

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SCOUT ENERGY MANAGEMENT, LLC, and
CHEVRON U.S.A. INC.,
Petitioners,

v.

PILOT INTELLECTUAL PROPERTY, LLC,
Patent Owner.

Case IPR2024-00385
Patent 8,505,332 B1

**PATENT OWNER'S RESPONSE TO
PETITIONERS' MOTION TO STRIKE**

The Exhibits and portions of Patent Owner Pilot (“Pilot”)’s Sur-Reply which Petitioners request that the Board strike and/or disregard is not new evidence. Exhibits 2078-2085 are summaries and analysis of previously submitted exhibits/evidence, prepared and submitted in support of Pilot’s direct response to new arguments asserted by Petitioners in their Reply.

Furthermore, Exhibits 2078-2085 are not a violation of the word limit because these exhibits are not incorporated by reference into the Sur-Reply. The information from these exhibits relied on in the Sur-Reply is included and explained in the Sur-Reply, and thereby included in the word count. *Compare Limelight Networks, Inc. v. Akamai Technologies, Inc.*, IPR2016-01631, Paper 34 at 17 (PTAB Oct. 25, 2017) (denying Motion to Exclude claim charts not included in the word count, noting that “the challenged claim charts are not arguments improperly incorporated into the Petition,” because the Petition explained the supporting analysis from the claim charts) with *Limelight Networks, Inc. v. Akamai Technologies, Inc.*, IPR2016-01894, Paper 8 at 12-16 (PTAB Mar. 8, 2017) (disregarding claim charts as improperly incorporated by reference because the Petition “was devoid of any explanation of the claim charts, beyond the bare citations thereto”).

Exhibit 2085 - Analysis of the Three Examples in the ‘332 Patent

Exhibit 2085 is an analysis of the three examples presented in Columns 10-16 of the ‘332 Patent. The first of the three examples analyzed at pages 1-3 of Exhibit

2085 is the same analysis that Pilot's technical expert Trevor Bors presented in his Declaration (EX2028, ¶127) submitted with Pilot's Response to the Petition (Paper 21). Exhibit 2085 presents the same calculations from the previously submitted Bors Declaration for the first example in the '332 Patent (EX2085 at 1-3), then repeats those same calculations for the second and third examples (EX2085 at 4-9).

This is not new evidence, nor is it even a new analysis of the previously submitted evidence. It is the same analysis previously presented for the first example in the '332 Patent, then merely replicated for the second and third examples.

This resubmission of the previously submitted analysis (now for all three examples in the '332 Patent) was prepared and submitted in support of Pilot's direct response to new arguments asserted by Petitioners in their Reply. Petitioners asserted for the first time in their Reply that the Challenged Claims of the '332 Patent do not disregard the recovery of methane and ethane. As part of their refusal to recognize that the Challenged Claims include disregarding the recovery of methane and ethane, Petitioners asserted in their Reply that "[t]he '332 Patent provides several embodiments that recover ethane" (Reply at 3).

Petitioners presented excerpts of Tables 2B and 5B from the '332 Patent for the first two of the three examples, annotated to support their assertion that these examples are "embodiments that recover ethane" (Reply at 3). Petitioners even cite to the Bors Exhibit 2028 Declaration calculations, the same calculations that

Petitioners now seek to have stricken from the record. Reply at 4 (citing EX2028 at 68 (“describing the recovery of 5.3% ethane”)). This calculated 5.3% ethane recovery at page 68 of the Bors Declaration is the same calculated 5.4% ethane recovery at N:8 on page 2 of Exhibit 2085. The inconsequential 0.1% difference is due to rounding functions in the spreadsheets.

These calculations were necessary to counter Petitioners’ misleading presentation of the numbers in the Tables. As explained in Pilot’s Sur-Reply at pages 6-12, Petitioners presented “Stream Composition” Tables 2B and 5B to make it appear that the amount of C2 Ethane “Disregarded” versus “Recovered” were almost the same.

TABLE 5B

Stream Compositions				
Name	Disregarded	Purified CO ₂ Recycle Stream 164	Sour NGL Stream 164	Cooled Sour NGL Rich Stream 266
Comp Mole Frac (H ₂ S)		0.0004	0.0008	0.0008
Comp Mole Frac (Nitrogen)		0.0162	0.0000	0.0000
Comp Mole Frac (CO ₂)		0.6975	0.0250	0.0250
Comp Mole Frac (Methane)		0.1922	0.0000	0.0000
Comp Mole Frac (Ethane)		0.0620	0.0613	0.0613
Comp Mole Frac (Propane)		0.0275	0.2670	0.2670
Comp Mole Frac (i-Butane)		0.0017	0.0836	0.0836
Comp Mole Frac (n-Butane)		0.0024	0.2751	0.2751
Comp Mole Frac (i-Pentane)		0.0000	0.0697	0.0697

Petitioners reference the amounts of ethane in Tables 2B and 5B, highlighting the amounts of ethane in the Purified CO₂ Recycle Stream 164 as “Disregarded,”

and in the Sour NGL Rich Stream 264 as “Recovered” (Reply at 3-4). While Petitioners characterize these ethane numbers as directly contradicting Pilot’s assertion that the ‘332 Patent’s process “leaves all (or almost all) of the methane and ethane in the carbon dioxide recycle streams,” a close review of the stream compositions in these tables confirms the disregarding of both methane and ethane.

One must recognize that the numbers shown in Tables 2B and 5B are “stream compositions” that show the relative amounts of components in each stream. These are the percentages of each component in the stream (the “Mole Fraction”). In order to determine how much of each component is in the stream, and compare the amount of ethane that remains in the Purified CO₂ Recycle Stream 164 (“Disregarded”), versus the amount of ethane that is in the Sour NGL Rich Stream 264 (“Recovered”), one must look at the flow rate of each stream. The flow rate numbers for these streams are shown in Tables 1B and 4B, and show that the flow rate for Recycle Stream 164 is about 15 times the flow rate of the Sour NGL Rich Stream 264.

TABLE 1B

Material Streams			
Name	Purified CO ₂ Recycle Stream 164	Sour NGL Rich Stream 264	Cooled Sour NGL Rich Stream 266
Vapor Fraction	1.0000	0.00000	0.0000
Temperature (F.)	97.39	202.6	120.0*
Pressure (psig)	325.0	340.0	635.3*
Molar Flow (MMSCFD)	15.88	1.119	1.119

Pilot's technical expert Bors did the calculations at paragraph 127 of his Declaration (EX2028) for the first example in the '332 Patent, explaining that one must multiply the stream flow rate by the mole fraction to determine the flow rates for the individual components in the streams. Bors confirmed in his calculations that the first example in the '332 Patent shows that 94.9% of the ethane is "disregarded," and 5.3% is "recovered."

Pilot for its Reply did these same calculations for the second and third examples (EX2085), confirming that in the second example 94.3% (F27) of the ethane is "disregarded" while only 5.6% (N27) is "recovered." In the third example, example 99.6% (F46) is "disregarded" while 0% (N46) is "recovered." This third example shows zero methane and zero ethane in the Sweet and Sour NGL Rich Streams (Tables 8B/8C), confirming complete disregard for the recovery of both methane and ethane.

This analysis demonstrates that the numbers in these Tables confirm that these in fact are embodiments showing the disregard for recovery of both methane and ethane. This analysis was necessary to support Pilot's direct response to new arguments asserted by Petitioners in their Reply. This is not new evidence, nor new analysis of previously submitted evidence. Exhibit 2085 is the appropriate resubmission of previously submitted analysis of previously submitted evidence, and therefore should not be stricken or disregarded.

Exhibit 2084 - Claims 4 and 7 Analysis of the Three Examples in the ‘332 Patent

As Petitioners note in their Motion, Exhibit 2084 is not cited anywhere in the Sur-Reply. Exhibit 2084 was prepared and submitted in support of Sur-Reply arguments that did not survive the final rounds of cuts to comply with the word limit. Pilot therefore does not object to Exhibit 2084 being stricken and/or disregarded.

Exhibits 2078-2083 – Claim Charts Demonstrating that Pilot’s CO2Flex® Plants Do Not Perform All of the Steps of the ‘332 Patent Claim 5

Exhibits 2078-2083 are not new evidence. These exhibits are Claim Charts analyzing previously submitted evidence, prepared and submitted in direct response to new arguments asserted by Petitioners in their Reply. Pilot submitted in its Response to the Petition Claim Charts and Process Flow Diagrams (“PFDs”), including Stream Tables (Exhibits 2052-2071), demonstrating the one-to-one correspondence between the Challenged Claims and Pilot’s five commercially successful CO2Flex® plants. Thereby confirming that these commercially successful plants are “coextensive” (“essentially the claimed invention”), qualifying for a rebuttable presumption of nexus.

Petitioners responded by asserting in their Reply that the objective evidence of nonobviousness, including the tremendous commercial success of Pilot’s CO2Flex® process, is due to “unclaimed features.” Petitioners attempt to block/rebut the presumption of nexus by asserting that “critical features ... appear to be recited in Claim 5, which is *not* challenged in this proceeding” (Reply at 20).

Petitioners' argument is that the feature recited in Claim 5 is "critical" to the commercial success of CO2Flex[®], and that this "critical feature" is not recited in the Challenged Claims (therefore an "unclaimed feature"). Petitioners did not present any evidence to support their argument. They just made an unsupported conclusory assertion that the commercially successful CO2Flex[®] plants use the Claim 5 process steps, and that this "critical feature" must be the reason for the commercial success.

Petitioners could have submitted claim charts to at least attempt to support their argument, which would not have counted against their word limit, as long as the charts were not incorporated by reference into the Reply, and as long as the parts of the claim charts relied on for their arguments were included and explained in the Reply, and thereby included in the word count. *See, e.g., Limelight Networks, Inc. v. Akamai Technologies, Inc.*, IPR2016-01631, Paper 34 at 17 (PTAB Oct. 25, 2017) (denying Motion to Exclude claim charts). While Petitioners submitted no evidence to support their argument, their single sentence unsupported conclusory assertion that Pilot's CO2Flex[®] plants use the Claim 5 process steps forced Pilot to prepare and submit claim charts to support their direct response to Petitioners' new argument.

Because Pilot had previously submitted claim charts to demonstrate that it qualified for a rebuttable presumption of nexus, the evidence necessary to demonstrate that Pilot's CO2Flex[®] plants do not use the Claim 5 process steps was

already in the record, which are the PFDs, including Stream Tables, for each of the five commercially successful CO2Flex[®] plants (Exhibits 2054-55, 2058, 2062, 2065-66, and 2070). So Pilot was able to prepare and submit claim charts using previously submitted exhibits/evidence, without having to ask the Board for a discretionary waiver to allow for submission of new evidence with its Sur-Reply. *See, e.g., Colgate-Palmolive Co. v. Noble Innovations NC L.L.C.*, IPR2023-01254, Paper 35 at 5 (PTAB Nov. 12, 2024) (noting that the Board is empowered under 37 C.F.R. § 42.5(b) to waive application of the 37 C.F.R. 42.23(b) prohibition on new evidence in a Sur-Reply).

And the evidence used in the claim charts Exhibits 2078-2083 is not just evidence that happened to be previously submitted, but not previously discussed. *See, e.g., St. Jude Med., Cardiology Div., Inc. v. Bd. of Regents of the Univ. of Mich.*, IPR2013-00041, Paper 65 at 2–3 (PTAB Jan. 27, 2014) (explaining that “new” evidence includes evidence already of record but not previously discussed in any paper of record). The CO2Flex[®] plant PFDs and Stream Table data analyzed in the Claim 5 claim charts (Exhibits 2078-2083) are the same CO2Flex[®] plant PFDs and Stream Table data analyzed in the claim charts previously submitted to demonstrate that the CO2Flex[®] plants are “coextensive” (Exhibits 2054-55, 2058, 2062, 2065-66, and 2070).

And the calculations done in the Claim 5 charts (Exhibits 2078-2083) are the

same type of calculations that Pilot's technical expert Bors presented in his Declaration (EX2028, ¶127) submitted with Pilot's Response to the Petition (Paper 21). The percentages recited in Claim 5 for disregarding C3+ recoveries require the same conversion described above by multiplying the stream flow rate by the mole fraction to determine the flow rates for the individual components in the streams.

As explained in the Sur-Reply at pages 14-16, the '332 Patent describes an alternative feature referred to as the "less aggressive cut," whereby one could limit the recovery of the NGLs (C3-C8), in addition to disregarding the recovery of methane and ethane. Claim 5 recites this alternative feature, specifying a range 20-40% C3+ recovery. (EX1001, 18:40-42.) This is the Claim 5 "less aggressive cut" alternative feature that Petitioners assert is a "critical feature" of the commercially successful CO2Flex[®] process, which is not recited in the Challenged Claims, and therefore precludes a presumption of nexus between the objective evidences of non-obvious and the Challenged Claims, including commercial success.

In response to this new argument from Petitioners, Pilot analyzed the C3+ recoveries for each of the five commercially successful CO2Flex[®] plants, and confirmed that none of these plants use the "less aggressive cut" feature. Pilot details this analysis in Exhibits 2079-2083. These Exhibits present a claim chart for each plant, confirming that each plant does not use the "less aggressive cut" feature recited in Claim 5, including spreadsheet calculations supporting the analysis.

Exhibit 2078 summarizes the results of the analysis.

This analysis was necessary to support Pilot's direct response to new arguments asserted by Petitioners in their Reply. This is a necessary analysis of previously submitted evidence, not new evidence. Exhibit 2078-2083 are the appropriate submission of analysis of previously submitted evidence, and therefore should not be stricken or disregarded.

Furthermore, Exhibits 2078-2083 are not a violation of the word limit because these exhibits are not incorporated by reference into the Sur-Reply. The information from these exhibits relied on in the Sur-Reply is included and explained in the Sur-Reply, and thereby included in the word count.

Pilot respectfully requests that the Board deny Petitioners' Motion to Strike.

Respectfully submitted this 11th day of April, 2025.

/Charles J. Rogers/

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e), I hereby certify that on April 11, 2025 the foregoing *Patent Owner's Response to Petitioners' Motion to Strike* is being served electronically by agreement of the parties, by e-mail to the following counsel of record.

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