

155 T.C. No. 3

UNITED STATES TAX COURT

TGS-NOPEC GEOPHYSICAL COMPANY AND SUBSIDIARIES, Petitioner v.
COMMISSIONER OF INTERNAL REVENUE, Respondent

Docket No. 28140-14.

Filed August 26, 2020.

R disallowed P's claimed I.R.C. sec. 199 deduction of \$1,946,324 for the 2008 tax year. R determined that P's gross receipts from the leasing of processed marine seismic data are not considered domestic production gross receipts (DPGR).

Held: P's processed marine seismic data is not qualifying production property within the meaning of I.R.C. sec. 199(c)(5) because it is neither tangible personal property nor a sound recording.

Held, further, P's processing of marine seismic data constitutes engineering services performed in the United States with respect to the construction of real property under I.R.C. sec. 199(c)(4), but its gross receipts from such services are DPGR only to the extent that such construction activities are within the United States.

Held, further, to the extent that P received gross receipts from its parent company for processing services of its parent's data for the parent's clients, such revenue does not constitute DPGR.

Val J. Albright, Michelle Y. Ku, and Brent C. Gardner, Jr., for petitioner.

Bettina M. Nadler, Carol B. McClure, and Ashley V. Targac, for respondent.

PARIS, Judge: Respondent determined a deficiency of \$858,392 with respect to petitioner's Federal income tax for 2008. The deficiency is based on respondent's disallowance of a claimed deduction of \$1,946,324 for income attributable to domestic production activities, pursuant to section 199.¹ The issue for decision is whether petitioner is entitled to the deduction.

Petitioner bears the burden of proof. See Rule 142(a).²

FINDINGS OF FACT

I. Petitioner's Background

Petitioner consists of TGS-NOPEC Geophysical Co., Inc. (TGS), and its subsidiaries, which together make up an affiliated group of corporations that files

¹Unless otherwise indicated, all section references are to the Internal Revenue Code (Code) in effect for the year in issue, and all Rule references are to the Tax Court Rules of Practice and Procedure.

²Petitioner has not raised the issue of sec. 7491(a), which shifts the burden of proof to the Commissioner in certain situations. The Court concludes that sec. 7491(a) does not apply here because petitioner has not produced evidence that it has satisfied the preconditions for its application.

a consolidated return for Federal income tax purposes. TGS is a corporation organized and existing under the laws of the State of Delaware. It is a wholly owned subsidiary of TGS-NOPEC Geophysical Co. ASA, a public limited liability company formed under the laws of Norway. Stock in TGS-NOPEC Geophysical Co. ASA is traded on the Oslo Stock Exchange under the symbol "TGS".

For 2008 petitioner maintained its books and records using the accrual method of accounting and computed its income on the basis of a calendar year. At the time it filed its petition, petitioner's principal place of business was in Houston, Texas.

II. Petitioner's Business Activities

A. Overview

Petitioner is engaged in the business of acquiring, processing, and licensing marine seismic data. During 2008 petitioner earned revenue by licensing the processed seismic data to companies in the oil and gas industry. As discussed below, raw seismic data is collected through seismic surveys, during which reflected energy waves are recorded on magnetic tapes. The data on those tapes is then processed to develop an image of subsurface geophysical structures. The processed data is ultimately purchased or licensed by companies in the oil and gas

industry to explore for hydrocarbon deposits and to develop drilling and production equipment.

As of December 31, 2008, petitioner employed 531 individuals in the United States. For 2008 petitioner reported salary and wage payments totaling \$27,296,140. Among its employees, petitioner employed a specialized imaging services team (imaging team) of approximately 55 individuals with advanced degrees or extensive experience in mathematics or the physical sciences. The imaging team was responsible for processing the raw seismic data.

Most of the raw data processed in 2008 was acquired from marine seismic surveys that were completed before the year in issue.

B. Marine Seismic Data Acquisition Background

The process of marine seismic data acquisition involves the recording and measurement of the travel time of seismic waves from a known energy source at or near the ocean's surface to various depths in the earth's subsurface. Generally, to conduct a seismic survey, petitioner would hire a marine vessel equipped with computers, sourcing equipment, and recording equipment.³

³During 2008 petitioner did not own any seismic vessels and did not own the vessels when the subject raw seismic data was collected. Rather, petitioner would contract for vessels and crews to acquire survey data on parameters set by petitioner's project development teams.

The process involves three main components: an acoustic sound source, a receiver cable (sometimes referred to as the streamer), and technology to record the data. The acoustic sound source is a carefully timed and positioned man-made source signal. It typically consists of an array of 36 acoustic elements tuned to a given frequency and programmed to fire simultaneously (i.e., within one or two milliseconds). The acoustic sound source is placed in the water and towed behind the vessel.

The receiver cables trail behind the vessel, typically at a depth of 10 to 15 meters below the surface of the water. The streamers are long, small-diameter tubes that contain listening devices called hydrophones, which detect the reflected seismic energy from the acoustic sound source. Each streamer is approximately 12 kilometers long, consists of segments between 50 and 200 meters long, and contains thousands of hydrophones.

During a typical marine seismic survey, the acoustic sound source fires a pulse of mechanical energy, forced downward into the seabed, generating a complex sequence of mechanical waves. The pulses reflect off rock strata at varying frequencies. The mechanical waves propagated through the subsurface are reflected from the seabed back up to the streamer, where they are recorded by

the pressure-sensitive hydrophones.⁴ The firing of the pulse is repeated every 10 to 20 seconds as the survey is conducted. The hydrophones record the reflected waves by converting pressure oscillations to electronic data, which is transmitted to the vessel through the streamer cable and recorded onto magnetic field tapes. Two sets of tapes are usually produced: one set containing the raw seismic data and another containing the raw seismic data combined and coordinated with the navigation or location data.

The surveyed area typically spans thousands of square kilometers, and the seismic surveys can take three months or more to complete.⁵ A typical 3-D seismic survey⁶ collects approximately 1,750 gigabytes of data every 24 hours.

⁴The acoustic sound source produces an audible noise when it is fired, but that noise is not recorded during the collection of seismic data.

⁵Some surveys were conducted in multiple phases. For example, petitioner's survey of the Mississippi Canyon area of the U.S. Gulf of Mexico, a joint venture with two other seismic contractors, was performed over six phases that took place during 1999 and 2000.

⁶A 3-D survey collects data through multiple acoustic sound sources and multiple streamers placed so that the resulting data can form a three-dimensional picture of the subsurface. In contrast, a 2-D survey involves a single acoustic sound source and a single streamer, and the reflected data reflects a flat "slice" of the earth. Placing multiple sound sources and multiple streamers effectively produces slices so close together as to generate a three-dimensional image.

Magnetic field tapes containing the raw seismic data are shipped by helicopter or supply boat about every five weeks to seismic data processing centers.

C. Processing of Marine Seismic Data

Processing seismic data involves applying software programs based on geophysical principles to manipulate and convert the raw seismic data into a form that can be interpreted by petitioner's clients. Petitioner employed an imaging team of approximately 55 individuals with advanced degrees or extensive experience and training in geological and geophysical sciences, mechanical engineering, mathematics, or physics, among other related fields, to process seismic data. Seismic survey projects prepared for clients were typically projects of 6,000 square kilometers and could take up to two years to process, requiring four team members working full time to complete.

The members of the imaging team manipulate the raw seismic data using high-powered computers and complex processing software, including proprietary software, based on sophisticated algorithms. The processing sequence is a multi-step procedure, requiring the skill and judgment of the imaging team, the end goal of which is to produce an image of the subsurface geology that oil and gas companies are able to use to find hydrocarbon deposits.

The imaging team's initial step involves removing or attenuating unwanted signal, sometimes referred to as "noise",⁷ while retaining the usable signal. From there, the imaging team applies geophysical algorithms and related computer programs to apply spatial and temporal sampling adjustments to the raw data; applies signal wavelet corrections, such as timing, amplitude, phase, and spectrum corrections; determines imaging earth model parameters; and applies final imaging and postimaging enhancements.

Processing seismic data requires significant computer power and data use. During 2008 petitioner used 25,000 computer processing unit (CPU) cores, 2,200 terabytes of internal disk space, and 150 terabytes of disk space in storage servers requiring 1.5 million kilowatt hours of electricity per month.

As technology improves or new algorithms are developed, the quality of imaging that petitioner is able to produce through the processing sequence also improves. Accordingly, petitioner would often process the same raw seismic data more than once, a practice petitioner refers to as "reprocessing". Reprocessing seismic data involves submitting the raw seismic data through the entire

⁷Noise refers to any unwanted signal picked up by the hydrophones during the acquisition process that may distort or interfere with the seismic data. Sources of noise may include streamer jerk, streamer leveling, ship noise, drilling operations or other seismic operations, marine environment noise, or sea surface reverberations.

processing sequence a new time, using the latest developments in hardware, software, algorithms, and processing techniques, with the objective of improving the quality of the previously processed seismic data. Reprocessing seismic data is significantly less expensive than the initial processing because petitioner does not incur the cost of acquiring the raw seismic data.

Petitioner's processing center is in Houston, Texas. The processing center consists of computer terminals and computer banks maintained in a secure facility with the necessary power requirements and cooling capabilities. To staff the processing center, petitioner employed in 2008 (in addition to the imaging team) 15 scientists who aided in research and development to improve and enhance the processing algorithms and methodology, as well as information technology specialists to support and maintain the computers and related hardware.

The processed data is saved on magnetic tape and stored in petitioner's secured data management center in Houston, which maintains petitioner's data library. Petitioner's practice is to maintain at least two copies of the magnetic tape containing the processed seismic data, with each copy held at a different location, in order to mitigate the risk of loss or damage.⁸

⁸Petitioner's data management center is in Houston. The record is unclear as to the location at which the backup copies of the data are stored.

When the need for processing services outpaced petitioner's capacity, petitioner would sometimes contract out a portion of the processing work to other companies.⁹ In such cases, petitioner would set the parameters of the processing project and assign a member of its quality control team to serve onsite at the processing company to ensure that petitioner's standards were met. Petitioner retained ownership of both the raw seismic data and the final product.

When petitioner received a data order from a client, the processed seismic data from the magnetic tapes would be copied and delivered to the client on a compact disc, digital video disc, computer hard drive, computer tape, or some other tangible, which the purchaser would use to load the data onto its own computer system. The processed seismic data could be (and was) copied multiple times and licensed to multiple clients.¹⁰ Petitioner did not manufacture the media on which it delivered the processed seismic data to its clients.

⁹In 2008 petitioner did not contract processing work to other companies but did sell processed data that had been processed by other companies under petitioner's supervision. The record is not precise regarding when portions of the processed data were contracted to other parties, but by 2008 petitioner no longer contracted its processing services.

¹⁰Petitioner refers to such data as "Multi-Client Seismic Data" (MCS) because it is intend to be, and was, licensed to multiple clients.

III. Licensing of Data

During 2008 petitioner generated revenue by, among other activities, licensing the use of the processed seismic data to its clients in the oil and gas industry. During 2008 it was petitioner's practice to enter into a master licensing agreement (MLA) with each client to which it licensed the processed seismic data. In most instances, petitioner entered into additional supplemental agreements with its clients.

The terms of the MLAs and supplemental agreements contained certain common clauses. Petitioner would grant the licensee the nonexclusive right to use the processed seismic data, while retaining ownership in the processed data and the field tapes. The MLAs restricted use of the data solely to companies holding a valid use-license from petitioner and to related entities (as defined in the MLA).

IV. Reproduction Revenue and Overriding Royalty Revenues

A portion of the revenue petitioner earned during 2008 was for what petitioner describes as "reproduction revenue". Reproduction revenue refers to revenue earned by petitioner with respect to processed seismic data sold or licensed by petitioner but owned by petitioner's parent company. Petitioner processed raw seismic data owned by its parent, stored the data in its (i.e., petitioner's) data management center, and filled orders from clients by copying

that processed data from its library onto tangible media and providing it to the client. Petitioner's parent was considered the party to these MLAs and would recognize the licensing revenue on its own books. Petitioner received a portion of that revenue because it bore the costs of transferring the data to the tangible medium and providing it to the client.

Petitioner additionally received revenue from certain overriding royalty interests that it held.

V. Petitioner's 2008 Tax Return

Petitioner timely filed Form 1120, U.S. Corporation Income Tax Return, for 2008. On the return, petitioner claimed, pursuant to section 199, a domestic production activities deduction (DPAD) of \$1,946,324, on the basis of domestic production gross receipts (DPGR) of \$74,098,854.¹¹ Respondent examined the return, disallowed \$1,941,087 of the claimed deduction, and issued a statutory notice of deficiency, determining a deficiency of \$858,392 based on the disallowance.

¹¹Petitioner later filed Form 1120X, Amended U.S. Corporation Income Tax Return. The adjustments claimed on the Form 1120X were unrelated to and did not affect the claimed DPAD.

Petitioner timely filed a petition with this Court for redetermination of the deficiency, disagreeing with respondent's disallowance of the deduction and alleging that its DPAD should be increased.¹²

OPINION

The issue before the Court is whether petitioner is entitled to a deduction for domestic production activities pursuant to section 199.¹³ Petitioner contends that it is entitled to the deduction on the grounds that its gross receipts from the sale or license¹⁴ of processed seismic data constitute DPGR, because either (1) the processed seismic data meets the definition of qualifying production property (QPP), either as tangible personal property or sound recordings, that were

¹²In its petition, petitioner alleges that it is entitled to a deduction of \$2,467,091 for income attributable to domestic production activities. The parties have since stipulated that, if the Court decides that the processed seismic data sold or licensed by petitioner is qualifying production property under sec. 199(c)(5) and that petitioner meets all other requirements under sec. 199, then petitioner is entitled to a DPAD of \$2,361,746. The parties have also stipulated that, if the Court decides that petitioner's activities constitute engineering services within the meaning of sec. 199(c)(4)(A)(iii) and that petitioner meets all other requirements under sec. 199, then petitioner is entitled to a DPAD of \$2,295,084.

¹³The parties briefed a number of evidentiary objections that the Court had reserved during trial. Those objections not addressed in this Opinion have been resolved by order dated August 26, 2020.

¹⁴Although the parties refer to petitioner's activities as "the sale or licensing" of processed seismic data, the Court will use simply the term "licensing" for ease of description.

manufactured, produced, grown, or extracted within the United States, sec. 199(c)(4)(A)(i); see also secs. 199(c)(5), 168(f)(4); or (2) the processing of seismic data is an engineering service performed in the United States with respect to the construction of real property in the United States, sec. 199(c)(4)(A)(iii). Respondent contends that petitioner is not entitled to the deduction under any section 199 definition.

I. Overview of Section 199

Section 199 was added to the Code by the American Jobs Creation Act of 2004, Pub. L. No. 108-357, sec. 102(a), 118 Stat. at 1424, to provide a tax deduction for certain domestic production activities.¹⁵ Section 199 allows a deduction for a specified percentage of the lesser of a taxpayer's "qualified production activities income" (QPAI) for the taxable year or the taxpayer's taxable income.¹⁶ Sec. 199(a). For 2008 the specified percentage was 6%. Sec. 199(a)(2).

¹⁵The Tax Cuts and Jobs Act of 2017, Pub. L. No. 115-97, sec. 13305(a) and (c), 131 Stat. at 2126, eliminated sec. 199 for taxable years beginning after December 31, 2017.

¹⁶The amount of the deduction may not exceed 50% of the Form W-2 wages of the taxpayer for the taxable year. Sec. 199(b)(1). Petitioner's claimed DPAD of \$2,361,746 (or \$2,295,084 under petitioner's alternative position) is less than 50% of petitioner's 2008 reported Form W-2 wages of \$27,296,140.

For purposes of section 199, QPAI means an amount equal to the excess, if any, of the taxpayer's DPGR for the taxable year over the sum of cost of goods sold allocable to such receipts and other expenses, losses, or deductions properly allocable to such receipts. Sec. 199(c)(1).

Section 199(c)(4) defines DPGR. Relevant to the present case, DPGR includes the gross receipts of the taxpayer which are derived from any lease, rental, license, exchange, or other disposition of QPP which was manufactured, produced, grown, or extracted by the taxpayer in whole or in significant part within the United States. Sec. 199(c)(4)(A)(i)(I). In the case of a taxpayer engaged in the active conduct of an engineering or architectural services trade or business, DPGR includes the gross receipts derived from engineering or architectural services performed in the United States by the taxpayer in the ordinary course of such trade or business with respect to the construction of real property in the United States. Sec. 199(c)(4)(A)(iii). The Court examines each of those definitions more closely below.

II. Expert Witnesses

A. Overview

Each party introduced expert testimony in support of the position that petitioner's gross receipts do or do not constitute DPGR. Petitioner called two

individuals to testify as experts on different aspects of the seismic data industry. Respondent called one individual to testify as an expert in physics and geophysics, especially as it pertains to the acquisition, recording, and interpretation of seismic data. The Court recognized each of the three individuals as an expert and received into evidence as direct testimony each individual's written report. See Rule 143(g).

Expert testimony is admissible where it assists the Court to understand the evidence or to determine a fact in issue. See Fed. R. Evid. 702; see also Gibson & Assocs., Inc. v. Commissioner, 136 T.C. 195, 229 (2011). Determining whether expert testimony is helpful to the Court is a matter within the Court's sound discretion. Gibson & Assocs., Inc. v. Commissioner, 136 T.C. at 230. The Court has broad discretion to evaluate the cogency of an expert's analysis, and the Court weighs an expert's testimony in light of his or her qualifications and with due regard to all other credible evidence in the record. Id. The Court may embrace or reject an expert's opinion in toto, or the Court may pick and choose what portions of the opinion to adopt. See Helvering v. Nat'l Grocery Co., 304 U.S. 282, 294-295 (1938); Gibson & Assocs., Inc. v. Commissioner, 136 T.C. at 230. The Court is not bound by an expert's opinion and will reject an expert's opinion to the extent that it is contrary to the judgment the Court forms on the basis of our

understanding of the record as a whole. Gibson & Assocs., Inc. v. Commissioner, 136 T.C. at 230.

B. Petitioner's Experts

1. Peter Seidel

Petitioner presented the testimony of Peter Seidel as an expert in the acquisition of marine seismic data. At the time of trial Mr. Seidel was serving as the director of marine acquisition for petitioner, had worked in the geophysical industry for approximately 40 years, and participated in multiple professional organizations.

2. Thomas E. Neugebauer

Petitioner also presented the testimony of Thomas E. Neugebauer as an expert in the utilization, processing, and handling of seismic data. At the time of trial Mr. Neugebauer served as vice president of North America projects for petitioner. He had previously conducted project development for petitioner, which involved developing multiclient projects that could then be licensed to petitioner's clients. Mr. Neugebauer has a bachelor of science degree in ocean engineering and has previously worked with other geophysical companies. As of the time of trial, he had approximately 38 years of experience in the seismic industry, including experience in the acquisition and processing of seismic data.

Mr. Neugebauer's expert report offered an explanation of the nature of seismic data, including his view as to whether such data constitutes sound recording; how the data is acquired and processed; and how companies ultimately use the processed data.

C. Respondent's Expert

Respondent presented the testimony of Kevin Bishop as an expert in physics and geophysics, especially as it pertains to the acquisition, recording, and interpretation of seismic data. As of the time of trial Mr. Bishop had 35 years of experience in the oil and gas industry and, since 2012, has provided advising and consulting services related to seismic data. Mr. Bishop's report additionally offered his opinion on whether processed seismic data constitutes sound recording.

III. Qualifying Production Property

A. Overview

Section 199(c)(5) defines QPP as tangible personal property, any computer software, and any sound recording described in section 168(f)(4). Petitioner argues that the processed seismic data that it licenses to its clients constitutes QPP under section 199(c)(5) as either tangible personal property under section

199(c)(5)(A) or as a sound recording within the meaning of sections 199(c)(5)(C) and 168(f)(4). For the reasons set forth below, the Court disagrees.¹⁷

B. Tangible Personal Property

For the purposes of calculating DPGR, a taxpayer determines whether gross receipts qualify on an item-by-item basis. Sec. 1.199-3(d)(1), Income Tax Regs. The term “item” means the property offered by the taxpayer in the normal course of the taxpayer’s business for lease, rental, license, sale, exchange, or other disposition to its clients. Sec. 1.199-3(d)(1)(i), Income Tax Regs. The parties agree that the property offered for sale or license in this case is the processed seismic data. See sec. 1.199-3(d)(1), Income Tax Regs. Petitioner contends that the processed seismic data constitutes tangible personal property because it is delivered to clients via one or more tangible media, such as computer hard drives, compact discs, computer tapes, or magnetic media tape. Relying on Texas Instruments, Inc. v. United States (Texas Instruments I), 551 F.2d 599 (5th Cir. 1977), petitioner argues that the data should be considered tangible personal property because the value of the processed seismic data depends entirely on the

¹⁷Because the Court’s finding that the processed seismic data does not constitute QPP is sufficient to resolve petitioner’s qualification for the deduction pursuant to sec. 199(c)(4)(A)(i)(I), the Court makes no finding as to whether petitioner’s activities fall within the definition of “manufactured, produced, grown, or extracted”.

existence of the tangible media and the data would not exist without being recorded thereon.

Respondent maintains that data, by its nature, is intangible, and the fact that it is delivered to petitioner's clients on a tangible medium does not transform the data into a tangible item. Respondent further argues that Texas Instruments I is distinguishable from the present case on both the law and the facts.

The Court agrees with respondent that the processed seismic data licensed by petitioner is intangible. Tangible personal property, generally, is any tangible property other than land, real property, computer software, sound recordings, qualified films, electricity, natural gas, or potable water. Sec. 1.199-3(j)(2)(i), Income Tax Regs.; see also ADVO, Inc. & Subs. v. Commissioner, 141 T.C. 298, 316 (2013). Tangible personal property is that which is "corporeal," capable of being "seen, weighed, measured, felt, touched, or in any other way perceived by the senses". Black's Law Dictionary (11th ed. 2019).

The term "tangible personal property" does not include property in a form other than a tangible medium. Sec. 1.199-3(j)(2)(iii), Income Tax Regs. The regulations provide, by way of example, that mass-produced books are tangible personal property, but neither the rights to the underlying manuscript nor an online version of the book is tangible personal property. Id. Similarly, computer

software, sound recordings, and qualified films are not, generally speaking, tangible personal property, even if affixed to a tangible medium.¹⁸ Id. subdiv. (i). Rather, the gross receipts from the sale of such items are DPGR by virtue of explicit carve-outs within the Code. See sec. 199(c)(4)(A)(i)(II), (5). The tangible medium to which such property may be affixed, however, is tangible personal property. Sec. 1.199-3(j)(2)(i), Income Tax Regs.

The item licensed by petitioner in this case is the processed seismic data. Data, as such, is inherently intangible. It lacks corporeal form. The intangible nature of this data is not changed by petitioner's loading the information onto a CD or other tangible medium. Such a medium serves only as the vehicle of transfer for the data; it does not become an embodiment of the data itself. In contrast to the printing of a book, where the physical medium becomes the item itself, the data and the delivery medium remain separate and separable items. Petitioner's clients are able to transfer the processed data from the tangible medium, copy the information, and share it within their organization.

Petitioner argues that Texas Instruments I compels a finding that the processed seismic data is tangible personal property. In Texas Instruments I, 551

¹⁸Certain exceptions to this general rule exist where the taxpayer has manufactured the physical medium on which the software, sound recording, or film is affixed. See sec. 1.199-3(j)(5)(ii), (k)(2)(i), Income Tax Regs.

F.2d at 608, the U.S. Court of Appeals for the Fifth Circuit considered whether seismic field tapes and output tapes constituted tangible personal property for purposes of the section 38 investment tax credit (ITC).¹⁹ A subsidiary of the taxpayer in that case was, like petitioner, engaged in the business of collecting, processing, and selling or licensing offshore seismic data to companies in the oil and gas industry. Id. The company collected raw seismic data, which was recorded and transcribed onto magnetic computer tapes called “field tapes”. The field tapes were then taken to the taxpayer’s processing center, where background noise and signals were eliminated and the retained signals sharpened and converted into an image representing a vertical slice of the earth. Id. The data representing the retained signals was stored on “output tapes”. Id. Using the

¹⁹Before its amendment under the Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085, the ITC entitled qualifying taxpayers to an investment tax credit equal to a specified percentage of the basis of “section 38 property”. Under the former sec. 48(a)(1), the term “section 38 property” was defined to include “tangible personal property.” See also Texas Instruments, Inc. v. United States, 551 F.2d 599, 608 (5th Cir. 1977). Although certain dissimilarities between the two provisions exist (e.g., “tangible personal property” under former sec. 48(a)(1) included computer software, see Northwest Corp. & Subs. v. Commissioner, 108 T.C. 358 (1997), and sound recordings, see EMI N. Am. Holdings, Inc. v. United States, 675 F.2d 1068 (9th Cir. 1982)), the Court interprets the two provisions to be generally consistent. See Elec. Arts, Inc. v. Commissioner, 118 T.C. 226, 241 (2002) (“Code provisions generally are to be interpreted so congressional use of the same words indicates an intent to have the same meaning apply, and congressional use of different words indicates an intent to have a different meaning apply.”).

tapes, the taxpayer would produce copies of the data, which it would then license to its clients. Id. The taxpayer's eligibility turned on whether the data tapes constituted tangible personal property. Id. at 609.

The Court of Appeals concluded that the tapes in Texas Instruments I were tangible personal property. In reaching its conclusion, the Court of Appeals articulated what has come to be known as the "intrinsic value" test: that property is considered "intangible if its intrinsic value is attributable to its intangible elements rather than to any of its specific tangible embodiments." Id. at 609. In the case of the data tapes, the Court of Appeals reasoned that "the value of the seismic data is entirely dependent upon existence of the tapes and films. If the tapes and film were destroyed prior to any reproduction of the film analog, nothing would remain. An investment in the data simply does not exist without recording of the data on tangible property." Id. at 611. The Court of Appeals compared the data on the tapes to master film negatives used in the motion picture industry, which the U.S. Court of Appeals for the Ninth Circuit had held were also tangible personal property for ITC and depreciation purposes. Id. at 610-611; see also Walt Disney Prods. v. United States, 480 F.2d 66 (9th Cir. 1973).

Petitioner urges that the present case is analogous to that of the taxpayer in Texas Instruments I. There, as here, the taxpayer collected seismic data on field

tapes and, using complex computer processing methods, translated that data into usable information that it would then sell or license to its clients for oil and gas exploration. Therefore, petitioner's argument goes, like the taxpayer's data in Texas Instruments I, petitioner's data should be treated as tangible personal property.

The Court disagrees. Though the similarities between Texas Instruments I and the present case are superficially appealing, there are material and crucial differences between the two cases. In Texas Instruments I, the original tapes and film were the property at issue in determining eligibility for the ITC. Those tapes contained the original data that was used to produce copies of the data and images that were eventually sold or licensed to the taxpayer's clients. In contrast, the item in the present case is not the original tapes but the processed seismic data, which petitioner nonexclusively licenses to its clients. Unlike the original data tapes in Texas Instruments I, the processed seismic data licensed by petitioner is not inextricably linked to the tangible medium on which it is recorded. Rather, the tangible medium serves only as a delivery vehicle to transmit reproductions of the data from petitioner's library to the client's computer system. Petitioner maintains at least two copies of the data, in different locations, and is capable of recovering the data should anything happen to the tapes. It is the data itself, and not the

tangible medium, that the client is interested in. Once that data has been transmitted to the client, the client is able to load it onto its computers, make its own copies of the data, and share the data within its organization.

The Court recognized the distinction between the original tapes and reproductions of the data in Texas Instruments, Inc. v. Commissioner (Texas Instruments II), 98 T.C. 628 (1992). In that case the Court considered whether the taxpayer was eligible for the ITC with respect to data collection and processing costs incurred in creating speculative data tapes from certain seismic surveys. Id. at 632. All of the surveys were conducted on the Outer Continental Shelf, and the data tapes for those surveys were stored in Calgary, Alberta, Canada. Id. at 631. The taxpayer licensed the seismic data to its clients, delivering the data on copies of those data tapes. Id. Relying on Texas Instruments I, the Court accepted that the original tapes were tangible personal property. Resolution of the case turned on whether those tapes were “property” of a United States person that was “used for the purpose of exploring for” resources on the Outer Continental Shelf within the meaning of the relevant statute. Id. at 634. The taxpayer argued that, although the data tapes were stored in Canada, its nonexclusive clients ultimately used the property for oil and gas exploration purposes on the Outer Continental Shelf, which, in the absence of a passthrough election, the taxpayer argued, entitled it to

the ITC. Id. at 635-636. The Court rejected the taxpayer's argument, pointing out that the taxpayer did not lease the original data tapes to its clients but, rather, licensed copies of the processed seismic data to its clients. The Court explained:

[T]he foundation of the conclusion of the Court of Appeals in * * * [Texas Instruments I] that the seismic tapes and films were tangible personal property and that the basis upon which the ITC was computed included the costs of the seismic data and information recorded thereon was that that intangible information did not exist as property separate from its physical manifestation in the original tapes and films. Those original tapes and films had intrinsic value in that the value of the taxpayer's investment in the seismic information was dependent upon the existence of those original tapes and films. * * *

Id. at 636.

In the present case, petitioner does not license, lease, or sell its original tapes or data recordings to its clients. Rather, similarly to the taxpayer in Texas Instruments II, petitioner copies the processed data onto a separate tangible medium, which it uses to transmit the processed seismic data to its clients. Significantly, it is the information contained on the tangible item, the processed seismic data that provides insight into the potential presence of hydrocarbon deposits, that petitioner's clients seek. The intrinsic value of the item petitioner licenses is attributable entirely to its intangible elements, rather than the tangible embodiment. Unlike the original data tapes or the master film negatives, the value of the processed data is not inextricably tied to the tangible medium.

The Court therefore concludes that the processed seismic data does not constitute tangible personal property for the purposes of section 199(c)(5)(A).

C. Sound Recording

Petitioner argues that, even if the processed seismic data is not tangible personal property, it still falls within the definition of QPP because it is a sound recording, as described in section 168(f)(4). See sec. 199(c)(5)(C). Petitioner takes the position that the recording of the reflected seismic energy waves constitutes a recording of sound because the longitudinal mechanical waves that cause the pressure oscillations measured by the hydrophones during the seismic survey are, in fact, “sound”, within the meaning of the relevant statutes.

Respondent disagrees, arguing that the recording of the seismic data is not a sound recording because sound is not recorded or fixed.

Section 168(f)(4) defines sound recordings as “[a]ny works which result from the fixation of a series of musical, spoken, or other sounds, regardless of the nature of the material (such as discs, tapes, or other phonorecordings) in which such sounds are embodied.” See also sec. 1.199-3(j)(4)(i), Income Tax Regs. The term “sound recordings” does not include the creation of copyrighted material in a form other than a sound recording, such as lyrics or music composition. Id. subdiv. (ii).

The processed seismic data, in the form in which it is delivered to petitioner's clients, is not sound; rather, it is a visual representation of the subsurface of the surveyed area, as derived through analysis and processing of the recorded seismic energy. Even if the Court were to accept petitioner's contention that the marine seismic data constitutes sound within the meaning of the statute, it does not follow that the final product (i.e., the processed seismic data) is a "work[] which result[s] from the fixation of a series of musical, spoken, or other sounds". See sec. 168(f)(4). A visual representation of recorded seismic energy (whether or not such energy is considered sound) does not fall within the ambit of section 168(f)(4). The Court finds further support for this conclusion in section 1.199-3(j)(4)(ii), Income Tax Regs., which excludes from the definition of sound recordings "copyrighted material in a form other than a sound recording, such as lyrics or music composition." In other words, representations of sound in a manner other than in an audible format are not themselves "sound recordings". This logic is no less applicable to subsurface mapping, which, like lyrics or music composition, is a visual portrayal derived from the recorded sound, and not a recording of sound in and of itself.

Further, the processed seismic data neither is a "work" nor results from the "fixation" of sound. A work is "an original expression, in fixed or tangible form

* * * that may be entitled to common-law or statutory copyright protection.”

Black’s Law Dictionary (11th ed. 2019). “Fixation” is another term of art within copyright law, referring to the “process or result of recording a work of authorship in tangible form so that it can be copyrighted under federal law.” Id.; see also 17 U.S.C. sec. 101 (2018) (defining “fixed” in the context of title 17).

Petitioner does not contend, and the Court does not find, that the processed seismic data is an original work of authorship protected by U.S. copyright law. Rather, the processed data is more akin to a useful article, a category to which Congress has not extended copyright protection.²⁰ The Court concludes that the definition of “sound recording” in section 199(c)(5)(C) refers to original pieces of authorship and not, as petitioner contends, such useful articles as processed marine seismic data.

The Court therefore concludes that the processed marine seismic data is not a “sound recording” within the meaning of sections 199(c)(5)(C) and 168(f)(4).

D. Conclusion

The Court holds that the processed marine seismic data is neither tangible personal property nor a sound recording within the meaning of section 199.

²⁰A useful article is “an article having intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.” 17 U.S.C. sec. 101 (2018).

Petitioner therefore has not satisfied the requirements of section 199(c)(4)(A)(i)(I) because the processed marine seismic data leased by petitioner is not QPP, as defined by section 199(c)(5).

IV. Engineering Services With Respect to Construction of Real Property in the United States

Petitioner argues, alternatively, that its gross receipts from the sale or licensing of processed marine seismic data constitute DPGR because the receipts are derived from engineering services with respect to the construction of real property in the United States²¹ within the meaning of section 199(c)(4)(A)(iii) and the regulations. As discussed in greater detail below, the Court agrees.²²

²¹For purposes of sec. 199, “United States” is defined to include “the territorial waters of the United States, and the seabed and subsoil of those submarine areas that are adjacent to the territorial waters of the United States and over which the United States has exclusive rights, in accordance with international law, with respect to the exploration and exploitation of natural resources.” Sec. 1.199-3(h), Income Tax Regs.

²²Petitioner performed certain services either outside the United States or in connection with the construction of real property outside the United States. The parties have stipulated that, if the Court finds that petitioner’s activities constitute engineering services within the requirements of sec. 199(c)(4)(A)(iii), petitioner’s DPAD would be limited to an amount which reflects only those receipts in connection with construction of real property in the United States.

A. Engineering Services

In the case of a taxpayer engaged in the active conduct of an engineering or architectural services trade or business, section 199(c)(4)(A)(iii) includes within the definition of DPGR the gross receipts of the taxpayer which are derived from “engineering or architectural services performed in the United States by the taxpayer in the ordinary course of such trade or business with respect to the construction of real property in the United States.”

As a threshold matter, the Court must first determine whether petitioner is engaged in the active conduct of an engineering or architectural services trade or business. “Engineering services” includes “any professional services requiring engineering education, training, and experience and the application of special knowledge of the mathematical, physical, or engineering sciences to those professional services such as consultation, investigation, evaluation, planning, design, or responsible supervision of construction * * * or erection, in connection with any construction project.” Sec. 1.199-3(n)(2), Income Tax Regs. At the time a taxpayer performs the engineering services, the taxpayer must be “engaged in a trade or business * * * that is considered engineering or architectural services for purposes of the * * * [North American Industry Classification System (NAICS)] on a regular and ongoing basis.” Id. subpara. (1).

Petitioner provided extensive evidence demonstrating that it is engaged in the active conduct of an engineering services trade or business and that its activities constitute engineering services within the meaning of section 199(c)(4)(A)(iii). Petitioner's business involves the acquisition, processing, and licensing of marine seismic data, activities which require extensive knowledge and training in, inter alia, geological and geophysical sciences, mechanical engineering, mathematics, and physics.

The processing of the raw seismic data requires high-powered computer technology and complex processing software. Petitioner maintains a seismic data processing center in Houston, at which it houses its computer terminals and data storage servers. During 2008 petitioner's processing center employed an imaging team of approximately 55 individuals with advanced degrees or extensive experience in mathematics or the physical sciences. These employees were involved in various stages of the data processing sequence, applying their education and training to manipulate the raw seismic data using geophysical principles to produce a visual representation of the subsurface of a given area. In addition, petitioner employs 15 scientists, who aid in research and development to improve and enhance the processing algorithms and methodology, and various

information technology specialists to support the computer and related hardware functionality of the processing group.

Moreover, petitioner's activities fall squarely within NAICS business activity code 541360, "Geophysical Surveying and Mapping Services", which is categorized under the designation 5413, "Architectural Engineering, and Related Services". See sec. 1.199-3(n)(1), Income Tax Regs. NAICS defines "Geophysical Surveying and Mapping Services" as follows:

This industry comprises establishments primarily engaged in gathering, interpreting, and mapping geophysical data. Establishments in this industry often specialize in locating and measuring the extent of subsurface resources, such as oil, gas, and minerals, but they may also conduct surveys for engineering purposes. Establishments in this industry use a variety of surveying techniques depending on the purpose of the survey, including magnetic surveys, gravity surveys, seismic surveys, or electrical and electromagnetic surveys.

During 2008 petitioner was actively involved in the interpretation and mapping of marine seismic data to assist in the location and acquisition of oil and gas. The Court concludes that petitioner was engaged in the active conduct of an engineering or architectural services trade or business and that its processing of raw seismic data constituted engineering services within the definition set forth in section 199(c)(4)(A)(iii) and the regulations thereunder.

B. Construction of Real Property

Even if petitioner was engaged in the active conduct of an engineering services trade or business, its gross receipts for those services do not qualify as DPGR unless the services were performed “with respect to the construction of real property in the United States.” Sec. 199(c)(4)(A)(iii). The Court must therefore consider whether petitioner’s processing of marine seismic data for its clients was performed “with respect to construction of real property.”²³

Section 1.199-3(m)(1)(i), Income Tax Regs., defines “construction” to mean “activities and services relating to the construction or erection of real property (as defined in paragraph (m)(3) of this section) in the United States by a taxpayer that, at the time the taxpayer constructs the real property, is engaged in a trade or business * * * that is considered construction for purposes of the * * * [NAICS] on a regular and ongoing basis.” See also *id.* para. (n)(1) (“DPGR include gross receipts derived from engineering or architectural services performed in the United States for a construction project described in paragraph (m)(1)(i) of this section.”). Such construction activity may relate to the construction of real property such as

²³As referenced *supra* note 22, the parties agree that, if petitioner otherwise meets the requirements of sec. 199(c)(4)(A)(iii), petitioner’s DPGR will be limited to only those gross receipts received for processing data in the United States, with respect to oil and natural gas properties in the United States. The Court’s discussion herein is therefore limited to only such services.

drilling oil and gas wells or support activities for oil and gas operations. Id. para. (m)(1), (3). Activities constituting construction are activities “performed in connection with a project to erect or substantially renovate real property”. Id. subpara. (2)(i).

As detailed in the testimony of expert witnesses presented by both parties, processed seismic data is used by oil and gas companies in support of the exploration, appraisal, development, and production phases of oil and gas production. Petitioner’s clients included various energy or oil and gas companies, as well as other companies engaged in the exploration for or development of drilling oil and gas wells.

Respondent contends that petitioner’s activities are not performed “with respect to construction of real property” because petitioner’s clients use the processed seismic data “for a variety of reasons other than to drill a well”. Uses for processed seismic data include to determine structural and stratigraphic properties; to qualify or quantify competitor prospects; to determine government leasing value; to evaluate opportunities to invest in a project; to determine reservoir holdings; to tie to well control for lithological identification; to estimate reservoir rock types and porosity; to prepare reservoir production economic forecasts; for well planning; to improve or maintain reservoir production rates; to

optimize infill drilling locations to assess regional trends; and to acquire more advanced data than that which the company already has.²⁴

Respondent is correct that petitioner's clients may license the processed seismic data other than for the direct and immediate purpose of drilling of a well. All of the purposes cited by respondent, however, are in service of the client's ultimate objective, which is to identify potential deposits of hydrocarbons and construct drilling and support infrastructure. Such ends are consistent with the statute, which requires that the engineering services be provided "with respect to" construction, sec. 199(c)(4)(A)(iii), and with the regulations, which define construction to include "activities and services relating to" the construction of real property, sec. 1.199-3(m)(1)(i), Income Tax Regs.

Petitioner's clients use the processed seismic data, among other reasons, to evaluate the presence of hydrocarbon deposits, to determine where (or whether) to drill or construct wells and related infrastructure, to determine whether to invest in a particular well, to determine reservoir holdings, or to gain a more complete understanding of the subsurface of a given area. The Court concludes that the

²⁴Seismic data may also be used for other purposes, such as scientific or research purposes. Respondent does not allege, and nothing in the evidence suggests, that petitioner's claimed DPGR includes such sales. Indeed, petitioner's client list and sales calculation include only companies engaged in oil and gas exploration and production.

processed marine seismic data is used by petitioner's clients in support of the construction of real property, as defined by section 199(c)(4)(A)(iii) and the regulations thereunder.

C. Respondent's Arguments

Respondent contends that petitioner does not meet the requirements for application of section 199(c)(4)(A)(iii). Specifically, respondent argues that petitioner is not providing a service; that any service petitioner does provide is not provided at the time its client constructs the property; and that seismic data is only one of many types of data relied upon by geoscientists in determining whether to drill.

The Court disagrees with these arguments. Respondent's contention that petitioner is "not providing a service" is without merit. Respondent argues that petitioner "does nothing more than provide data that is incorporated, as one piece of a data pie, into analysis done by its clients. * * * [Petitioner] has no role in any subsequent activity after the customer gets the data." This assessment mischaracterizes petitioner's activity. Petitioner's processing and reprocessing of seismic data is a highly technical and complex procedure that requires the labor and services of well-educated employees and the application of their specialized

knowledge and judgment. A typical seismic survey may take one to two years to process, requiring at least four trained geophysicists working full time.

Moreover, that petitioner's services are only part of its client's larger operation is not inconsistent with the statutory requirement that such services be provided "with respect to the construction of real property in the United States," sec. 199(c)(4)(A)(iii), or with the regulatory requirement that such services be provided "in connection with any construction project", sec. 1.199-3(n)(2), Income Tax Regs. Nothing in the text of the statute or the regulations requires that the engineering services that petitioner provided be the sole data upon which its client relied, nor does the text of either require that petitioner remain involved throughout the duration of the construction project.

Similarly, respondent's argument that petitioner does not "provid[e] any services at the time its customer constructs any real property" misreads the relevant text. Section 1.199-3(n)(1), Income Tax Regs., provides that "[a]t the time the taxpayer performs the engineering or architectural services, the taxpayer must be engaged in a trade or business * * * that is considered engineering or architectural services for purposes of the NAICS * * * on a regular and ongoing basis." "Construction project" for the purposes of section 199(c)(4)(A)(iii) refers to the definition provided in section 1.199-3(m)(1)(i), Income Tax Regs. See sec.

1.199-3(n)(1), Income Tax Regs. Section 1.199-3(m)(1)(i), Income Tax Regs., sets forth that

[t]he term construction means activities and services relating to the construction or erection of real property * * * in the United States by a taxpayer that, at the time the taxpayer constructs the real property, is engaged in a trade or business * * * that is considered construction for the purposes of the * * * [NAICS] on a regular and ongoing basis.

In the regulation above, the phrase “at the time the taxpayer constructs the real property” refers to taxpayers such as petitioner’s clients, who perform the construction, requiring that such taxpayers be engaged in the regular and ongoing trade or business of construction activity. That definition, read in conjunction with section 1.199-3(n)(1), Income Tax Regs., does not require that the construction be underway at the time the engineering services are provided, but rather, that the engineering services be provided by taxpayers like petitioner in support of a construction project undertaken by parties engaged in the construction industry.

Further, the phrase “activities and services relating to” construction activities is construed to include, in the context of providing engineering services, activities that occur before the construction activity begins. Section 1.199-3(n)(1), Income Tax Regs., explicitly provides for the inclusion of gross receipts for “feasibility studies for a construction project in the United States, even if the

planned construction project is not undertaken or is not completed.” (Emphasis added.) A feasibility study, by definition, occurs before the commencement of the construction activity. Similarly, a taxpayer providing engineering services to determine the suitability of a drilling project will generally do so before the project is undertaken.

Respondent additionally argues that, even if the processing of seismic data does constitute engineering services within the meaning of section 199(c)(4)(A)(iii), petitioner’s reproduction revenue and the revenue earned in connection with the licensing of data for which the processing services were contracted to other companies do not. Accordingly, respondent contends that revenue earned from such activities should not be included in DPGR.

During 2008 petitioner received and claimed as DPGR \$9,592,974 in reproduction revenue. Reproduction revenue refers to revenue received by petitioner with respect to processed seismic data sold or licensed by petitioner but owned by petitioner’s parent company. Petitioner processed the raw seismic data owned by its parent, stored the data in its data management center, and filled orders from clients by copying the processed data from its library onto tangible media and providing it to the client. All of the activities petitioner performed were performed within the United States.

On the basis of the evidence in the record, the Court concludes that, to the extent that petitioner received reproduction revenue from its own clients for processing services for construction activities in the United States, such receipts are no different from the services petitioner generally provided; the difference is merely the ownership of the underlying raw seismic data. Where, however, petitioner has reproduction revenue received from its parent where petitioner has used raw seismic data owned by its parent, to provide and process surveys to the parent's clients, the Court concludes that the services petitioner provides are too removed from the construction activity to satisfy the requirements of section 199(c)(4)(A)(iii) and that petitioner is not entitled to a DPAD for any of those amounts.

With respect to the revenue earned in connection with the licensing of data for which the processing services were contracted to other companies, the Court agrees with petitioner that such revenue may be included in petitioner's DPGR (to the extent that the other requirements of section 199 are met and the data was processed for petitioner's clients and not its parent's clients) because petitioner performed engineering services for its clients in connection with the processing of that data, as well. At times, particularly when the company was smaller, petitioner would contract a portion of its processing work to other companies when the need

for services outpaced its capacity. When doing so, petitioner would set the parameters of the assignment and would designate a member of its quality control team to work onsite at the contracted company to ensure compliance with petitioner's standards. Such activities still require knowledge and application of seismic processing and, the Court finds, are sufficient to fall within the scope of "engineering services", as defined by the Code and the regulations.

Finally, the parties have stipulated that some portion of the DPGR was revenue derived from petitioner's ownership of overriding royalty interests (ORRI). Petitioner has failed to explain why any generally accepted definition of ORRI would qualify under the engineering exception for the construction of real property within the United States. Such ORRI income does not satisfy the requirements of section 199(c)(4)(A)(iii).

The Court concludes that petitioner's activities constitute engineering services within the meaning of section 199(c)(4)(A)(iii). Accordingly, the Court holds that petitioner is entitled to a DPAD in the amount conditionally stipulated by the parties for 2008, subject to the limitations set forth above.

V. Conclusion

For the foregoing reasons and subject to the limitations discussed supra notes 22 and 23 and part IV.C, the Court concludes that petitioner's gross receipts

from its licensing of processed marine seismic data constitute DPGR because the receipts are derived from engineering services with respect to the construction of real property in the United States. The Court has considered the parties' arguments and, to the extent not addressed herein, concludes that they are moot, irrelevant, or without merit.

To reflect the foregoing,

Decision will be entered
under Rule 155.