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

APPLICATION OF LONGFELLOW ENERGY, LP
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO **Case No. 21651**

APPLICATION OF SPUR ENERGY PARTNERS, LLC
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO **Case No. 21733**

APPLICANT LONGFELLOW ENERGY, LP'S WRITTEN CLOSING STATEMENT

In accordance with the Hearing Examiner's instructions at the close of the hearing on June 17 and 18, 2021, and the subsequent extension of time allowed by the Division, Longfellow Energy, LP ("Longfellow" or "LFE") hereby submits this closing statement in the above-referenced cases.

1. Due public notice has been given and the Division has jurisdiction of these cases and the subject matter.

2. Longfellow Case No. 21651 was combined for hearing with Spur Energy Partners, LLC ("Spur") Case No. 21733. *See* Pre-Hearing Order (Mar. 4, 2021). A single order is being issued for the consolidated cases.

3. Longfellow and Spur's cases involve competing proposals to develop the Yeso formation underlying a standard 480-acre, more or less, horizontal spacing and proration unit within the Empire; Glorieta-Yeso Pool [Pool Code 96210] in the N/2 of Section 13 and the NE/4 of Section 14, all within Township 17 South, Range 28 East, NMPM, Eddy County, New Mexico. Both applicants intend to drill horizontally.

4. Longfellow proposes five (5) 1.5-mile wells oriented from West to East. Longfellow Exhibits, Tab 3, Landman Direct Testimony ("LFE Landman Direct Testimony") ¶ 6 [pdf 15-16] (June 10, 2021); *id.* Tab 5, Geologist Direct Testimony ("LFE Geologist Direct Testimony") ¶¶ 12, 14(d) [pdf 72] (June 10, 2021).

5. Spur proposes six (6) 1.5-mile wells oriented from West to East. Spur Exhibit C ¶ 6; *see* Spur Exhibit C-2.

6. All proposed wells are subject to the spacing and setback requirements set forth in Division Rule 19.15.16.15 NMAC.

7. In Case No. 21651, Longfellow proposes to drill the following wells to be completed at standard locations within the proposed Horizontal Spacing Unit ("HSU" or "Unit"):

a. **Hendrix State Com 1314 ABX 001H** well, to be horizontally drilled from an approximate surface hole location 361' FNL and 2400' FEL of Section 14, T17S-R28E, to an approximate bottom hole location 347' FNL and 20' FEL of Section 13, T17S-R28E. The first take point will be located at approximately 347' FNL and 2493' FEL of Section 14, T17S-R28E. The last take point will be located at approximately 347' FNL and 100' FEL of Section 13, T17S-R28E.

b. **Hendrix State Com 1314 ABX 002H** well, to be horizontally drilled from an approximate surface hole location 386' FNL and 2400' FEL of Section 14, T17S-R28E, to an approximate bottom hole location 800' FNL and 20' FEL of Section 13, T17S-R28E. The first take point will be located at approximately 800' FNL and 2492' FEL of Section 14, T17S-R28E. The last take point will be located at approximately 800' FNL and 100' FEL of Section 13, T17S-R28E.

c. **Hendrix State Com 1314 ABX 003H** well, to be horizontally drilled from an approximate surface hole location 1703' FNL and 2428' FEL of Section 14, T17S-R28E, to an approximate bottom hole location 1254' FNL and 20' FEL of Section 13, T17S-R28E. The first take point will be located at approximately 1254' FNL and 2491' FEL of Section 14, T17S-R28E. The last take point will be located at approximately 1254' FNL and 100' FEL of Section 13, T17S-R28E.

d. **Hendrix State Com 1314 ABX 004H** well, to be horizontally drilled from an approximate surface hole location 1728' FNL and 2428' FEL of Section 14, T17S-R28E, to an approximate bottom hole location 1708' FNL and 20' FEL of Section 13, T17S-R28E. The first take point will be located at approximately 1708' FNL and 2490' FEL of Section 14, T17S-R28E. The last take point will be located at approximately 1708' FNL and 100' FEL of Section 13, T17S-R28E.

e. **Hendrix State Com 1314 ABX 005H** well, to be horizontally drilled from an approximate surface hole location 1753' FNL and 2428' FEL of Section 14, T17S-R28E, to an approximate bottom hole location 2161' FNL and 20' FEL of Section 13, T17S-R28E. The first take point will be located at approximately 2161' FNL and 2489' FEL of Section 14, T17S-R28E. The last take point will be located at approximately 2161' FNL and 100' FEL of Section 13, T17S-R28E. *See* LFE Landman Direct Testimony ¶ 6(a)-(e) [pdf 15-16].

8. In Case No. 21733, Spur proposes to drill the following wells:

a. **Aid North Well No. 10H**: SHL: 860' from the North line and 2,400' from the East line (Unit B) of Section 14-17S-28E. BHL: 330' from the North line and 100' from the East line (Unit A) of Section 13-17S-28E, with a total vertical depth of approximately 4,065 feet.

b. **Aid North Well No. 11H**: SHL: 900' from the North line and 2,400' from the East line (Unit B) of Section 14-17S-28E. BHL: 1,220' from the North line and 100' from the East line (Unit H) of Section 13-17S-28E, with a total vertical depth of approximately 4,065 feet.

c. **Aid North Well No. 12H**: SHL: 2,370' from the North line and 2,400' from the East line (Unit G) of Section 14-17S-28E. BHL: 2,110' from the North line and

100' from the East line (Unit H) of Section 13-17S-28E, with a total vertical depth of approximately 4,065 feet.

d. **Aid North Well No. 50H**: SHL: 880' from the North line and 2,400' from the East line (Unit B) of Section 14-17S-28E. BHL: 430' from the North line and 100' from the East line (Unit A) of Section 13-17S-28E, with a total vertical depth of approximately 4,430 feet.

e. **Aid North Well No. 51H**: SHL: 2,390' from the North line and 2,400' from the East line (Unit G) of Section 14-17S-28E. BHL: 2,300' from the North line and 100' from the East line (Unit H) of Section 13-17S-28E, with a total vertical depth of approximately 4,430 feet.

f. **Aid North Well No. 70H**: SHL: 920' from the North line and 2,400' from the East line (Unit B) of Section 14-17S-28E. BHL: 1,365' from the North line and 100' from the East line (Unit H) of Section 13-17S-28E, with a total vertical depth of approximately 4,645 feet. *See* Spur Exhibit C, Landman Direct Testimony ("Spur Exhibit C") ¶ 6 (June 10, 2021).

9. ConocoPhillips Company ("COP") entered appearances in both cases, but did not present evidence or cross-examine the witnesses. *See generally* Transcript.

10. The Division's task is to determine which development plan, Longfellow's or Spur's, will most efficiently develop the subject acreage, prevent waste, and protect correlative rights. *In re Hearing Called by the Oil Conservation Division to Consider Cases No. 16099-16101, and 16102-16104, 16169-16174*, Order No. R-20223, ¶ 27 (Nov. 8, 2018).

11. The Division, in Order Nos. R-14518, R-1487, and R-20223, relying on Oil Conservation Commission Order R-10731-B, considered the following factors in evaluating competing development plans in a compulsory pooling case:

a. A comparison of geologic evidence presented by each party as it relates to the proposed well location and the potential of each proposed prospect to efficiently recover the oil and gas reserves underlying the property.

b. A comparison of the risk associated with the parties' respective proposals for the exploration and development of the property.

c. A review of the negotiations between the competing parties prior to the applications to force pool to determine if there was a "good faith" effort.

d. A comparison of the ability of each party to prudently operate the property and, thereby, prevent waste.

e. A comparison of the differences in well cost estimates (AFEs) and other operational costs presented by each party for their respective proposal.

f. An evaluation of the mineral interest ownership held by each party at the time the application was heard.

g. A comparison of the ability of the applicants to timely locate well sites and to operate on the surface.

Order No. R-20223, ¶ 28.

12. Longfellow appeared through counsel and presented testimony and exhibits from a Landman, a Geologist, and an Engineer relating to the factors as follows:

- *Geologic evidence as it relates to proposed well locations and potential of each proposed prospect to efficiently recover oil and gas reserves underlying the property*

    a. The true vertical landing depth of the target formation for Longfellow is approximately 3,900' for the bench 1 "Paddock" wells (001H, 003H, 005H) and approximately 4,300' for the bench 2 "Blinebry" wells (002H and 004H). LFE Geologist Direct Testimony ¶ 13 [pdf 72]; *see also* LFE Exhibits, Tab 6, LFE Geologist Exhibit ("LFE Geologist Exhibit") B-4, B-6, and B-7 [pdf 81, 83-84].

    b. The horizontal spacing and proration units are justified from a geologic standpoint; there are no structural impediments or faulting that will interfere with horizontal development; each quarter-quarter section will contribute more or less equally to production; an established West to East trend is present in the NW Shelf Yeso horizontal wells; such orientation fits Longfellow's lease boundaries and is consistent with the adjacent Hendrix State Com 13CD 001H-005H wells; and the preferred well orientation does not strand any acreage or result in unrecovered reserves. LFE Geologist Direct Testimony ¶ 14(a)-(d) [pdf 72].

    c. The landing zones and inter-well lateral spacing of the wells in Longfellow's proposed HSU have been designed to maximize recovery of oil and gas and minimize any negative impact on the adjacent Hendrix State Com 13CD 001H-005H wells that are operated by Longfellow. LFE Exhibits, Tab 7, Engineer Direct Testimony ¶ 4 ("LFE Engineer Direct Testimony") at unnumbered page ("UNP") 2 [pdf 87] (June 10, 2021); LFE Exhibits, Tab 8, LFE Engineer Exhibit C ("LFE Engineer Exhibit C"), Slide 2 [pdf 101].

    d. Longfellow's proposed well laterals will be spaced approximately 900' apart from each other horizontally within each stratigraphic reservoir interval ("Bench or Benches"), with the lower Bench being offset vertically by approximately 450' from the upper Bench. This "wine-rack" spacing pattern is the best practice to maximize oil recovery from a volume of reservoir rock because this consistent lateral spacing pattern reduces the risks of well interference and vertical communication between well laterals placed within different Benches. LFE Engineer Direct Testimony at UNP 5-6 [pdf 90-91]; LFE Geologist Exhibit C at unnumbered Slide 9 [pdf 108]; Transcript, Vol. 1 at 98:23-99:6.

- *Risk associated with the proposals for exploration and development*

    a. Spur's proposed well lateral pattern locates its deeper well laterals closer to its shallower well laterals in an irregular pattern, increasing the risk of well communication and interference, thereby reducing the ultimate recovery of oil and gas. LFE Engineer Direct Testimony at UNP 6 [pdf 91]. Longfellow's lateral

spacing methodology maximizes recovery of oil and gas while minimizing the potential negative effects of frac hits, well interference, and competitive drainage. LFE Engineer Direct Testimony at UNP 5-6 [pdf 90-91]; LFE Engineer Exhibit C, Slide 2 [pdf 101].

b. Longfellow's proposed fracture stimulation is fifty percent larger than the fracture simulation proposed by Spur. Longfellow's larger fracture stimulation method creates a larger stimulated rock volume that is able to drain a greater reservoir area. Longfellow's simulation modelling validates this greater drainage of hydrocarbons from the Paddock and Upper Blinebry Benches with minimal risk of interference effects. LFE Engineer Direct Testimony at UNP 6 [pdf 91].

c. Longfellow's comprehensive petrophysical study of the Yeso formation and in-depth electric log analysis of a vertical well located near the proposed HSU shows significant oil-in-place within the Yeso. The Paddock contains the highest amount of oil-in-place, followed the by Upper Blinebry (comprising ~45% of the oil-in-place of the Paddock), and lastly, the Middle Blinebry (comprising ~16% of the oil-in-place of the Paddock). Productivity declines as the lower Benches are analyzed, and the reserves associated with the Middle Blinebry are substantially lower than those of the Paddock and Upper Blinebry. LFE Engineer Direct Testimony at UNP 10 [pdf 95]; LFE Engineer Exhibit C, Slide 15 [pdf 114]; LFE Engineer Rebuttal Exhibit C-21, Slide 22 [pdf 137-139]; *see* Transcript, Vol. 1 at 109:7-111:15.

d. Spur's proposed well lateral spacing will leave undrained Upper Blinebry reservoir between Spur's 11H and 70H wells. LFE Engineer Rebuttal Exhibit C-21 [pdf 135]; Transcript, Vol. 2 at 372:22-373:17.

e. The economics of the Middle Blinebry (Bench 3) are unproven. Only one of the Bench-3 wells drilled in Spur's plan meets a current economic breakeven or exceeds an internal rate of return of 30 percent. LFE Engineer Rebuttal Exhibit C-21, Slide 22 [pdf 137]; Transcript, Vol. 2 at 375:6-378:5.

f. A comparison of Longfellow and Spur's different proposed fracture stimulations shows an improved Estimated Ultimate Recovery of Oil as a result of Longfellow's larger frac size. LFE Engineer Direct Testimony at UNP 11 [pdf 96]; LFE Engineer Exhibit C, Slide 16 [pdf 115]; *see id.*, Slide 17 [pdf 116]; *see also* Transcript, Vol. 1 at 111:16-113:8. Longfellow's projected ultimate recoveries reveal, in relation to Spur, an increase of 121,000 Bbl of oil per well, or stated another way, a 26 percent increase in recoverable reserves and significantly higher economic returns. LFE Engineer Direct Testimony at UNP 11 [pdf 96]; Transcript, Vol. 1 at 114:8-12.

g. Spur's proposed well lateral spacing increases the likelihood of negative communication/interference between Spur's proposed 10H and 50H wells and 12H and 51H wells, respectively and decreases the total recovery of reserves from these wells. LFE Engineer Direct Testimony at UNP 6-7 [pdf 91-92]; LFE Engineer Exhibit C at unnumbered Slide 10 [pdf 109]; Transcript, Vol. 1 at 96:23-97:20.

h. Longfellow's analysis of the recently completed Spur-operated Welch 28A stacked laterals in a nearby Unit shows production interference. LFE Engineer Rebuttal Exhibit C-21, Slide 21 [pdf 136]; Transcript, Vol. 2 at 373:20-375:5.

i. Longfellow's finding and development ("F&D") costs indicate its Plan of Development will recover significantly more oil (approximately 309,000 Bbl of oil incremental) for only a marginally higher full development cost than Spur's POD. Longfellow's F&D equates to $9.63/Bbl of oil in contrast to Spur's F&D at $10.95/Bbl of oil. Spur's approximate 13% increase in development cost per barrel of oil produced signifies that its Plan of Development of smaller fracs, irregularly spaced well laterals, and the drilling of six wells versus Longfellow's five wells, is a less economic Plan of Development. LFE Engineer Direct Testimony at UNP 12 [pdf 97]; LFE Engineer Exhibit C, Slide18 [pdf 117]; *see* Transcript, Vol. 1 at 113:9-114:21.

j. In addition to being less economic, Spur's Plan of Development will increase the likelihood of negative interference between wells and decrease the effective drainage of the reservoir rock volume, thereby leaving behind valuable recoverable reserves of oil and gas and resulting in significant waste. LFE Engineer Direct Testimony at UNP 6-7 [pdf 91-92]; *see* LFE Engineer Rebuttal Exhibit C-21, Slide 21 [pdf 136]; Transcript, Vol. 2 at 373:20-375:5.

- *Negotiations between the competing parties prior to the applications to force pool to determine if there was a "good faith" effort*

a. Longfellow made a good-faith effort to negotiate with Spur and other non-joined working interest owners. LFE Landman Direct Testimony ¶ 14 [pdf 17]; LFE Exhibits, Tab 4, LFE Landman Exhibit ("LFE Landman Exhibit") A-5 [pdf 27].

b. Longfellow obtained its initial interest in the pertinent acreage in December 2019 and diligently pursued and acquired the remainder of its interests through fifteen separate acquisitions. LFE Landman Direct Testimony ¶ 29 [pdf 19].

c. The parties agree that the Affidavit of Paul R. Eschete, Spur's landman, reflects the times at which communications took place between the parties relating to these competing proposals. *See* Spur Exhibit C at 4-5, ¶ 13; *see also* Transcript, Vol. 1 at 65:12-66:18.

d. Longfellow finalized its well proposal on November 30, 2020 and mailed it on December 1, 2020, thirty-five days prior to the mailing of Spur's well proposal on January 4, 2021. LFE Landman Direct Testimony ¶ 30 [pdf 19]; LFE Engineer Exhibit A-7 [pdf 38]; Spur Exhibit C-5.

- *Ability of each party to prudently operate the property and, thereby, prevent waste*

a. Longfellow's Plan of Development ("POD") includes its significant infrastructure facilities constructed within one mile of its proposed wells, including a 2-million barrel capacity produced water storage impoundment and water recycling facility, connected to an existing water pipeline system and salt water disposal well. LFE

Engineer Direct Testimony at UNP 2 [pdf 87]; LFE Engineer Exhibit C, Slides 3-4 [pdf 102-03]. These existing facilities are designed to support Longfellow's drilling and completions activities in the area, enabling recycled produced water to be used for the fracs of its wells. LFE Engineer Exhibit C, Slide 4 [pdf 103]. Longfellow plans to recycle and reuse 100% of its water production for the duration of the company's development in the area, which will significantly reduce or eliminate the sourcing of fresh water and the disposal of produced water from the flowback and production of its wells and conserve freshwater resources, and should eliminate the need to inject the produced water into a disposal well. LFE Engineer Direct Testimony at UNP 3 [pdf 88]; LFE Engineer Exhibit C, Slide 4 [pdf 103]; *see* Transcript, Vol. 1 at 155:22-157:20. *See* LFE Engineer Direct Testimony at UNP 3 [pdf 88]. Spur did not testify that it had any similar water facilities located in proximity to its proposed wells. *See generally* Direct Testimony of Spur witnesses; Transcript, Vol. 2 (June 18, 2021).

b. Longfellow has seventeen approved horizontal drilling permits in the immediate area, fourteen of which are adjacent to or within 1-2 miles of the proposed HSU. LFE Engineer Direct Testimony at UNP 2 [pdf 87]. Longfellow's locations have ready access to its existing water infrastructure facilities. *Id.*

c. Longfellow has surveyed and contracted for two (2) surface drilling locations/pads to develop the proposed HSU. Both locations are on high ground adjacent to the west edge of the unit. LFE Engineer Direct Testimony at UNP 3 [pdf 88]; LFE Engineer Exhibit C, Slide 5 [pdf 104].

d. Longfellow's POD provides "best practice" protection for its five operated vertical Yeso producing wells within the proposed HSU from the adverse effects of the fracture stimulations of its proposed wells. LFE Engineer Direct Testimony at UNP 2 [pdf 87]. Spur does not operate any wells within the proposed HSU. *See generally* Spur, Exhibit E (Affidavit of Spur Engineer); Spur Exhibit E-2.

e. Longfellow's operated vertical gas well, the Puma 001, is located on an existing pad near Longfellow's proposed northern drilling pad location for the proposed HSU. *See* LFE Engineer Exhibit C, Slide 5 [pdf 104]. The proximity of the Puma 001 pad location will allow Longfellow to use this existing pad as an additional equipment staging and storage area for its development of the proposed HSU with the existing access road, reducing the amount of road construction area needed. *See* Transcript, Vol. 1 at 88:17-89:5.

f. Longfellow's operations are designed and structured around minimizing flaring. Longfellow's drill pads will be equipped with vapor recovery units and connected with gas pipelines prior to flowback, eliminating excess flaring. While also mitigating risk, this method increases gas sales revenue for working-interest owners. LFE Engineer Direct Testimony at UNP 4 [pdf 89]; LFE Engineer Exhibit C, Slide 8 [pdf 107]; Transcript, Vol. 1 at 93:16-22. This operational plan will enable Longfellow to maintain its Natural Gas Management Plan, as required in 19.15.27.9(D) NMAC, and to comply with the new rules related to venting and flaring. 19.15.27.8 NMAC.

g. In contrast, Spur has a history of gas flaring in its recent development of the Welch 28A unit. *Id.*; LFE Engineer Exhibit C, Slide 8 [pdf 107]. Spur flared gas for over 50 days after the beginning of flowback from its Welch 28 State wells, which are located approximately 2 miles from the surface location of this proposed HSU. LFE Engineer Exhibit C, Slide 8 [pdf 107].

h. Longfellow's POD will result in larger recoveries of oil and better economic returns than Spur's POD. LFE Engineer Direct Testimony at UNP 10-11 [pdf 95-96].

- *Differences in well cost estimates (AFEs) and other operational costs presented by each party for their respective proposal*

a. Longfellow conducted an "AFE Side-by-Side" to compare its AFEs to Spur's AFEs. LFE Engineer Direct Testimony at UNP 7 [pdf 92]; LFE Engineer Exhibit C, Slides 11-14 [pdf 110-13]; *see* Transcript, Vol. 1 at 99:18-100:5.

b. In the oil and gas industry, contingency costs are included in AFEs to account for potential costs associated with unknown or unpredictable events. Longfellow has allocated $433,000 in contingency costs while Spur has allocated only $75,000. LFE Engineer Direct Testimony at UNP 7 [pdf 92]; Transcript, Vol. 1 at 100:9-101:4.

c. Longfellow's AFE Side-by-Side analysis removed Longfellow and Spur's contingency costs. *Id*. at UNP 7-8 [pdf 92-93]; *see* LFE Engineer Exhibit C, Slide 11 [pdf 110]; Transcript, Vol. 1 at 100:9-101:4.

d. Longfellow accounted for a variance of $154,465 of Intangible and Tangible Drilling costs. While Longfellow's Intangible and Drilling costs are higher than Spur's, Longfellow reconciled this difference by explaining that Spur's casing costs are out of date, and thus fail to account for rising steel prices, and that Longfellow's updated AFEs have incorporated the most recent movement in both service prices and steel prices, as of June 2021. LFE Engineer Direct Testimony at UNP 8 [pdf 93]; *see id.* at UNP 7 [pdf 92]. Also, Longfellow assumed sixteen days of drilling time while Spur's AFE failed to indicate its assumption with respect to drilling time. *Id.* Spur also failed to identify its costs for water and surface casing cementing. *Id*.; LFE Engineer Exhibit C, Slide 12 [pdf 111]; *see* Transcript, Vol. 1 at 102:8-103:25.

e. An approximate variance of $809,000 exists between Longfellow and Spur's Intangible Completions Cost. Longfellow explained that this difference results from its plans to fracture stimulate its wells with fracture treatments that are approximately fifty percent greater than Spur's fracture treatments, in order to increase the amount of oil recovery per well. The variance between Longfellow and Spur's Intangible Completions Costs shrinks to roughly four percent when fracture stimulation costs are considered as a whole and normalized to frac job size. LFE Engineer Direct Testimony at UNP 8-9 [pdf 93-94]; LFE Engineer Exhibit C, Slide 13 [pdf 112]; *see* Transcript, Vol. 1 at 104:6-105:22.

f. Lastly, there is a $128,054 variance between Longfellow and Spur's Tangible Completion costs. The differences arise from artificial lift. Spur plans to rent its artificial-lift equipment. In contrast, Longfellow will purchase its artificial-lift equipment. Because Spur has shifted costs from its capital expenditures to operating expenses by choosing to rent, this variance is superficial. In the long-run, renting artificial-lift equipment incurs more costs after fourteen months of production. LFE Engineer Direct Testimony at UNP 9-10 [pdf 94-95]; LFE Engineer Exhibit C, Slide 14 [pdf 113]; *see* Transcript, Vol. 1 at 105:24-109:1.

g. Longfellow conducted an F&D cost analysis, which is a common metric in the oil and gas industry that combines the reservoir development plan, the number of wells to be drilled, the total costs associated with the project (the total sum of each well's AFE), and the total expected reserves to be extracted during the life of the project. Longfellow's F&D costs analysis has shown that it will find more oil than Spur for approximately one percent higher total costs. Because Longfellow has lower F&D costs than Spur, Longfellow's POD employs its capital more efficiently. LFE Engineer Direct Testimony at UNP 12 [pdf 97]; LFE Engineer Exhibit C, Slide 18 [pdf 117]; Transcript, Vol. 1 at 113:16-114:21.

h. Longfellow's F&D costs are $9.63/Bbl of oil compared to $10.95/Bbl of oil for Spur. LFE Engineer Direct Testimony at UNP 12 [pdf 97].

i. The estimated costs of Longfellow's proposed wells are fair, reasonable, and comparable to the costs of other wells of similar depths and lengths drilled in this area of New Mexico. LFE Landman Direct Testimony ¶ 18 [pdf 17].

- *Mineral interest ownership held by each party at the time the application was heard*

a. Two separate joint operating agreements ("JOAs"), the Puma JOA and the Aid JOA, cover the lands that comprise four of the five tracts in the proposed HSU. Longfellow is the Operator under the provisions of both the Puma and the Aid JOAs. These JOAs must be considered when computing the working interests because they govern and determine the actual working-interest ownership of the four tracts that comprise approximately two-thirds of the area of the proposed HSU. Furthermore, well costs and well revenues will be based on the working interests set forth in these JOAs as to two-thirds (2/3) of the proposed HSU and the wells drilled therein. Transcript, Vol. 1 at 32:16-34:3; LFE Landman Rebuttal Exhibit A-11 [pdf 5]; Puma Joint Operating Agreement, LFE Landman Rebuttal Exhibit A-12 [pdf 6-97] (Dec. 14, 2005); AID Joint Operating Agreement, LFE Landman Rebuttal Exhibit A-13 [pdf 98-134] (Sept. 15, 1981).

b. Spur's land witness testified that Spur is not force pooling the working interest ownership on which the well costs and revenues are to be allocated. Transcript, Vol. 2 at 205:14-25, 207:5-7.

c. Spur's land witness admitted that taking into account the current ownership of the working interests from the two existing JOAs results in Longfellow owning and controlling a greater amount of the working interests in the proposed HSU than Spur. Transcript, Vol. 2 at 215:22-25. The letters of support from MEC Petroleum

and COP comprise only 2.51% of the working interests and do not give Spur majority control of the working interests in the proposed HSU. *See* LFE Landman Rebuttal Exhibit A-11 [pdf 5].

d. With the Puma JOA governing the working interest as to the NE/4 of Section 14-17S-28E, the Aid JOA governing the working interest as to the NE/4 of Section 13-17S-28E, and the Spur lease governing the working interest as to the NW/4 of Section 13-17S-28E, the current working interest ownership of the proposed HSU results in Longfellow controlling approximately 47.23% of the HSU working interest and Spur controlling approximately 40.31% of the HSU working interest. *See* LFE Landman Rebuttal Exhibit A-11 [pdf 5]. The approximately 13% remaining working interest is held by another twelve uncommitted working-interest owners, none of whom have more than a 3% working interest. LFE Landman Direct Testimony ¶ 29 [pdf 19]; LFE Landman Rebuttal Exhibit A-11 [pdf 5].

- *Ability of the applicants to timely locate well sites and to operate on the surface*

a. Longfellow has already surveyed and entered into an agreement with the surface owner in the N/2 of Section 14, T17S-R28E, Eddy County, New Mexico to construct two (2) surface drilling locations within the proposed HSU. Both locations are construction-ready. LFE Landman Direct Testimony ¶ 28 [pdf 19]; LFE Engineer Direct Testimony at UNP 3 [pdf 88]; LFE Engineer Exhibit C, Slide 5 [pdf 104].

b. Longfellow is prepared to submit its drill permit applications upon issuance of the Compulsory Pooling Order from this case. Longfellow has surveyed its pads and wells, scouted its pipeline ROWs, finished its directional plans, and has surface use agreements in place with the surface owners. LFE Engineer Direct Testimony at UNP 3 [pdf 88]; LFE Engineer Exhibit C, Slides 3 and 5 [pdf 102 and 105]; Transcript, Vol. 1 at 122: 7-8. Spur offered no evidence related to its surface development plan nor its readiness in regard to drilling pad surveys or construction, pipeline ROWs, or drilling permit filing preparedness. *See generally* Transcript; Spur Exhibits.

c. Spur changed the SHL or BHL for its proposed wells twice after its initial well proposals, first with its revised well proposals of May 12, 2021, and subsequently with the C-102 plats presented at the hearing. The SHLs and BHLs for Longfellow's wells have not changed since its initial proposal. Transcript, Vol. 1 at 95:3-21; *id*. Vol. 2 at 176:6-22; 187:10-189:5; LFE Landman Exhibits A-6 and -7 [pdf 28-59]; LFE Landman Direct Testimony ¶ 15 [pdf 17].

d. Spur's C-102 plats are dated February 8, 2021, but the SHLs and BHLs set forth in its revised well proposals of May 12, 2021—separated by a period of over three months—do not match the SHLs and BHLs shown on the February C-102 plats presented at the hearing. Spur still has not proposed final well locations for the wells described in its hearing testimony to all of the uncommitted interests it seeks

to pool. *See* Spur Exhibits C-2 and -5; Transcript, Vol. 1 at 91:21-92:10, 13-15; 95:12-21; Transcript, Vol. 2 at 203:4-204:17.

e. Spur employed a defective grid for its C-102 plats. *See* Transcript, Vol. 2 at 199:11-15. Spur testified that it "normalized" the land grid in its plats. *Id*. Spur's method is not a standard operating procedure in land survey plats for wells drilled in the United States. The land area depicted in Spur's plats does not conform to the US Jeffersonian survey "adjustments" to the Northern and Southern borders of Section 14. These adjustments (sometimes referred to as "correction or irregular sections") occur at periodic intervals in all the Jeffersonian survey lands to account for the curvature of the earth. As a result of Spur's defective land grid, the well locations shown as surveyed by Spur's C-102 plats are not accurate renditions of the actual SHLs and BHLs, or of the actual orientation of the well lateral as depicted on the plat. Transcript, Vol. 2 at 199:19-200:16.

f. An examination of Spur's Exhibit C-3 reveals that Spur was aware of the correct land grid orientation of Section 14. *See* Spur Exhibit C-3. Spur's C-102 plats, made by a licensed surveyor, failed to utilize accurate land grid data. *See* Spur Exhibit C-2. Spur's C-102 plats, thus, contravene 19.15.7.13(B) NMAC, which states, "An operator shall fill out and certify the information required on form C-102 except the well location on the plat. A professional surveyor, registered in the state of New Mexico, or surveyor approved by the division, shall plot and certify the well location on the plat from the section's outer boundaries." Spur's normalized land grid does not show the accurate well location from the section's outer boundaries. *See* Transcript, Vol. 2 at 198:6-15, 199:13-24, 200:2-7. The map portion of Spur's C-102s has identical SHLs and FTPs on the 51H and 70H. *See* Spur Exhibit C-2; LFE Engineer Exhibit C, Slide 7 [pdf 106]. While Spur updated the BHL, its SHL and FTP are identical on the map portion of the C-102s. *See* Spur Exhibit C-2; Transcript, Vol. 1 at 133:7-17.

g. Because of the actual orientation of Section 14, a straight line drawn from the actual FTP to the presumed LTP of Spur's proposed Aid North 51H well is located in a non-standard location ("NSL") to the southern boundary of the proposed HSU. *See* Transcript, Vol. 1 at 135:17-24; *id*. Vol. 2 at 279:1-18, 337:20-338:13 Spur did not file for a NSL for this proposed well. Transcript, Vol. 2 at 338:11-13. The testimony of Spur's land witness implied that Spur could drill the well as a standard location by altering the azimuth of the well. The testimony of Spur's geologist related that the inter-well spacing between the 70H and 51H is consistent at 935' and made no mention of any adjustment in azimuth. *See* Transcript, Vol. 2 at 260:24-261:6. The map exhibits also all show the 51H as having no change in azimuth. *See* Spur Exhibit C-2 (C-102 for Aid North 51H). This would place the wellbore within 330' of the Southern unit boundary when it crosses from S14 to S13, which would require approval of a NSL. *Id*.

h. Spur's C-102 plats failed to show the last take point for any of their wells, which is a violation of Division requirements. Transcript, Vol. 2 at 195:18-22; *see* 19.15.7.13(A)-(C) NMAC. Examiner Lowe stressed that the agency is "very aware and concerned for the first take points and last take points and where they are located." Transcript, Vol. 2 at 233:4-6.

i. In contrast, Longfellow's completed intervals and first and last take points for the Hendrix State Com 1314 ABX Wells will meet statewide setback requirements for horizontal wells. LFE Landman Direct Testimony ¶ 8 [pdf 16]. The location of the proposed wells within the Longfellow HSU is depicted in the draft C-102 forms, which correctly indicate the locations of each surface hole, bottom hole, and the first and last take points. LFE Landman Direct Testimony ¶ 15 [pdf 17]; LFE Landman Exhibit A-6 [pdf 28-37].

In light of the foregoing, the Division observes as follows:

13. NMSA 1978, Section 70-2-17(B) (1977) provides that in establishing a proration unit, "the division shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, including those of royalty owners, the prevention of waste, the avoidance of the augmentation of risks arising from the drilling of an excessive number of wells, and the prevention of reduced recovery which might result from the drilling of too few wells."

14. Section 70-2-17(D) provides that "[w]hen two or more separately owned tracts of land are embraced within a spacing or proration unit, or where there are owners of royalty interests or undivided interests in oil and gas minerals which are separately owned or any combination thereof . . . [who] have not agreed to pool their interests," the division has authority to "pool all or any part of such lands or interests or both . . . as a unit."

15. "'Mineral interest owner' means a working interest owner, or an owner of a right to explore for and develop oil and gas that is not subject to an existing oil and gas lease." 19.15.2.7(M)(10) NMAC. A "pooled working interest" means a working interest or unleased mineral interest that is pooled by division or commission order and not by voluntary agreement of the owner of the interest, except for an unleased mineral interest on federal, state or tribal lands. 19.15.13.7(C) NMAC.

16. A "Mineral interest owner" means a working interest owner, or an owner of a right to explore for and develop oil and gas that is not subject to an existing oil and gas lease. 19.15.2.7(M)(10) NMAC.

17. "Pooled working interest" means a working interest or unleased mineral interest that is pooled by division or commission order and not by voluntary agreement of the owner of the interest, except for an unleased mineral interest on federal, state or tribal lands. 19.15.13.7(C) NMAC.

18. "The applicant shall give notice to each owner of an interest in the mineral estate of any portion of the lands the applicant proposes to be pooled or unitized whose interest is evidenced by a written conveyance document either of record or known to the applicant at the time

the applicant filed the application and whose interest has not been voluntarily committed to the area proposed to be pooled or unitized . . . ." 19.15.4.12(A)(1) NMAC.

19. A pooling order allocates costs based on a working interest owner's proportionate share. 19.15.13.8(A) NMAC. In considering competing proposals to pool, the Division must evaluate the mineral interest ownership held by each party at the time the application was heard on the same basis.

THE DIVISION CONCLUDES that:

1. The comparison of geologic and engineering evidence presented by each party as it relates to the proposed well locations and the potential of each proposed prospect to efficiently recover the oil and gas reserves underlying the property reveals that Longfellow's Plan of Development to recover the oil and gas reserves is more efficient than Spur's due to its implementation of wine-rack spacing.

2. A comparison of the risk associated with the parties' respective proposals for the exploration and development of the property indicates that Longfellow's POD is less risky than Spur's.

3. A review of the negotiations between the parties indicates that the parties made a good-faith effort prior to the force-pooling applications.

4. The evidence in the record indicates that Longfellow can prudently operate the property and prevent waste more effectively than Spur. Longfellow's approach is a more robust and efficient long-term plan to develop its potential drillable locations with minimal surface waste and maximum oil recovery. Longfellow's plan of development is superior to Spur's plan of development.

5. The differences between Longfellow and Spur's AFEs are superficial. Longfellow's F&D Costs analysis has shown that it will recover more hydrocarbons than Spur for approximately one percent higher costs out of the total costs associated with the project.

6. The testimony and the evidence clearly indicates that Longfellow owns a greater working interest than Spur in the proposed HSU.

7. Longfellow has timely located well sites to operate on the surface due to its current agreement with the surface owner in the N/2 of Section 14, T17S-R28E, Eddy County, New Mexico.

8. Longfellow's proposed development will protect correlative rights, prevent waste, and conserve resources.

9. As a result of the Division's seven-factor analysis, Spur's applications in Case No. 21733 should be denied.

10. Longfellow's applications in Case No. 21651 are approved as detailed below.

11. The Division has jurisdiction to issue this Order pursuant to NMSA 1978, Section 70-2-17.

12. Longfellow is the owner of an oil and gas working interest within the Unit.

13. Longfellow satisfied the notice requirements for the Application and the hearing as required by 19.15.4.12 NMAC.

14. The Division satisfied the notice requirements for the hearing as required by 19.15.4.9 NMAC.

15. Longfellow has the right to drill the Well(s) to a common source of supply at the depth(s) and location(s) in the Unit described in Exhibit A.

16. The HSU contains separately owned uncommitted interests in oil and gas minerals.

17. Some of the owners of the uncommitted interests have not agreed to commit their interests to the Unit.

18. The pooling of uncommitted interests in the Unit will prevent waste and protect correlative rights, including the drilling of unnecessary wells.

19. This Order affords to the owner of an uncommitted interest the opportunity to produce his just and equitable share of the oil or gas in the pool.

IT IS THEREFORE ORDERED:

20. The uncommitted interests in the Unit are pooled as set forth in Exhibit A.

21. The Unit shall be dedicated to the Well(s) set forth in Exhibit A.

22. Longfellow is designated as operator of the Unit and the Well(s).

23. If the location of a well will be unorthodox under the spacing rules in effect at the time of completion, Longfellow shall obtain the Division's approval for a non-standard location in accordance with 19.15.16.15(C) NMAC.

24. Longfellow shall commence drilling the Well(s) within one year after the date of this Order, and complete each Well no later than one (1) year after the commencement of drilling the Well.

25. This Order shall terminate automatically if Longfellow fails to comply with Paragraph 19 unless Longfellow obtains an extension by amending this Order for good cause shown.

26. The infill well requirements in 19.15.13.9 NMAC through 19.15.13.12 NMAC shall be applicable.

27. Longfellow shall submit each owner of an uncommitted working interest in the pool ("Pooled Working Interest") an itemized schedule of estimated costs to drill, complete, and equip the well ("Estimated Well Costs").

28. No later than thirty (30) days after Longfellow submits the Estimated Well Costs, the owner of a Pooled Working Interest shall elect whether to pay its share of the Estimated Well Costs or its share of the actual costs to drill, complete and equip the well ("Actual Well Costs") out of production from the well. An owner of a Pooled Working Interest who elects to pay its share of the Estimated Well Costs shall render payment to Longfellow no later than thirty (30) days after

the expiration of the election period, and shall be liable for operating costs, but not risk charges, for the well. An owner of a Pooled Working Interest who fails to pay its share of the Estimated Well Costs or who elects to pay its share of the Actual Well Costs out of production from the well shall be considered to be a "Non-Consenting Pooled Working Interest."

29. No later than one hundred eighty (180) days after Longfellow submits a Form C-105 for a well, Longfellow shall submit to each owner of a Pooled Working Interest an itemized schedule of the Actual Well Costs. The Actual Well Costs shall be considered to be the Reasonable Well Costs unless an owner of a Pooled Working Interest files a written objection no later than forty-five (45) days after receipt of the schedule. If an owner of a Pooled Working Interest files a timely written objection, the Division shall determine the Reasonable Well Costs after public notice and hearing.

30. No later than sixty (60) days after the expiration of the period to file a written objection to the Actual Well Costs or the Division's order determining the Reasonable Well Costs, whichever is later, each owner of a Pooled Working Interest who paid its share of the Estimated Well Costs shall pay to Longfellow its share of the Reasonable Well Costs that exceed the Estimated Well Costs, or Longfellow shall pay to each owner of a Pooled Working Interest who paid its share of the Estimated Well Costs its share of the Estimated Well Costs that exceed the Reasonable Well Costs.

31. The reasonable charges for supervision to drill and produce a well ("Supervision Charges") shall not exceed the rates specified in Exhibit A, provided however that the rates shall be adjusted annually pursuant to the COPAS form entitled "Accounting Procedure-Joint Operations."

32. No later than within ninety (90) days after Longfellow submits a Form C-105 for a well, Longfellow shall submit to each owner of a Pooled Working Interest an itemized schedule of the reasonable charges for operating and maintaining the well ("Operating Charges"), provided however that Operating Charges shall not include the Reasonable Well Costs or Supervision Charges. The Operating Charges shall be considered final unless an owner of a Pooled Working Interest files a written objection no later than forty-five (45) days after receipt of the schedule. If an owner of a Pooled Working Interest files a timely written objection, the Division shall determine the Operating Charges after public notice and hearing.

33. Longfellow may withhold the following costs and charges from the share of production due to each owner of a Pooled Working Interest who paid its share of the Estimated Well Costs: (a) the proportionate share of the Supervision Charges; and (b) the proportionate share of the Operating Charges.

34. Longfellow may withhold the following costs and charges from the share of production due to each owner of a Non-Consenting Pooled Working Interest: (a) the proportionate share of the Reasonable Well Costs; (b) the proportionate share of the Supervision and Operating Charges; and (c) the percentage of the Reasonable Well Costs specified as the charge for risk described in Exhibit A.

35. Longfellow shall distribute a proportionate share of the costs and charges withheld pursuant to paragraph 29 to each Pooled Working Interest that paid its share of the Estimated Well Costs.

36. Each year on the anniversary of this Order, and no later than ninety (90) days after each payout, Longfellow shall provide to each owner of a Non-Consenting Pooled Working Interest a schedule of the revenue attributable to a well and the Supervision and Operating Costs charged against that revenue.

37. Any cost or charge that is paid out of production shall be withheld only from the share due to an owner of a Pooled Working Interest. No cost or charge shall be withheld from the share due to an owner of a royalty interests. For the purpose of this Order, an unleased mineral interest shall consist of a seven-eighths (7/8) working interest and a one-eighth (1/8) royalty interest.

38. Except as provided above, Longfellow shall hold the revenue attributable to a well that is not disbursed for any reason for the account of the person(s) entitled to the revenue as provided in the Oil and Gas Proceeds Payment Act, NMSA 1978, Sections 70-10-1 *et seq.*, and relinquish such revenue as provided in the Uniform Unclaimed Property Act, NMSA 1978, Sections 7-8A-1 *et seq.*

39. The Unit shall terminate if (a) the owners of all Pooled Working Interests reach a voluntary agreement; or (b) the well(s) drilled on the Unit are plugged and abandoned in accordance with the applicable rules. Longfellow shall inform the Division no later than thirty (30) days after such occurrence.

40. The Division retains jurisdiction of this matter for the entry of such orders as may be deemed necessary.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served on counsel of record by electronic mail on July 23, 2021:

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