarbon resources in the greater Flagstaff region and Coconino County, and is requesting the support of Flagstaff in carrying out reasonable exploration and development activities which do not significantly compromise the environment or impinge the material rights of the indigenous communities;

NOW THEREFORE, THE PARTIES DO HEREBY AGREE:

That Flagstaff and DME shall work together on a cooperative basis to evaluate potential resources and if mutually beneficial, to develop reasonable plans for the strategic development of helium and hydrocarbon resources in the greater Flagstaff region and in Coconino County generally;

That the parties shall share all available technical and geological data related to helium and hydrocarbon resources in the Flagstaff region and in Coconino County generally;

That DME will fully consult with Flagstaff concerning each major exploration, drilling, development and or production program in the area with a view toward limiting environmental impact whilst allowing for successful extraction of valuable resources in order to generate cash flow for Flagstaff and the local communities, to encourage job creation and enhancement of local infrastructure; and to generally improve the well-being of the people;

That the parties will work together on a cooperative basis to encourage access to areas identified as highly prospective for helium and hydrocarbon resources in Coconino County which are not in designated national or state parks or are otherwise recognized as highly sensitive from the standpoint of environmental, water resources, cultural, or existing grazing or livestock considerations.

The Term of this Memorandum of Understanding shall be One year from the date hereof to and including January 10, 2020, unless terminated by either party on ten days' prior written notice and without further liability or obligation to the other party. It is contemplated that the parties may enter into one or more written agreements from time to time to further the objectives of this Memorandum of Understanding.

IN WITNESS WHEREOF, the parties do set their hand to this Memorandum of Understanding as of the date above written:

DESERT MOUNTAIN ENERGY CORP.

By _____
Irwin A. Olian, CEO & Director

THE CITY OF FLAGSTAFF

By Barbara Goodrich
BARBARA GOODRICH
CITY MANAGER

City of Flagstaff
Memorandum of Understanding
Desert Mountain Energy Corp.

ATTEST:

Stacy Salzburg
CITY CLERK

APPROVED AS TO FORM:

Angie W. Hill
CITY ATTORNEY

Exhibit B

LIC-2019-146-AG1
CITY OF FLAGSTAFF
LICENSE FOR ACCESS AND SEISMIC TESTING
ON RED GAP RANCH

This License Agreement ("License") is entered into this 23rd day of January, 2019 by and between the City of Flagstaff, a municipal property corporation ("City") and Desert Energy Corp., a Nevada for-profit corporation doing business as Desert Mountain Energy Corp. ("Licensee").

RECITALS

- A. City owns tracts of vacant land located east of the City of Flagstaff, and known as Red Gap Ranch. The lands were acquired for their water rights and are subject to grazing leases. The City lands are interspersed with State Land Department parcels ("State lands") in a checkerboard pattern.
- B. Desert Mountain Energy Corp. has obtained approximately 19 non-competitive oil and gas leases of State lands from the State Land Department to conduct seismic testing, drilling, and production of helium gas on state lands.
- C. City desires to grant Desert Mountain Energy Corp. a license across City lands so that Desert Mountain Energy Corp. is able to access State lands and conduct seismic testing.
NOW, THEREFORE, in consideration for the conditions of this License, the parties agree as follows:
 1. **Term.** The License will commence on January 23, 2019 and continue for a period of one (1) year, unless sooner revoked or terminated pursuant to this License. The License may be renewed upon written approval of the City Manager and Licensee.
 2. **License for Ingress and Egress, and Seismic Testing.** City hereby grants Licensee a non-exclusive license for ingress and egress, including the right to drive small equipment, four-wheelers, vibrators, rubber track vehicle and small trucks (collectively "Equipment"), across City lands identified as:

Township and Range section numbers: 120N R12E Sections 3, 11, 13; and 120N R13E Sections 18, 19, 21, 22, 27, 29, and 33 also identified respectively as Coconino County Assessor Parcel Nos. 40607002C (690.24 acres), 40607002B (754.24 acres), 40608001K (2,473.74 acres), collectively ("City Lands")

but only within the existing roads ("Existing Roads") and within the transect lines ("New Paths") identified in the documents attached herein as Exhibit A. The New Paths and the crossings at state-land owned corners are fifteen feet (15') wide. The crossings at the corners run at 45 degree angle and are often referred to as butterfly easements. Licensees shall use the same access routes in and out of City Lands where possible, so as to minimize disturbance to the land.

City hereby further grants Licensee a non-exclusive license to conduct seismic testing on City Lands using Equipment operated on the Existing Roads and New Paths. The seismic testing

activities involves operating the Equipment and identifying the geologic structures at a depth of approximately 3,850 to 1,400 feet below surface by means of vibration. No explosives will be used.

3. Fees. In consideration of the grant, Licensee shall pay City:
 - a. A One-time administration fee of \$1,500.00;
 - b. A License fee for the initial term (one year) is waived in exchange for a copy of the report compiling seismic testing information on City Lands. Licensee will provide City with an electronic copy of both the underlying data and the report at no expense.
 - c. A Security Deposit of \$2,000 which may be drawn upon by City in the event Licensee does not promptly complete restoration work under this License, to pay for City costs in doing such restoration work. This deposit will not accrue interest to Licensee but will be refunded to Licensee upon conclusion of the License if not otherwise applied to restoration work. If the Security Deposit is drawn down, Licensee shall restore it to the original amount.
4. Adjustments to License Fee. Fees and deposits may be adjusted upon renewal of the License.
5. Reserved.
6. City Representative. The City of Flagstaff Water Services Director will serve as the City's representative and will have authority to approve Licensee's activities on City Lands. Any City approval shall not have the effect of waiving Licensee's obligation to comply with this License and other applicable laws and regulations. Contact information: Brad Hill, (928) 213-2400.
7. Requests to Use Other Areas. Licensee shall submit a request to the City Representative at least 10 days prior to commencing any proposed activities on City Lands other than in the Access Ways and Burial/Easements, except in case of an emergency and in such event, notice will be provided to City as soon as practicable (within 48 hours).
8. Responsibility for Employees, Contractors, and Subcontractors. Licensee shall ensure that all its employees, contractors and subcontractors ("Agents") comply with the terms and conditions of this License, and Licensee will be responsible for any violation of the License by an Agent. Prior to commencing any activities on City Lands, Licensee shall:
 - a. Provide a copy of this License to each of its Agents who will be engaged in the maintenance, and
 - b. Require compliance with this License as a condition of Licensee's contract with any contractor who will be engaged in the maintenance, and require each such contractor to include compliance with this License as a condition of its subcontracts.
9. Access Across Adjacent Properties. Licensee must obtain separate approval from adjacent property owners as necessary to access City Lands.

10. **Approvals.** Licensee shall acquire any necessary permits or approvals from the federal government, City of Flagstaff, Coconino County, Arizona Parks Department, Arizona Department of Transportation, Arizona State Museum and State Historic Preservation Office and/or the County Highway Department prior to grading or disturbing any City Lands.

11. **Archaeological and Historic Preservation.** City is not aware of any archaeological resources along Existing Roads, and has not conducted an assessment of all City Lands. If Licensee detects or finds any archaeological resources or historical artifacts on City Lands, it work shall cease, and Licensee shall notify the City Representative with the location, observations, and photographs. City Representative shall notify the Arizona State Museum and all work must comply with the Arizona Antiquities Act.

12. **Flora and Native Plants.** Prior to driving on New Paths, Licensee shall submit a request to the City of the amount of flora, if any, proposed to be cut, removed, or destroyed by use of the Equipment and shall pay the City such sum of money as the City may determine to be the full value of the flora to be so cut, removed or destroyed.

If the removal of plants protected under the Arizona Native Plant Law is necessary to enjoy the privilege of this License, the Licensee hereunder must previously acquire the written permission of the Arizona State Land Department and the Arizona Department of Agriculture to remove those plants.

13. **Grazing.** City has grazing leases across City Lands. Lease Agreement dated February 20, 2007 with Mariposa Sheep Company, Inc., an Arizona corporation ("Grazing Lease"), a copy of which has been provided to Licensee.

- a. Licensee or its Agents shall notify the grazing lessee(s) at least 10 days prior to entering City Lands.
- b. If Licensee activities on City Lands occur during periods of livestock grazing, Licensee will take the necessary measures to insure livestock protection and containment. This may require temporary fencing.
- c. Any damage to rangeland improvements by the Licensee or its Agents (i.e., fencing, gates, pipelines, earthen structures, etc.) will be replaced and/or reconstructed with new material to grazing lessee's satisfaction and at Licensee's expense.
- d. Licensee shall provide City with documentation of the grazing lessee's consent prior to making any alterations to existing improvements.
- e. Licensee shall not engage in any activity that will substantially interfere with or otherwise cause a breach of the Grazing Lease.

14. **Materials.** Licensee shall not remove or allow removal of any materials (including but not limited to dirt and rocks) from City lands without the prior written consent of the City.

15. **Public Use.** Licensee shall not exclude from use of U.S. Forest Service, State of Arizona, City of Flagstaff its lessees or licensees, or the general public the right of ingress and egress over

City lands. City may approve temporary fencing to protect work areas.

16. **Soil.** Licensee shall conduct all maintenance activities in a manner that will minimize disturbance to all land values including, but not limited to, vegetation, drainage channels, and streambanks. Work methods shall be designed to prevent degradation of soil conditions in areas where such degradation would result in detrimental erosion or subsidence. Licensee shall take such other soil and resource conservation and protection measures on the land under grant or permit as determined necessary by the City.

17. **Trees.** Licensee shall not cut nor allow to be cut or removed any timber or standing trees on City lands, without the prior written consent of the City.

18. **Restoration following Activities.** Within thirty (30) days of completion of any activities on City Lands, Licensee shall submit to City a statement of work completed and thereafter shall restore any land or improvements it has disturbed including, but not limited to, restoration of the surface, revegetation, and fencing as determined necessary by the City. Licensee shall reseed any disturbed surface area with native seed sourced from the Colorado Plateau. In the event Licensee does not promptly complete restoration work, City reserves the right to do such restoration work and Licensee shall pay for the City's costs. City will apply the Security Deposit towards City's costs and invoice Licensee for any remaining balance.

19. **Compliance with Laws.** Licensee shall adhere to all applicable laws, rules, regulations, ordinances and building codes related to use of the City Lands.

20. **Indemnification.** Licensee shall indemnify, defend and hold harmless the City, its council, boards and commissioners, officers, employees from all losses, claims, suits, payments and judgments, demands, expenses, attorney's fees or actions of any kind resulting from personal injury to any person, including employees, subcontractors or agents, guests or invitees of Licensee or damages to any property arising or alleged to have arisen out of the negligent performance of the Licensee, except any such injury or damages arising out of the negligence of the City, its officers, agents or employees. This indemnification provision shall survive termination or expiration of the Licensee.

21. **Environmental Indemnification.** Licensee shall protect, defend, indemnify and hold harmless the City from and against all liabilities, costs, charges and expenses, including attorney's fees and court costs arising out of or related to the presence or existence of any substance regulated under any applicable federal, state, or local environmental laws, regulations, ordinances or amendments thereto because of (a) any substance that came to be located on the City Lands due to Licensee's use or occupancy of the lands by the Licensee before or after the issuance of the License; or (b) any release, threatened release or escape of any substance in, on, under or from said City Lands that is caused, in whole or in part, by any conduct, actions or negligence of the Licensee, regardless of when such substance came to be located on the City Lands.

For the purposes of this License, the term "regulated substances" shall include substances defined as "regulated substances", "hazardous waste", "hazardous substances", "hazardous materials", "toxic substances" or "pesticides" in the Resource Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments of 1984, the Comprehensive Environmental Response, Compensation and Liability Act, the Hazardous Materials Transportation Act, the Toxic Substance Control Act, the Federal Insecticide, Fungicide and Rodenticide Act, the relevant local and state environmental laws, and the regulations, rules and

ordinances adopted and publications promulgated pursuant to the local, state and federal laws. This indemnification shall include, without limitation, claims or damages arising out of any violations of applicable environmental laws, regulations, ordinances or subdivisions thereof, regardless of any real or alleged strict liability on the part of City. This environmental indemnity shall survive the expiration or termination of the License and/or any transfer of all or any portion of the City Lands and shall be governed by the laws of the State of Arizona.

In the event any such action or claim is brought or asserted against the City, the Licensee shall have the right, subject to the right of the City to make all final decisions with respect to City's liability for claims or damages, (i) to participate with City in the conduct of any further required cleanup, removal or remedial actions and/or negotiation and defense of any claim indemnifiable under this environmental indemnity provision, having reasonable regard to the continuing conduct of the operator/business located on the City Lands and (ii) to participate with the City in negotiating and finalizing any agreement or settlement with respect to any such claim or cleanup.

22. **Termination by Licensee.** Licensee may terminate this License upon at least thirty (30) days written notice to City for convenience. In such event Licensee shall provide City with a copy of any seismic testing on City Lands completed as of the termination date.

23. **Revocation by City.** City may revoke this License in the event of any of the following:

- a. Licensee has violated a term or condition of this License, City has provided written notice and reasonable opportunity to cure, and Licensee has failed to cure the same; or
- b. Licensee has engaged in activities that will have the effect of causing City to violate its Grazing Leases as determined in the discretion of City after consultation with the Lessee; or
- c. The City Manager shall have the right to revoke this License upon at least six (6) months advance written notice to Licensee for convenience.

The City or Flagstaff shall be forever wholly absolved from any liability for damages which might result to the Licensee upon cancellation or revocation.

24. **Restoration upon Conclusion of License.** Within thirty (30) days after cancellation, revocation, expiration or termination of the License, Licensee shall, as far as is reasonably possible, restore and/or rehabilitate the land to its natural condition to the satisfaction of the City. Licensee shall reseed any disturbed surface area with native seed sourced from the Colorado Plateau. Licensee may, with written permission of City, allow abandonment of improvements in place. If improvements are not removed and/or restoration is not completed within thirty (30) days or other reasonable time allowed by City, City shall do such work and charge the actual costs of such work against the Security Deposit and invoice Licensee for any balance of the costs incurred.

25. **Reserved.**

26. **Fire Treatment Use.** City reserves the right to engage in or allow fire treatment (including but not limited to, cutting of timber, cleaning, prescribed burns, and fire-fighting) in the City Lands and such Fire Treatment Use shall have priority rights over any use permitted pursuant to this License.

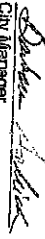
- 27. **Other Non-Fire Treatment Uses.** City reserves the right to execute licenses or grants within the City Lands for other non-fire treatment uses, so long as the same do not interfere with Licensee's proper use of the Access Ways and Butterfly Casements.
- 28. **Laws.** City reserves the right to amend this License to conform with current law, including any amendments or repeals of existing laws as may hereafter be made, and no provisions of this License shall create any vested right in conflict with the same.
- 29. **Governing Law.** This License shall be construed in accordance with laws of Arizona. The courts of Arizona shall have exclusive jurisdiction and Coconino County shall be the venue.
- 30. **Nondiscrimination.** The parties agree to be bound by applicable State and Federal rules governing Equal Employment Opportunity, Non-discrimination and Disabilities, including Executive Order No. 99-4.
- 31. **Conflict of Interest.** This contract is subject to cancellation pursuant to A.R.S. § 38-511.
- 32. **Assignment.** Licensee may assign this License with prior written consent of City, and upon assignee's assumption of all rights and obligations of the License.
- 33. **Notices.** All notices or other communications under this License shall be in writing and shall be deemed to be delivered on the date of delivery if delivered in person or on the date of receipt requested, postage prepaid and addressed as follows:

<p>If to Licensee: Robert W. Rohlfing, Director Desert Mountain Energy Corp. 1133 96th Street, Delta, B.C. V4L 2P8 Canada</p>	<p>With a copy to: Arizona Statutory Agent per Arizona Corporation Commission records</p>
<p>If to City: City Flagstaff Water Services Director City of Flagstaff 211 W. Aspen Avenue Flagstaff, AZ 86001</p>	<p>With a copy to: City Real Estate Manager City of Flagstaff 211 W. Aspen Avenue Flagstaff, Arizona 86001</p>

Or such other person designated by the party in writing.

In witness whereof, the parties have caused this License to be executed by their duly authorized representatives on the date(s) set forth below.

CITY OF FLAGSTAFF


City Manager

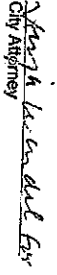
LICENSEE


Title: *Executive Director*

ATTEST:


City Clerk

APPROVED AS TO FORM:


City Attorney

Attachments:

Exhibit A - Documents showing Access Ways and New Paths

Exhibit C

Council meeting to shed light on Red Gap Ranch helium mining

- [Scott Buffon](#)
- Feb 12, 2019 Updated Mar 19, 2019
- 0

SALE! Subscribe for \$1/mo.



Red Gap Ranch with the San Francisco Peaks in the distance.
Emery Cowan

- Facebook
- Twitter
- Email
- Print
- Save

Scott Buffon

The Flagstaff City Council hopes to clarify the city's stance on an agreement they entered into allowing Desert Mountain Energy to access city property for helium and hydrocarbon that could be present beneath the surface.

The land in question, Red Gap Ranch, was purchased by the city with taxpayer money for a different resource also found beneath the surface — potential drinking water. City voters **approved** a \$15 million bond for the purchase to extend the city's water resources, with city officials only spending \$6.9 million for the land and water access in 2005.

The city is holding a council meeting on Tuesday about a Desert Mountain Energy press release that city officials say "overstates" the city's commitment to their agreement that included exploration and production, according to the **online council agenda**.

Alicyn Gitlin, conservation coordinator at the Sierra Club, is concerned about the city's lack of transparency and communication on the mining and exploration prospect, which she believes could risk damaging the city's water.

"It's a very big violation of the public trust by not including public input and notification prior to making a decision like this that could affect our future water supply," Gitlin said.

Red Gap Ranch is located east of Flagstaff, south of the Navajo Nation and adjacent to the I-40 highway and has not yet been developed for city use.

Jessica Drum, spokesperson for the City of Flagstaff, encouraged people to attend the council meeting for further information.

The Desert Mountain Energy **press release** and focus for the concern states: "The parties agree to work together to limit the environmental impact of the work and production programs whilst allowing for the successful extraction of valuable resources."

Olian Irwin, CEO for Desert Mountain Energy, said he stands by the information in the press release as accurate, but said there is always a possibility of misinterpretation.

Irwin also alleged that the company had no intention to build a well on the city's land or damage the city's water supply, despite the press release stating it could allow for hydrocarbon resource development. Hydrocarbons can include multiple different compounds but often occur in petroleum and natural gas.

"We won't do a well for helium if there's any danger of contaminating the water supply at all," Irwin said. "It's just not going to happen."

A city council **report** from mid-January explains that the city will only allow seismic testing and mining if both Desert Mountain Energy and the city agreed to pursue the project.

"The memorandum of understanding: expresses the parties' desire to explore possibilities for helium exploration and mining if mutually beneficial and to cooperatively work together," the memo to the city council explained.

The agreement details the use of seismic testing to explore the presence for helium. Taylor McKinnon, public lands campaigner with the Center for Biological Diversity, said he is also concerned with how little public input has been allowed on the project, which he feels might endanger the Red Gap Ranch property.

"It's bad public policy," McKinnon said. "Secondly, a question arises, how does facilitating hydrocarbon exploration and development fit with the city's new **climate action plan**?"

Desert Mountain Energy describes itself as a producer of helium, oil and gas on their website. Irwin alleges they included hydrocarbon in the agreement, because other gases and minerals can be found while exploring for helium.

"There's no intent, this is not about looking for oil wells," Irwin said. "Maybe that will be clarified with an amendment to the agreement."

City officials also recommend revising the agreement to clarify their perspective, according to the council agenda item.

"Any decisions or forward path by the city would be fully vetted with the council and public to achieve a complete understanding of the process to do any extraction, the environmental impacts, water quality impacts, and other factors that would be related to any decision in moving forward should any helium resource be discovered," the city agenda said.

Helium is a nonrenewable resource and is used in items like computer hard drives and MRI machines as coolant.

Scott Buffon can be reached at **sbuffon@azdailysun.com**, on Twitter **[@scottbuffon](https://twitter.com/scottbuffon)** or by phone at (928) 556-2250.

0 comments

Exhibit D

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

INJECTION WELL

OIL

GAS

CO2

HELIUM WELL

OTHER

Helium

AIR QUALITY DIVISION

NAME OF COMPANY OR OPERATOR

Desert Mountain Energy Corp

20 NOV -9 PM 10:45

Address

City

State

Phone Number

6300 W. 23 St. N.

Muskogee

OK74401

918-752-7020

Drilling Contractor

To be Determined

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor

13-120004

Well number

26-1

Elevation (ground)

5451.8

Nearest distance from proposed location to property or lease line:

1,660'

feet

Distance from proposed location to nearest drilling, completed or applied-for well on the same lease:

Not Applicable

feet

Number of acres in lease

640

Number of wells on lease, including this well, completed in or drilling to this reservoir:

1

If lease purchased with one or more wells drilled, from whom purchased.

Name

Address

NA

Well location (give footage from section lines)

1660 ft FEL, 2,335' FNL

Section - Township - Range or Block and Survey

S26 T20N R12.5E G&SRB&M

Dedication per A.A.C. R12-7-104(A)(3)

All of Sec

Field and reservoir (if wildcat, so state)

Wildcat

County

Coconino County, AZ

Distance in miles and direction from nearest town or post office

18 Miles East to Winslow, AZ 1.2 Miles North to Meteor Crater Interchange on I40

Proposed depth:

2,000'

Rotary or cable tools

Air/Mist

Approximate date work will start

11/12/20

Bond status

Amount \$25,000

Organization Report

On file

Or attached

X

Filing Fee of \$25.00

Attached

Yes

Remarks

RECEIVED
NOV 09 2020
ADEQ

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the:

CEO

of the

Desert Mountain Energy Corp

(company), and that I am authorized by said company to make this report; and that this

report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Mail completed form to:

Oil and Gas Program Administrator
Arizona Oil & Gas Conservation Commission
c/o Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007

Signature

Date

e-mail completed form to: azogcc@azdeq.gov

Permit / LTF No.: 1255/ LTF#86784

Approval Date: November 18th, 2020

Approved By: 

NOTICE: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

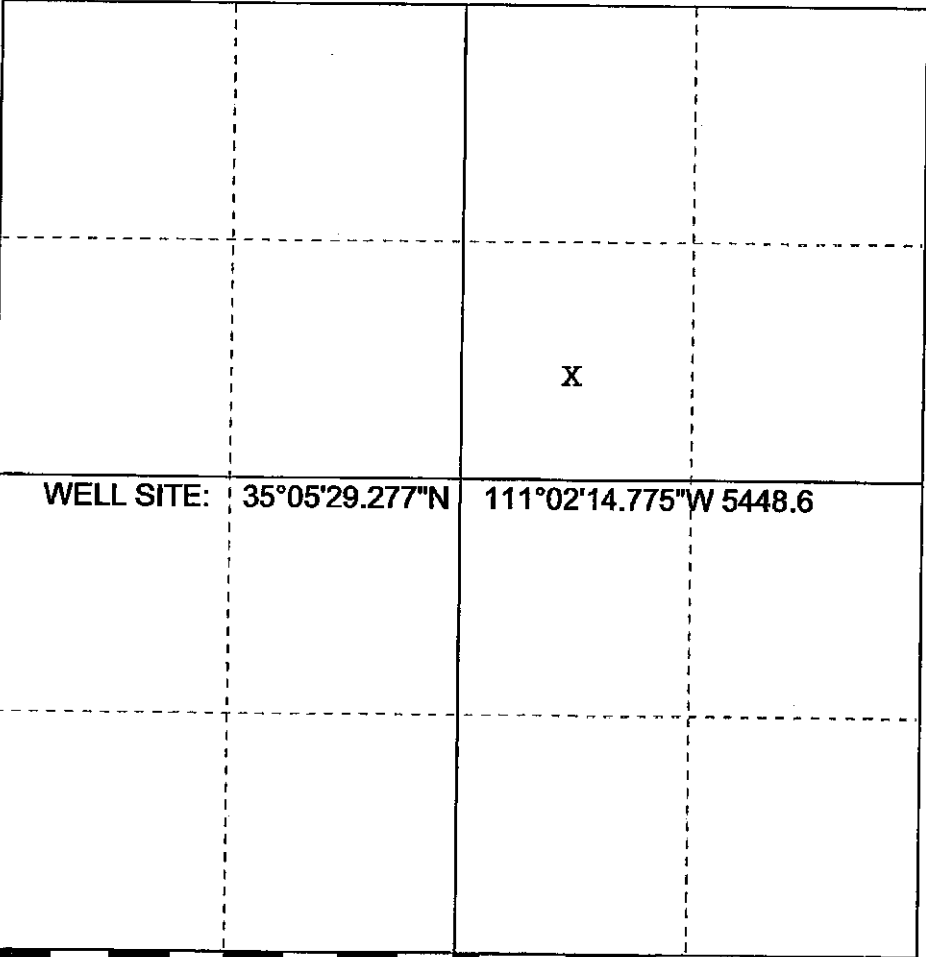
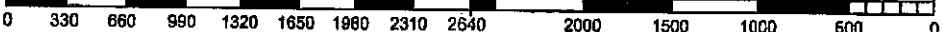
**STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION**

Application to Drill or Re-enter

File two copies: one by mail, one electronically

Form No. 3

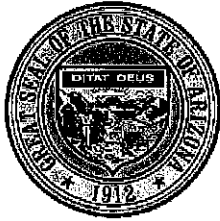
1. Operator shall outline on the plat the acreage dedicated to the well in compliance with A.A.C. R12-7-107.
2. A registered surveyor shall show on the plat the location of the well and certify this information in the space provided.
3. ALL DISTANCES SHOWN ON THE PLAT MUST BE FROM THE OUTER BOUNDARIES OF THE SECTION.
4. Is the operator the only owner in the dedicated acreage outlined on the plat below ? YES NO
5. If the answer to question four is no, have the interests of all owners been consolidated by communization agreement or otherwise? YES NO If answer is yes, give type of consolidation _____
6. If the answer to question four is no, list all the owners and their respective interests below:

Owner Desert Mountain Energy Corp	Land Description In the SW1/4 NE1/4 S26 T20N R12.5E
State 26-1	
	<p style="text-align: center;">CERTIFICATION</p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p style="text-align: center;"><i>R W Rohlifing</i></p> <p>Name R W Rohlifing CEO</p> <p>Position CEO , President</p> <p>Company Desert MountainEnergy</p> <p>Date 11-2-20</p> <p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed 8/21/2020</p> <p>Registered Land Surveyor Alisa J. Templeton</p> <p>Certificate No. AZ RLS 26406</p>
<p>WELL SITE: 35°05'29.277"N 111°02'14.775"W 5448.6</p>	
	

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement	Type
7"	23#	J-55	Sur	500'	500'-Surface	150	reg
4.5"	11.6#		Sur	1,990'	1,900'-Surf	180	Prem

ARIZONA OIL and GAS CONSERVATION COMMISSION



State of Arizona
Oil and Gas Conservation Commission

1110 W. Washington Street, Phoenix, AZ 85007

602-771-4501

www.azogcc.az.gov

Marta Hodan, Oil and Gas Administrator

Commissioners:

Frank Thorwald, Chair

J. Dale Nations, Ph.D., Vice Chair

Stephen R. Cooper

William C. Feyerabend

CERTIFICATE for PERMIT to DRILL an OIL, GAS, INJECTION or GEOTHERMAL WELL PERMIT / LTF NUMBER 1255 / LTF #86784

Has been issued to **Desert Mountain Energy Corp.**

to drill a well known as **Desert Mountain 26-1 State**

located **1660 FEL 2335 FNL**

in Section 26 Township 20N Range 12.5E , Coconino County, Arizona

The entirety of Sec 26, T20N, R12.5E (640 acres) of said Section, Township and Range is dedicated to this well.

Said well shall be drilled substantially as described in the Application and as approved by the OGCC's letter dated November 19, 2020. Desert Mountain Energy Corp. is subject to terms and conditions of the permit to drill and all applicable Arizona Revised Statutes (A.R.S.) Title 27, Chap. 4, Art. 1 and 4, and the Arizona Administrative Code (A.A.C.) R12-7-104, R12-7-106 to 107 and R12-7-175 to 176.

Total Depth: 2,000 feet

Issued: November 18, 2020

API No.: 02-005-20036

Expires*: May 17, 2021

*The permit to drill expires if operations are not commenced within 180 days from date of this certificate (see A.A.C R12-7-104(D))

Marta Hodan, Oil & Gas Program Administrator

ogcc@azdeq.gov

OPERATOR SHALL DISPLAY THIS CERTIFICATE IN A CONSPICUOUS PLACE ON-SITE

Exhibit 3

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

INJECTION WELL

OIL

GAS

CO2

HELIUM WELL

OTHER Helium

AIR QUALITY DIVISION

NAME OF COMPANY OR OPERATOR

Desert Mountain Energy Corp

20 NOV -3 PM 12:45

Address

City

State

Phone Number

6300 W. 23 St. N.

Muskogee

OK74401

918-752-7020

Drilling Contractor

To be Determined

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor

13-120004

Well number

26-1

Elevation (ground)

5451.8

Nearest distance from proposed location to property or lease line:

1,660'

feet

Distance from proposed location to nearest drilling, completed or applied-for well on the same lease:

Not Applicable

feet

Number of acres in lease

640

Number of wells on lease, including this well, completed in or drilling to this reservoir:

1

If lease purchased with one or more wells drilled, from whom purchased.

NA

Name

Address

Well location (give footage from section lines)

1660 ft FEL 2,335' FNL

Section - Township - Range or Block and Survey

S26 T20N R12.5E G&SRB&M

Dedication per A.A.C. R12-7-104(A)(3)

All of Sec

Field and reservoir (if wildcat, so state)

Wildcat

County

Coconino County, AZ

Distance in miles and direction from nearest town or post office

18 Miles East to Winslow, AZ 1.2 Miles North to Meteor Crater Interchange on I40

Proposed depth:

2,000'

Rotary or cable tools

Air/Mist

Approximate date work will start

11/12/20

Bond status

Amount \$25,000

Organization Report

On file

Or attached

X

Filing Fee of \$25.00

Attached

Yes

Remarks

RECEIVED
 NOV 09 2020
ADEQ

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the CEO of the Desert Mountain Energy Corp (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Mail completed form to:

Oil and Gas Program Administrator
 Arizona Oil & Gas Conservation Commission
 c/o Arizona Department of Environmental Quality
 1110 W. Washington Street
 Phoenix, AZ 85007

Signature

Date

e-mail completed form to: azogcc@azdeq.gov

Permit / LTF No.: 1255/ LTF #86784

Approval Date: November 18th, 2020

Approved By: [Signature]

NOTICE: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

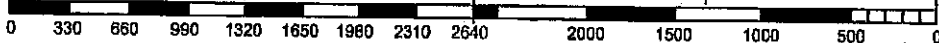
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Application to Drill or Re-enter

File two copies: one by mail, one electronically

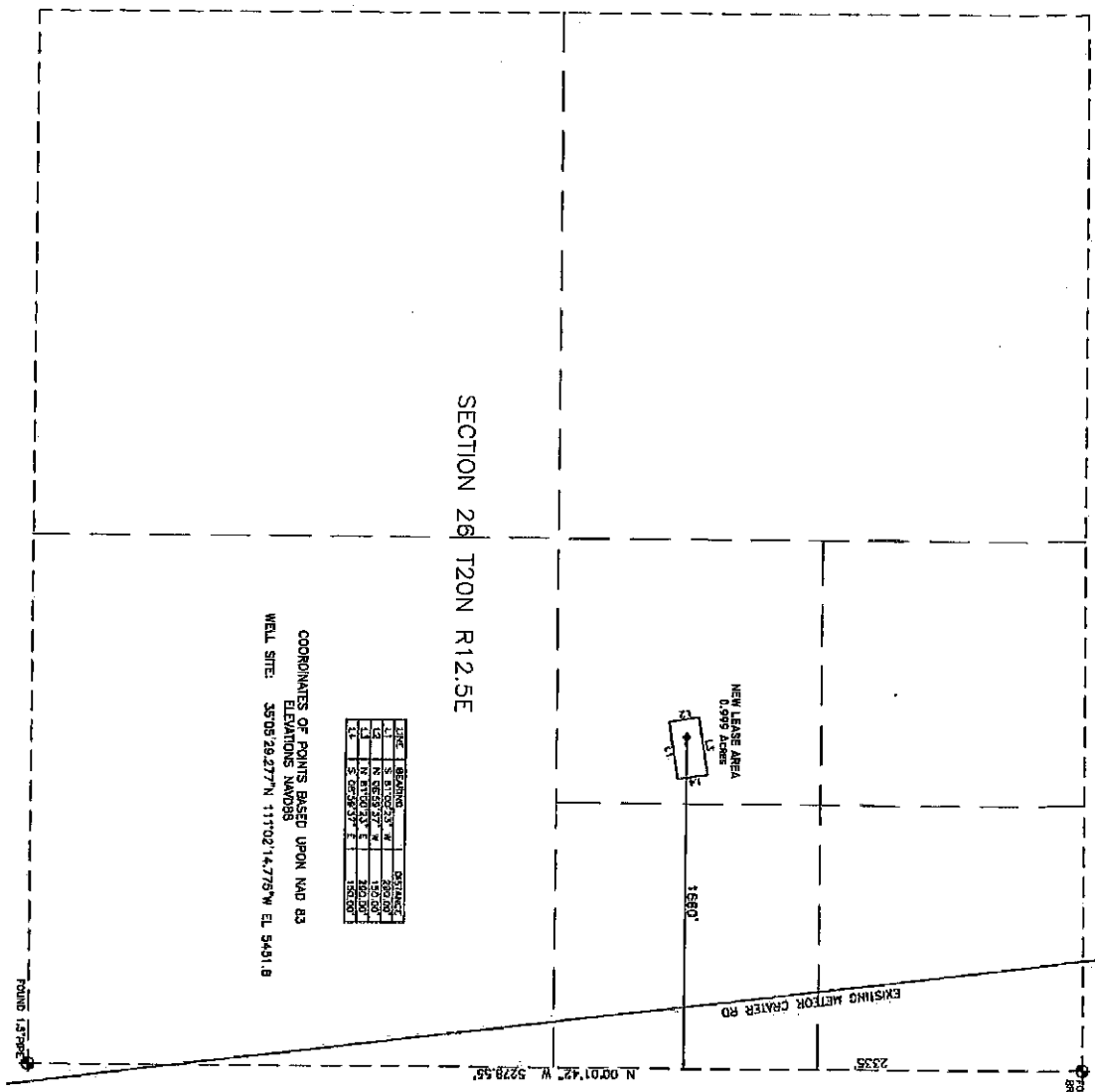
Form No. 3

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Owner Desert Mountain Energy Corp	Land Description In the SW1/4 NE1/4 S26 T20N R12.5E
State 26-1	
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<p>WELL SITE: 35°05'29.277"N 111°02'14.775"W 5448.6</p>	<p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p>
	<p>Date Surveyed 8/21/2020</p> <p>Registered Land Surveyor Alisa J. Templeton</p> <p>Certificate No. AZ RLS 26406</p>

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Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement	Type
7"	23#	J-55	Sur	500'	500'-Surface	150	reg
4.5"	11.6#		Sur	1,990'	1,900'-Surf	180	Prem



SECTION 26 T20N R12.5E

LINE	BEARING	DISTANCE
1	S 81°02'27\"	1580.00'
2	N 58°59'57\"	150.00'
3	N 81°00'33\"	260.00'
4	S 82°28'37\"	150.00'

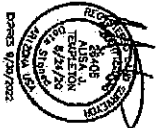
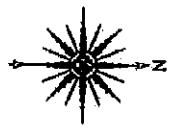
COORDINATES OF POINTS BASED UPON NAD 83
 ELEVATIONS NAVD83
 WELL SITE: 35°05'28.27\" N 111°02'14.77\" W EL 5491.8

POINT 13796.8

POINT 1118 OLD
 SPASS OR LINE DOWN

N 00°01'42\" W 5229.55'

0' 400' 800' 1200'
 COORDINATES BASED UPON GPS SOLUTION



THIS IS TO CERTIFY THAT THE WELL LOCATION SHOWN
 UPON THIS PLAT WAS PLOTTED FROM FIELD NOTES OF
 AN ACTUAL SURVEY MADE BY ME AND THE SCALE IS
 TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE
 AND BELIEF.

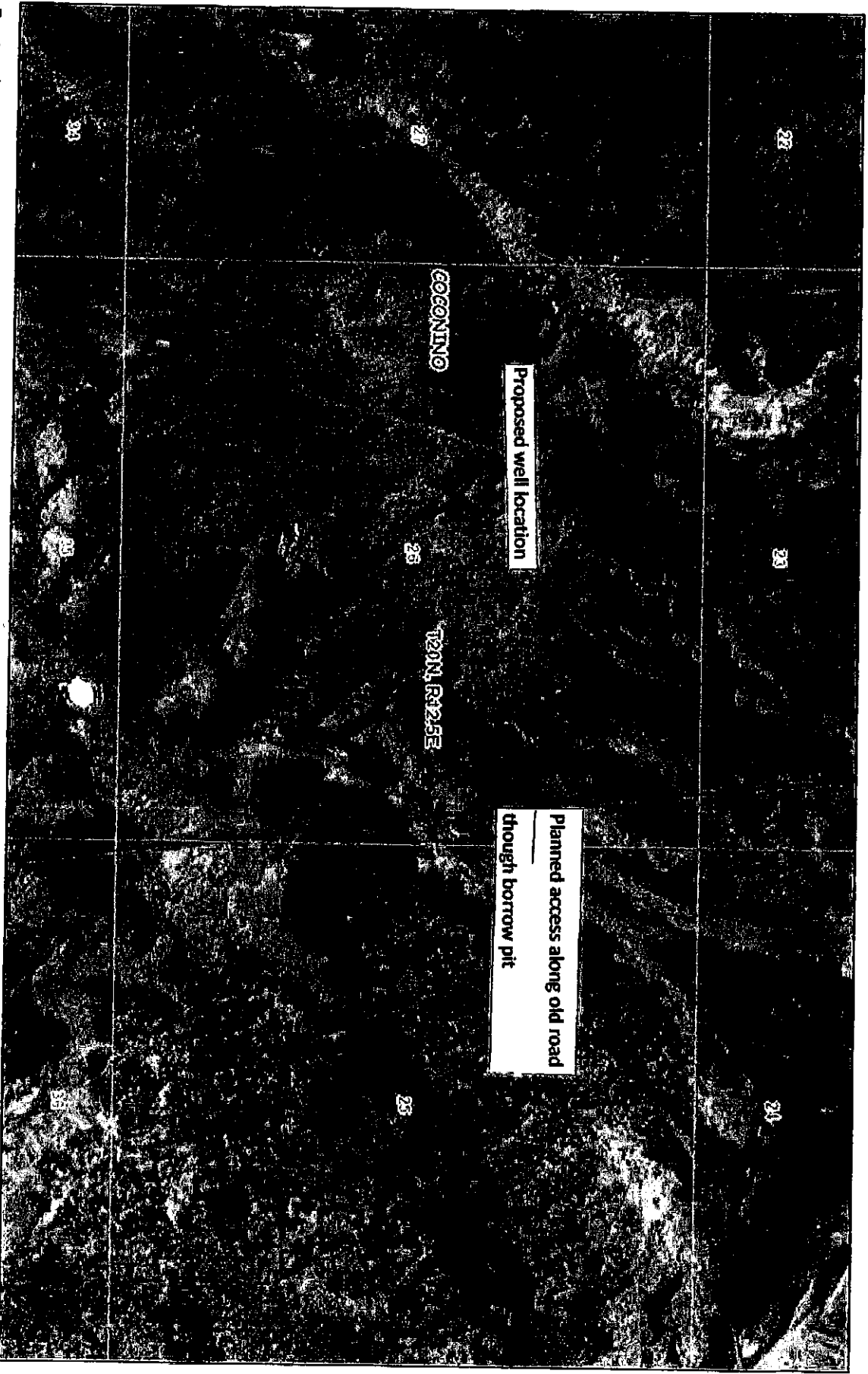
20-18

PLAT OF PROPOSED WELL SITE AND LEASE AREA
 IN THE SW1/4 NE1/4 SECTION 26, T20N, R12.5E,
 G&SRB&M COCONINO COUNTY, ARIZONA

EXTREME MEASURES LAND SURVEYS, INC.
 10800 NIGHTHAWK LANE FLAGSTAFF, ARIZONA 86004
 928.853.3661 extremeasures1997@outlook.com

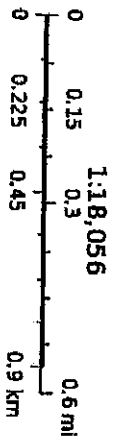
SCALE: 1"=400' (PLOTTED ON 11x24")
 SURVEYOR: ALPHA TOMPSETT
 DRAWN: ALPHA TOMPSETT
 CLIENT: G&SRB&M COCONINO COUNTY
 DATE: 24 AUGUST 2023

Arizona State Land Department



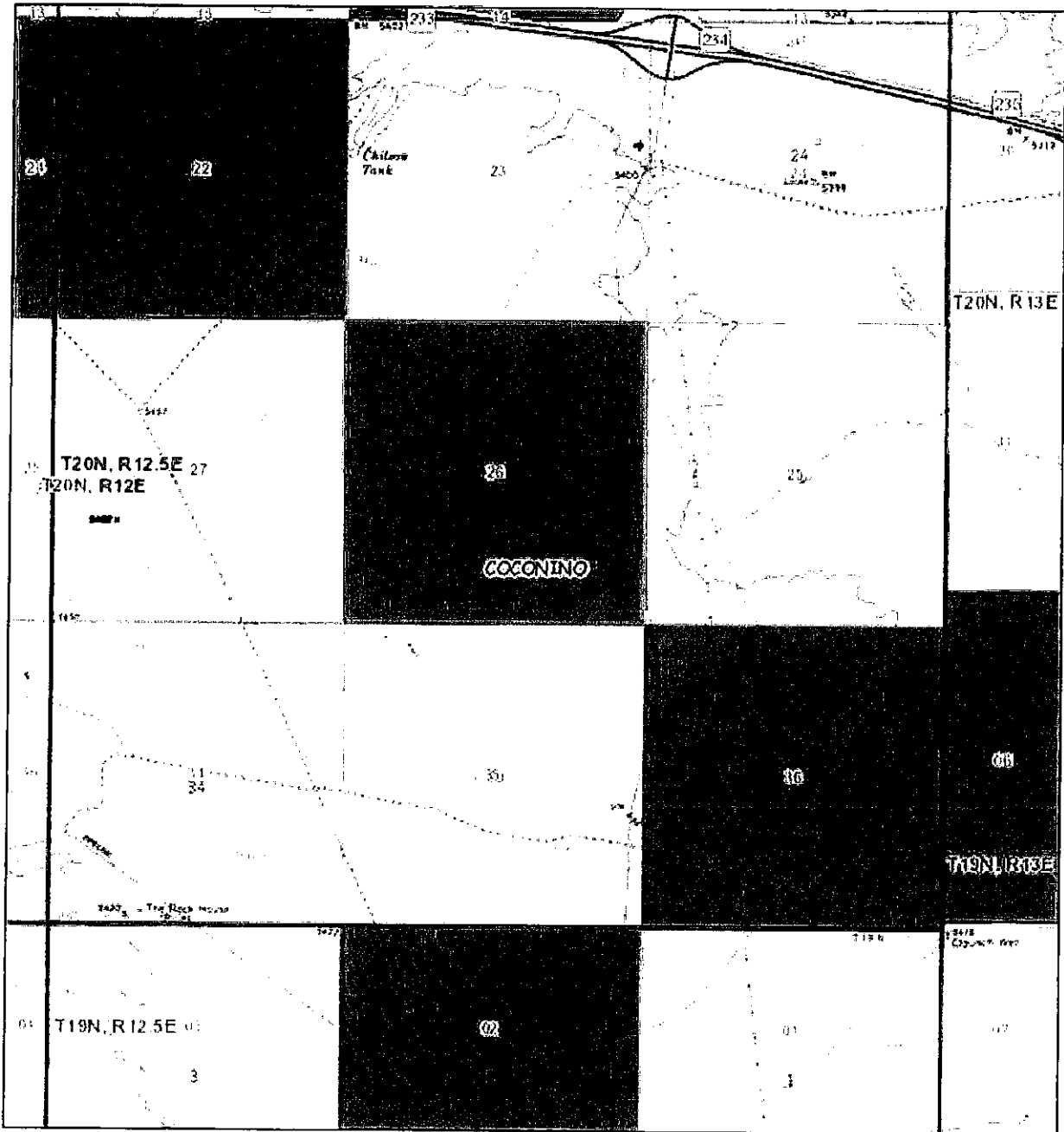
September 28, 20 Desert Mountain Energy Corp.

STATE 26-1, Coconino County, Arizona

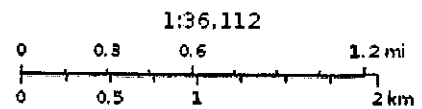


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Arizona State Land Department



November 6, 20



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APPENDIX A

STATE OF ARIZONA LAND DEPARTMENT
1616 W. ADAMS
PHOENIX, AZ 85007

RUN DATE: 21 May 2018
RUN TIME: 9:56 AM
PAGE: 1

KE-LEASE# 013-120004-00-100 APPTYPE: NEW
AMENDMENT#: 0

LAND#	LEGAL DESCRIPTION	AUS	ACREAGE
19.0-N-12.5-E-02-03-030-1000	LOTS 1 THRU 4 S2N2 S2	0.00	640.600
19.0-N-12.5-E-12-03-053-1000	ALL	0.00	640.000
19.0-N-12.5-E-26-03-053-1000	ALL	0.00	640.000
19.0-N-12.5-E-36-03-030-1000	ALL	0.00	640.000
	TOTALS	0.00	2,560.600

IN WITNESS HEREOF, the parties hereto have signed this Lease effective the day and year set forth previously herein.

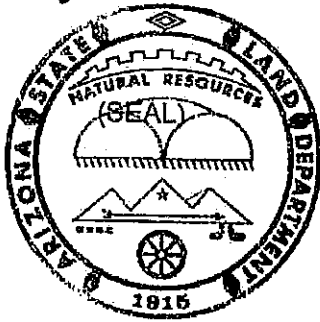
DESERT MOUNTAIN ENERGY CORP
Lessee

R. W. Phillips Director
Authorized Representative

R. W. Phillips 5-22-15
Signature Date

STATE LAND DEPARTMENT
Arizona State Land Commissioner

BY Jennifer H. [Signature] 05.22.18
Date



Desert Mountain Energy Corp.

6300 W. 23 St. N. Muskogee, OK. 74401

To: Marta Hodan, Director

11/02/20

Arizona Oil & Gas Conservation Commission

C/O Arizona Department of Environmental Quality

1110 W. Washington Street

Phoenix, AZ. 85007

RE: Justification and well planning for well Sec 26 20N 12.5E, Coconino County.

Good Day

Desert Mountain Energy Corp. is seeking to permit and drill a well on the above listed ASLD lease. The company finds both the current and future demands for Helium and the associated pricing to be the most compelling for profitability. The greatly elevated prices provide additional profit margins which ten years ago simply did not exist. As such it not only increases the likelihood for operators to operate successfully on lower volumes, also providing the maximum potential for meaningful royalties being paid to mineral owners and in this case, the Arizona State Land Department. It is our plan to further maximize profits from all wells we drill by processing the helium and selling to end users located in Arizona.

The State 26-1 planned well site, (ASLD Lease#13-120004 ASLD GFOP#041-121486), is situated on the apex of an anticlinal structure which has been previously documented by USGS mapping, numerous geologists and confirmed by our proprietary seismic. This specific anticlinal feature runs from approximately three miles west of location to three miles NE of proposed location. Review of available existing geological data in addition to our physical study of the area and seismic, supports this placement as the location to intersect multiple probable helium bearing zones with the highest porosities and permeabilities. Thereby providing the minimums to eliminate the need to conduct hydraulic fracturing operations. Furthermore, the use of air mist drilling through the prospective zones reduces the damage to the near well bore via intrusion by heavy bentonite clay drilling fluids. The nearest well, (Townsend / Gus Berry State 26-1, Sec 26 19N 13E), approximately 7 miles SE of the intended site did not encounter any H₂S. Therefore we do not anticipate encountering any H₂S. However, well logs indicate the gas / water contact point was present in all zones. Our location should be approximately 530' structurally higher than the Townsend / Gus Berry well and therefore we would anticipate water free production if gas is present. The Triassic Formation is present at varying locations with the Moenkopi present in outcrops.

Proprietary seismic indicated formation tops are as follows; Permian Kaibab LS 55', Coconino SS 180', Supai 1,250', Ft Apache 1,620' Amos Wash 1,750', with planned TD at 2,000'. The Ft. Apache and Amos Wash are the target formations in this well.

This location is 1,660' from the nearest lease line and therefore does not require a well spacing exemption. Planned access utilizes an old road directly off paved roadway, (paved roadway traverses N/S through section containing drill site,) thence westerly across exposed sand rock then through a small borrow pit to the proposed drill location. This location was selected to use old existing access along with the area containing the least amount of any form of vegetation. As the planned drill location is flat grading is not considered a requirement to drill. Utilization of a smaller air mist drill rig enables us to reduce the drill location to just under one acre. This well will be a vertical single zone completion and large hydraulic fracturing will *NOT* be used. If the well is deemed non-commercial it will be plugged and abandoned in accordance with AZOGCC rules and regulations, nor will any attempt be made to recover any casing.

Well planning calls for two small pits which will be dewatered and backfilled upon completion of operations. 20' of 10" surface conductor is to be set and cemented into place. Followed with drilling an 8.75" hole to approximately 510', setting 500' of 7" 23# casing using approximately 150 sax of cement. Then drill a 6.25" hole to approximately 2,000'. If a decision to set pipe is made, run 1,990', 4.5", 11.6# J-55 casing and cemented to surface with approximately 180 sax of premium lite. A 5000# double ram hydraulic BOP with blind rams will be used by the drilling contractor.

The small footprint for shallow Helium wells also minimizes the impacts to the surface of the state lands, whilst providing a unique opportunity for financial rewards to the taxpayers of the State of Arizona. The area we have targeted has and continues to suffer tremendous negative economic impact with the closing of many facilities which paid meaningful wages. In our meetings with local leaders and legislators, we have been welcomed and encourage to take the chance on this opportunity not only to help them locally with good paying jobs, but to help the children in the education system via the royalties paid to ASLD.

Respectfully submitted,

Robert W. Rohlfing, CEO

Desert Mountain Energy Corp.



Douglas A. Ducey
Governor

State of Arizona
Oil and Gas Conservation Commission
1110 W. Washington Street, Phoenix, AZ 85007
602-771-4501
www.azogcc.az.gov

Commissioners:
Frank Thorwald, Chair
J. Dale Nations, Ph.D., Vice Chair
Stephen R. Cooper
William C. Feyerabend

FORM 1 - ORGANIZATION REPORT

(File two copies: by mail, and electronically)

Principal:

Legal name and business address of the person required to obtain a permit to drill an oil or gas well under Arizona Revised Statutes (A.R.S.) §27-513, as registered with the Arizona Corporation Commission:

Desert Mountain Energy Corp
6300 W. 23 ST. N. Muskogee, OK 74401

If a reorganization, give name and address of previous organization:

State of incorporation: Nebraska

Date of permit to do business in the state of Arizona: 01/09/18

Name and mailing address of state agent: Paracorp Inc, 8825 N. 23 Ave, Phoenix, AZ 85021

Authorized to do business in Arizona as a:

- Domestic or Foreign Corporation A.R.S. §10-1028 Certificate of Good Standing
- Limited Liability Company A.R.S. §29-614 Certificate of Good Standing
- Limited Partnership, Limited Liability Partnership, or Limited Liability Limited Partnership certificate or certificate of registration on file at Arizona Secretary of State
- Individual or Sole Proprietorship doing business under a Certificate of Trade Name registered at Secretary of State pursuant to A.R.S. §44-1460.01

Principal Officers or Partners (if partnership)

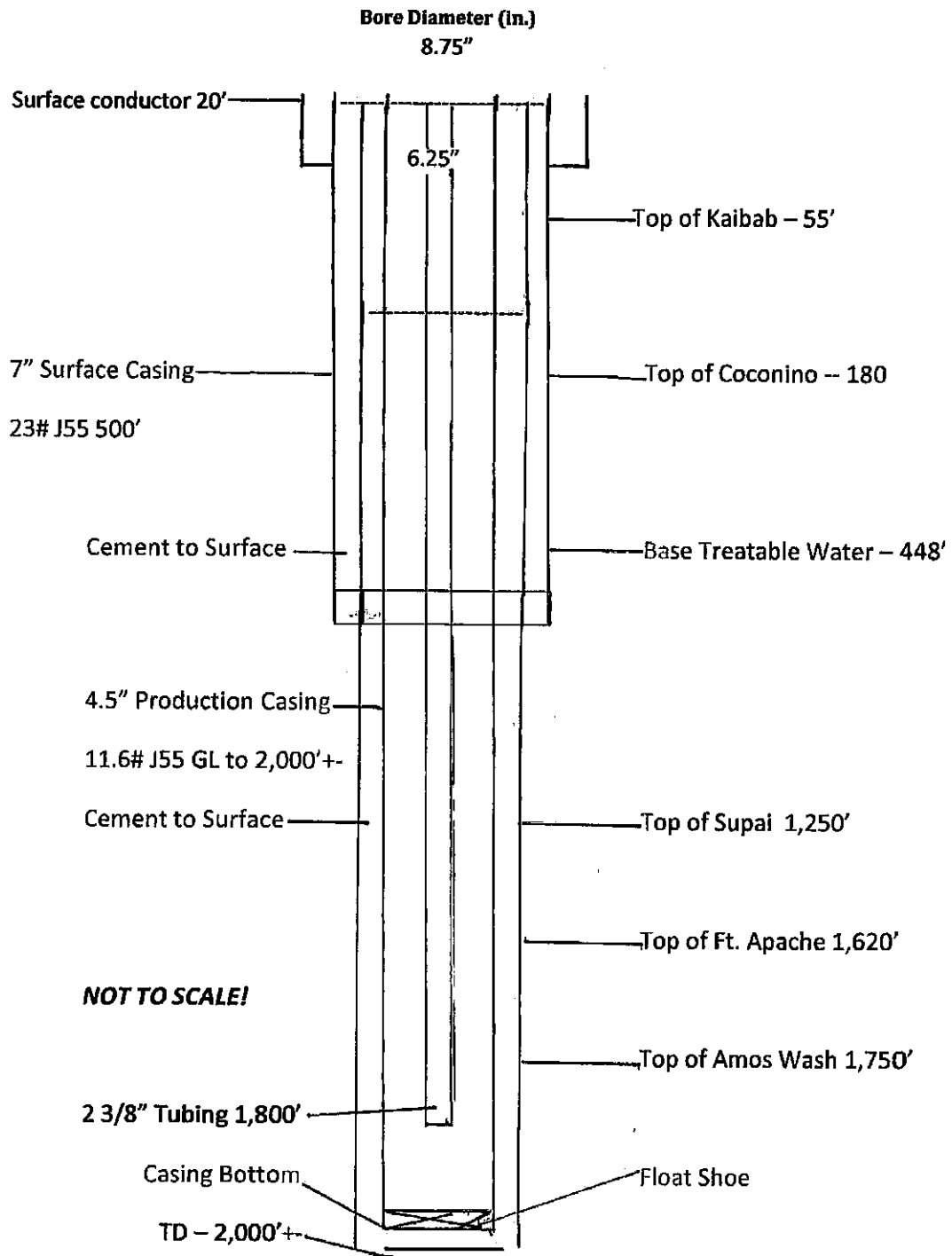
Name / Title	Mailing Address
<u>Robert W. Rohlfing CEO/Director</u>	<u>6300 W. 23 ST. N. Muskogee, OK. 74401</u>
<u>Scott Davis CEO/Director</u>	<u>510-580 Hornby St. Vancouver, BC V6C 3B6</u>

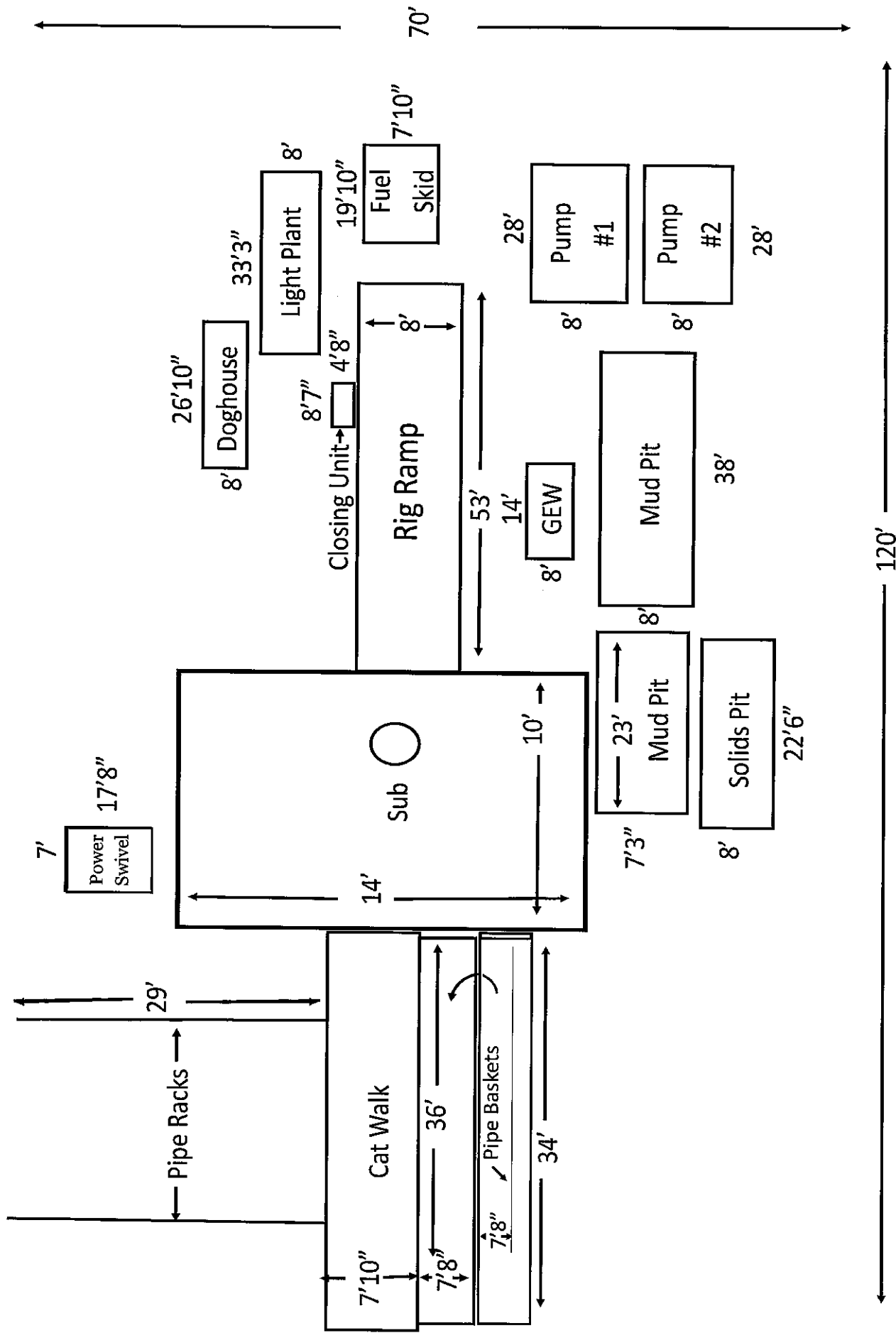
Director's Name	Mailing Address

CERTIFICATE I, the undersigned, under the penalty of perjury state that I am the CEO of the Desert Mountain Energy Corp. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

RW Rohlfing CEO
Signature
11-2-20
Date

DESERT MOUNTAIN ENERGY CORP. STATE 26-1 WELL DESIGN





STATE OF ARIZONA



**Office of the
CORPORATION COMMISSION**

CERTIFICATE OF GOOD STANDING

I, the undersigned Executive Director of the Arizona Corporation Commission, do hereby certify that:

DESERT MOUNTAIN ENERGY CORP.

ACC file number: F22500845

a foreign corporation, was authorized to transact business or conduct affairs in the State of Arizona on 01/09/2018;

That all annual reports owed to date by said corporation have been filed or delivered for filing, and all annual filing fees owed to date have been paid; and

That, according to the records of the Arizona Corporation Commission, said corporation is in good standing in the State of Arizona as of the date this Certificate is issued.

This Certificate relates only to the legal existence of the above named entity as of the date this Certificate is issued, and is not an endorsement, recommendation, or approval of the entity's condition, business activities, affairs, or practices.

IN WITNESS WHEREOF, I have hereunto set my hand, affixed the official seal of the Arizona Corporation Commission, and issued this Certificate on this date: 03/02/2020



Matthew Neubert

Matthew Neubert, Executive Director

SECURITIES SAFEKEEPING
1700 WEST WASHINGTON ST. - PHOENIX, ARIZONA 85007

DATE: 5-11-2020

STATE AGENCY NO. _____

STATE AGENCY AZ Dept of Environmental Quality

State Treasurer's Use Only

COMPANY Desert Mountain Energy Corp
6300 W. 73rd Street North
Muskogee, OK 74401

DOMESTIC FOREIGN

DEPOSIT

C.D. NO.: Cashier's Check 76846019441 (for financial assurance)

BANK: Wells Fargo Bank, NA.

MAY 12 PM 3:44

MATURITY DATE: 3/23/2021 INTEREST RATE: NA %

AMOUNT \$ 25,000.00

C.D. ASSIGNMENT MUST BE ATTACHED UNLESS C.D. IS PAYABLE TO STATE TREASURER

RELEASE

C.D. NO.:

BANK:

MATURITY DATE: INTEREST RATE: %

AMOUNT \$

STATE TREASURER VALIDATION NO. _____

RECEIVED THE ABOVE RELEASE

STATE AGENCY AUTHORIZATION

BY _____
Authorized Signature Date

BY [Signature]
Authorized Signature

Bank or Firm

STATE TREASURER AUTHORIZATION
BY [Signature]
Authorized Signature

FOR BANK USE ONLY

BANK AUTHORIZATION

Checked by _____ Verified by _____

BY _____
Authorized Signature

STATE'S DEPOSITORY BANK