

July 20, 2011

Via EDGAR and Courier

Securities and Exchange Commission
100 F Street NE
Washington, D.C. 20549
Attention: H. Roger Schwall
Assistant Director, Division of Corporation Finance

Re: Dawson Geophysical Company
Registration Statement on Form S-4
Filed June 10, 2011
File No. 333-174843

Dear Mr. Schwall:

Dawson Geophysical Company (“Dawson”) has today electronically filed under the Securities Exchange Act of 1933, as amended, Pre-Effective Amendment No. 1 (the “Amendment No. 1”) to its Registration Statement on Form S-4 (File No. 333-174843), originally filed on June 10, 2011 (the “Registration Statement”). Set forth below are Dawson’s responses to the comments contained in the letter from the Staff (the “Staff”) of the Division of Corporation Finance of the Securities and Exchange Commission (the “Commission”), dated July 8, 2011, with respect to the Registration Statement. Enclosed with this letter, please also find a copy of Amendment No. 1, marked to show changes from the Registration Statement as filed on June 10, 2011.

For your convenience, we have repeated each comment of the Staff in bold face type exactly as given in the comment letter and set forth below such comment is our response. The headings and numbered paragraphs below correspond to the headings and numbered paragraphs of the Staff comment letter.

Registration Statement on Form S-4

General

1. **Where comments also could apply to similar or related disclosure that appears elsewhere in the same or another section, please make parallel changes to all**

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affected disclosure. This will eliminate the need for us to repeat similar comments. Also, your response letter should include page number references keying each response to the page of the filing where the responsive disclosure can be found. This will expedite our review of the filing.

Dawson acknowledges the Staff's comment. Accordingly, where the Staff's comments also could apply to similar or related disclosure that appears elsewhere in the same or another section, Dawson will seek to make parallel changes to all affected disclosure. Also, as requested, this response letter includes page number references keying each response to the page of Amendment No. 1 where the responsive disclosure can be found.

- 2. Please provide us with the board books prepared in connection with this transaction and a description of any other material presentations that may have been made to either the board of directors of TGC or the board of directors of Dawson that influenced its respective decision to recommend this transaction to shareholders.**

In response to the Staff's comment, the board books prepared by Raymond James & Associates, Inc. ("Raymond James"), as Dawson's financial advisor, and by Southwest Securities, Inc. ("Southwest Securities"), as TGC Industries, Inc.'s ("TGC") financial advisor, in connection with the approval of the transaction on March 20, 2011 by each of Dawson's and TGC's board of directors are being provided to the Staff on a supplemental basis. We are also supplementally providing the Staff an additional board book prepared in February by EnerCom, Inc., Dawson's investor relations consultant, for the Dawson board of directors as well additional presentations prepared by Southwest Securities for the TGC board of directors.

All of these materials are being provided to the Staff pursuant to Rule 418 under the Securities Act. In accordance with Rule 418, Dawson is requesting that these materials be returned promptly following completion of the Staff's review thereof. In addition, due to their sensitive commercial and financial nature, Dawson will be requesting confidential treatment for these materials under the Freedom of Information Act, as amended ("FOIA"), in accordance with 17 C.F.R. §200.83(b).

- 3. Summarize in the proxy statement / prospectus all material non-public information, including projections, cost savings and potential synergies, exchanged among and relied upon by the parties. Also, provide us with copies of the materials exchanged, including any projections provided by management to each of the advisors.**

In response to the Staff's comment, the Registration Statement has been revised to add a new section entitled "Certain Information Provided by the Parties". This section includes a summary of the projections provided separately by Dawson and TGC management to each of the financial advisors. Please see page 68 of Amendment No.

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1. We also intend to provide the missing information relating to quarterly projections in each of the second tables set forth on pages 70 and 72 of Amendment No. 1, which information shall be filed in a subsequent pre-effective amendment to the Registration Statement after Dawson's earnings announcement during the week of July 25.

In response to the Staff's comments for copies of any other non-public information exchanged among and relied upon by the parties, we note that, as is customarily a part of the due diligence process in a transaction such as the proposed transaction, Dawson and TGC allowed each other, and each other's respective representatives, access to data rooms containing non-public information and exchanged other non-public information that concerned Dawson and TGC, respectively, as well as their respective operations. Dawson and TGC have not supplementally provided the Staff with this additional non-public information because of the large volume of such materials.

As requested, copies of the projections provided separately by Dawson and TGC management to each of the financial advisors, are being provided supplementally to the Staff pursuant to Rule 418 under the Securities Act. In accordance with Rule 418, Dawson is requesting that these materials be returned promptly following completion of the Staff's review thereof. In addition, due to their sensitive commercial and financial nature, Dawson will be requesting confidential treatment for these materials under FOIA, in accordance with 17 C.F.R. §200.83(b).

The Merger, page 51

Overview, page 51

4. **You mention the possibility that the exchange ratio may be modified after shareholders have received the final proxy statement / prospectus and cast their respective votes. Disclose in necessary detail how and when Dawson and TGC shareholders will be notified of any changes to the exchange ratio.**

In response to the Staff's comment the disclosure on pages vii, viii, 2, 52 and 88 of Amendment No. 1 has been revised to make the requested disclosure.

Background of the Merger, page 51

5. **You describe a number of factors due to which some of those individuals making recommendations to shareholders face real conflicts of interest in making the recommendation. To provide more accurate disclosure, please rename the "Interests of Certain Persons" section so that it makes clear that there are actual conflicts of interest involved. At each place the recommendations appear, identify those making the recommendation which have such conflicts and provide a cross reference to the newly captioned "Conflicts of Interest" section. Also eliminate the suggestion that such factors or interests "may be" different from other shareholders' interests, when there appears to be no question that the**

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interests provide the individuals making the recommendations with conflicts or apparent conflicts.

In response to the Staff's comment, Dawson has amended the Registration Statement to re-title the sections previously named "Interests of Certain Persons in the Merger that May be Different from Your Interests" to "Conflicts of Interest". Please see pages 9 and 89 of Amendment No. 1. In addition, please see the revised disclosure at each place where the TGC's board of directors recommendation that TGC shareholders approve the merger appears in the Registration Statement, specifically on the TGC notice to shareholders and on pages vii, xi, 3, 41, 46 and 68 of Amendment No. 1.

6. **We note your disclosure at the bottom of page 52 regarding the increase in the market price of Dawson common stock between July 2010 and January 26, 2011. For purposes of comparison, please disclose the corresponding increase in the market price of TGC common stock over the same period.**

In response to the Staff's comment, the Registration Statement has been revised to make the requested disclosure. Please see page 53 of Amendment No. 1.

7. **We note your disclosure at page 53 that in discussions between Messrs. Whitener and Jumper between January 26, 2011 and February 4, 2011, Mr. Jumper indicated that, because of the rise in Dawson's trading price, seismic market conditions and the ability to deploy additional channels, Dawson would be willing (unlike in June 2010) to consider a transaction at a reasonable premium to the current trading price of TGC common stock. Please explain Mr. Jumper's references to seismic market conditions and the ability to deploy additional channels. Clarify why these factors made a potential transaction with TGC, at a premium to the then-current trading price of TGC common stock, more attractive to Dawson.**

In response to the Staff's comment, the Registration Statement has been revised to make the requested disclosure. Please see page 54 of Amendment No. 1.

8. **We note your disclosure at page 55 regarding the employment agreements with certain of TGC's key employees that would be effective as of the closing. Please clarify in the Conflicts of Interests section whether these employees (besides Mr. Whitener) had any role in negotiating the merger agreement.**

In response to the Staff's comment, the Registration Statement has been revised to make the requested disclosure. Please see page 91 of Amendment No. 1.

Dawson's Reasons for the Merger, page 59

9. **You present a "number of factors [considered,] including..." and state that the reasons you list "are not intended to be exhaustive but include material facts**

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considered” by the Dawson board. You state at page 61 that the listed negative factors are included “without limitation.” Revise to clarify that you discuss in this section all material factors, including potentially negative factors, which the board considered and to eliminate any ambiguity in that regard.

In response to the Staff’s comment, the Registration Statement has been revised to make the requested disclosure and to eliminate ambiguity relating to the disclosure of the factors considered by the Dawson board of directors. Please see pages 63 — 65 of Amendment No. 1.

10. **Reconcile your statement at page 63 that the board did not “attempt to quantify or assign any relative or specific weights to the various factors that it considered” with the statement at page 62 that the board “concluded that the anticipated benefits of the merger would outweigh the preceding [potentially negative] considerations.”**

In response to the Staff’s comment, the Registration Statement has been revised. Please see pages 64 and 65 of Amendment No. 1.

11. **Rather than referring to “certain” exceptions, circumstances, and conditions, briefly describe the material items in each case.**

In response to the Staff’s comment, the Registration Statement has been revised to make the requested disclosure. Please see pages 61, 62 - 64, 67 and 68 of Amendment No. 1.

TGC’s Reasons for the Merger, page 63

12. **Disclose whether the receipt of the legality opinion from Haynes and Boone is a waivable condition. We note the disclosure at page 120 that neither counsel “intends to waive” the condition.**

In response to the Staff’s comment, the Registration Statement has been revised to make the requested disclosure. Please see pages xiv, 11 and 126 of Amendment No. 1.

13. **In that regard, because it appears that the condition is waivable, please file an executed opinion of both firms prior to effectiveness and undertake to recirculate and resolicit if the condition is waived and the change in tax consequences is material.**

Executed tax opinions from each of the law firms have been filed as Exhibits 8.1 and 8.2 to Amendment No. 1.

In addition, Dawson and TGC commit to recirculate the prospectus and resolicit proxies in the event that either party waives the condition relating to the delivery of a

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tax opinion and the change in tax consequences is material. Language to this effect has been inserted into the Registration Statement on pages xiv, 11 and 126 of Amendment No. 1.

14. **Similarly, disclose in necessary detail what actions the board will take if “the reconfirmation opinion fails to confirm” the merger fairness. If it may waive that condition and proceed despite the failure to obtain a favorable “reconfirmation” opinion, make this clear.**

In response to the Staff’s comment, the Registration Statement has been revised to make the requested disclosure. Please see pages xii and 7 of Amendment No. 1.

Opinions of Financial Advisors

15. **Supplementally provide us with copies of the engagement letters for each of the financial advisors.**

In response to the Staff’s comment, copies of the engagement letters for each of the financial advisors have been provided to the Staff on a supplemental basis.

These engagement letters are being provided to the Staff pursuant to Rule 418 under the Securities Act. In accordance with Rule 418, Dawson is requesting that these materials be returned promptly following completion of the Staff’s review thereof. In addition, due to their sensitive commercial nature, Dawson will be requesting confidential treatment for these materials under FOIA, in accordance with 17 C.F.R. §200.83(b).

16. **Confirm to us that each of the advisors had all necessary data to conduct each analysis it describes. Otherwise, for each analysis for which the advisor had only partial data, disclose which data was missing.**

Raymond James, Dawson’s financial advisor, has confirmed that (i) there were no limitations imposed by any party on Raymond James’s review, (ii) Raymond James received all the data and other information from Dawson and TGC that it had requested and (iii) Raymond James had full access to the officers of Dawson and TGC that Raymond James believed it needed, in each case, to conduct each analysis described in the Registration Statement.

Southwest Securities, TGC’s financial advisor, has confirmed that (i) there were no limitations imposed by any party on Southwest Securities’ review, (ii) Southwest Securities received all the data and other information from TGC and Dawson that it had requested and (iii) Southwest Securities had full access to the officers of TGC and Dawson that Southwest Securities believed it needed, in each case, to conduct each analysis described in the Registration Statement.

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17. **Disclose whether the companies will obtain updated fairness opinions in the event that any of the assumptions no longer is accurate. For example, with regard to forecasts, there likely will be additional historical financial information available for both companies prior to the time of the special meeting.**

Dawson does not intend to obtain an updated fairness opinion with respect to the proposed acquisition of TGC. Accordingly, in response to the Staff's comment, the Registration Statement has been revised to make the requested disclosure. Please see page 78 of Amendment No. 1.

It is a condition to the closing of the transaction that TGC receive a "reconfirmation opinion" from Southwest Securities, its financial advisor, as of the closing date, that the exchange ratio to be applied in the merger is fair, from a financial point of view, to TGC shareholders. Please see pages xii, 7, 24 and 111 of Amendment No. 1 for disclosure in the Registration Statement relating to the condition that the "reconfirmation opinion" be delivered.

18. **You suggest that the reader should read the attached opinions by the fairness advisors, and you state that the opinions disclose "assumptions made, procedures followed, matters considered and limits on the scope of the review" in connection with each opinion. The proxy statement / prospectus should discuss these matters. Revise to eliminate any suggestion that the required information appears elsewhere. Please disclose this information in the detailed section regarding the opinions that you provide later in the text and include appropriate cross-references in the summary section to this enhanced disclosure. Also see Item 1015(b)(6) of Regulation M-A.**

In response to the Staff's comment, the Registration Statement has been revised to make the requested disclosure. Please see pages 4, 72 and 78 of Amendment No. 1. Also, please note that Dawson has deleted from the Registration Statement the reference to "assumptions made, procedures followed, matters considered and limits on the scope of the review". Accordingly, Dawson has not provided enhanced disclosure regarding these matters.

19. **It does not appear to appropriate to suggest that reading the actual opinions will provide the reader with any additional substantive information, given the brevity of the opinions and the apparent absence of additional material information. Please eliminate any suggestions to the contrary, or explain to us why you disagree.**

In response to the Staff's comment, the Registration Statement has been revised to make the requested disclosure. Please see pages 4, 72 and 78 of Amendment No. 1.

20. **Rather than referring generally to "numerous assumptions," briefly identify the material assumptions each advisor made in performing its analyses.**

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In response to the Staff's comment, the Registration Statement has been revised to make the requested disclosure. Please see pages 77 and 78 of Amendment No. 1.

21. **Discuss any weighting in necessary detail. We note for example the statement at page 74 that the advisor "may have given various analyses more or less weight than other analyses." Also, where the derived values may be read not to support the fairness of either the exchange ratio or the merger consideration, ensure that the results and conclusions are discussed in detail. For example, refer to the derived "Implied Exchange Ratio Reference Range" on page 80, which is entirely above the amount of the proposed exchange ratio.**

In response to the Staff's comment, the Registration Statement has been revised. Please see pages 74, 77, 80 and 86 of Amendment No. 1.

Opinion of TGC's Financial Advisor, page 72

22. **We note your statement at page 73 that Southwest Securities' opinion "was furnished solely for the use and benefit of the board of directors of TGC in connection with their consideration of the merger and is not intended to, and does not, confer any rights or remedies upon any other person, and is not intended to be used, and may not be used, for any other purpose, without Southwest Securities' express, prior written consent." This suggests that security holders may not rely on Southwest Securities' opinion. Please revise to eliminate from the opinion and the disclosure the "solely" reference and to state unequivocally that Southwest Securities is consenting to the inclusion of the opinion with this proxy statement/prospectus.**

In response to the Staff's comment, the Registration Statement has been revised. Please see page 79 of Amendment No. 1 and page C-2 of Annex C to Amendment No. 1.

Exhibits

23. **Please file all omitted exhibits, including opinions of counsel, as soon as practicable. You will need to allow yourself enough time to respond to any resulting staff comments in that regard.**

In response to the Staff's comment, all previously omitted exhibits (or forms thereof) have now been filed with Amendment No. 1, including executed copies of the legality opinion at Exhibit 5.1 and the Tax Opinions at Exhibit 8.1 and 8.2.

24. **We note your disclosure at page 56 regarding the members of the TGC board of directors who will be appointed to your board in connection with the merger. Please file a written consent from each such member. Refer to Securities Act Rule 438.**

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In response to the Staff's comment, Exhibits 99.6 and 99.7 have been filed with Amendment No. 1.

* * *

In response to the closing comments of the Staff's comment letter, Dawson has advised us, and has authorized us to hereby acknowledge on its behalf, in connection with its response to the Staff's comments, that:

- should the Commission or the Staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve Dawson from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- Dawson may not assert Staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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If you have any questions with respect to the foregoing responses or require further information, please contact the undersigned at (214) 953-6954 or Sarah Rechter at (214) 953-6419.

Very truly yours,

/s/ Neel Lemon

Neel Lemon

cc: Stephen C. Jumper
Dawson Geophysical Company

Sarah Rechter
Baker Botts L.L.P.

Alexandra M. Ledbetter, Attorney-Advisor