



**THE ATTORNEY GENERAL  
OF TEXAS**

**AUSTIN 11, TEXAS**

**PRICE DANIEL  
ATTORNEY GENERAL**

**December 23, 1952**

This Opinion  
Overrules Opinion  
# 2-3695 insofar as they  
conflict -

This Opinion  
Affirms Opinion  
# V-33010-362110-378  
C-726140-41

Hon. Robert S. Calvert  
Comptroller of Public Accounts  
Austin, Texas

Opinion No. V-1567

Re: Reconsideration of Att'y  
Gen. Op. V-1353 (1951)  
and all related prior  
opinions.

Dear Sir:

You have requested a reconsideration of Attorney General Opinion V-1353 (1951) and of all related prior Attorney General Opinions. Opinion V-1353 passed upon the taxability under Article 7060a, V.C.S., of certain well servicing operations. Subsection (b) of Section 1 of Article 7060a, as amended by Section XIV of House Bill 285, Acts 52nd Leg., R.S. 1951, ch. 402, p. 695, reads as follows:

"(b) Every person in this State engaged in the business of furnishing any service or performing any duty for others for a consideration or compensation, with the use of any devices, tools, instruments or equipment, electrical, mechanical, or otherwise, or by means of any chemical, electrical or mechanical process when such service is performed in connection with the cementing of the casing seat of any oil or gas well or the shooting or acidizing the formation of such wells or the surveying or testing of the sands or other formations of the earth in any such oil or gas wells, shall report on the 20th day of each month and pay to the Comptroller, at his office in Austin, Texas, an occupation tax equal to 2.42% of the gross amount received from said service furnished or duty performed, during the calendar month next preceding. The said report shall be executed under oath on a form prescribed and furnished by the Comptroller."

In connection with your request, there has been submitted a report, compiled by various members of the oil industry, defining terms, explaining various operations involved in drilling, testing and surveying wells, and giving reasons why each of said operations is or is not embraced by the provisions of Subsection

(b) of Section 1 of Article 7060a above quoted. Likewise, a legal brief has been furnished us. This brief discusses the submitted report in the light of court decisions and prior opinions of this office.

We will first consider operations which might or might not be taxable as a service performed "in connection with the cementing of the casing seat of any oil or gas well . . ."

The bottom of the producing or oil string of casing, the last column of casing placed in a well, is commonly referred to as the "casing seat." Placing cement between the oil string and the sides of the well bore is, of course, the exact operation named in the statute and is a taxable service. Cementing "liners" (strings of casing whose tops are situated below the surface) is also a taxable service if the liners are used as extensions of the oil string as distinguished from liners used to repair defective strings of casing. Various other cementing services are explained and classified in the report as nontaxable. We quote the following therefrom.

"Cementing conductor, surface, intermediate or protective casing strings"

"In oilfield terminology, the casing seat of an oil or gas well is the bottom of the producing string of casing in the well. In the course of drilling, it may be found desirable to run a string or several strings of casing prior to the running of the producing string. These casing strings are commonly referred to as conductor, surface, intermediate or protective strings.

"A conductor string is a short string of casing extending from the surface to a comparatively shallow depth used to support loosely consolidated surface formations, to keep the top of the well bore open, and to provide a means of conveying fluid used in drilling from the well bore.

"A surface string is a string run to greater depth than a conductor string and fulfills the same requirements outlined above for a conductor string. In addition, it excludes waters, and may provide support for strings of casing subsequently run in the well.

"Intermediate and protective strings, when employed, are run to facilitate drilling operations for various reasons: (1) to exclude water; (2) to reduce

the cost of drilling fluid by keeping contaminants such as salt from entering the well bore; (3) to eliminate the loss of drilling fluids in 'thiefing' formations; (4) as a precautionary measure to provide a means of controlling pressure in the event excessive pressures are encountered; and (5) to prevent caving.

"Conductor, surface, intermediate and protective strings of casing, when used, are used to facilitate drilling operations. Cementing of these strings cannot be considered as cementing the casing seat in an oil or gas well, and therefore is not taxable.

"Cementing to control wells  
Cementing for lost circulation

"On occasion, it may be found necessary to pump cement into a well for the purpose of: (1) bringing the well under control; (2) shutting off undesirable flows of fluids; or (3) sealing off intervals in the hole where drilling fluid is being lost. These operations are undertaken to facilitate drilling and are not the operation of cementing of the casing seat in an oil or gas well.

"Plug back operations

"A plug back operation is one in which the bottom section of the well bore is cemented off to prevent the inflow of fluid from that portion of the hole. Many types of plugs are used. This operation is not the cementing of the casing seat in an oil or gas well.

"Cementing for abandonment

"Before abandoning a well, cement plugs are placed in the hole to prevent escape of fluids from one formation to another and to protect fresh water sands. The operation of placing a cement plug in a well is not the cementing of the casing seat in an oil or gas well.

"Squeeze cementing operations

" 'Squeeze cementing' is an operation in which a fluid cement, after being placed in the desired

position in a well, is subjected to high pump pressure to force some of the cement into the surrounding formations. This operation is not the cementing of the casing seat in an oil or gas well.

"Cementing to repair defective casing  
Cementing liners for remedial or repair  
operations"

"Casing that is defective when run in the hole or becomes defective after being in the hole (becomes corroded, etc.) may permit unwanted fluids to enter the well or allow well fluids to escape from the well. When such defects cannot be repaired by cementing alone, then a liner may be cemented through the defective section. Such operations are not cementing of the casing seat in an oil or gas well.

"Cementing for whipstock operations"

"In the course of drilling operations, it frequently becomes desirable to deflect or change the direction of the hole for one of several reasons: (1) to complete drilling in a predetermined target area; (2) to correct a 'crooked hole' condition that has developed during the course of drilling; or (3) to drill around an obstacle (lost tools, pipe, etc.) that cannot be removed from the hole. A deflecting tool which permits directing the course of a well, is known as a whipstock. It is a long, slender, tapered steel wedge which is supported in the well in such a position that the drilling tools are deflected from their previous course and in the desired direction. Whipstocks are sometimes cemented in place. Cementing of a whipstock is not the cementing of the casing seat in an oil or gas well."

We agree with the foregoing classifications for the reasons stated in the report.

In Attorney General Opinion O-3627 (1941) the following questions were considered:

"1. A party takes a contract from the operator to cement a well for a stipulated price (perhaps he uses 500 sacks of cement). Will he be permitted to

deduct the cost of cement before computing the tax?

"2. There is a tool known as a 'cement packer' which is used in cementing liners in wells. This tool is leased or rented to the owner of the well or contractor for a fee of \$12 per day operators time, plus car mileage to location and operator's expenses. Would the party who receives rent for the 'packer' be subject to the tax on the rental received or rental plus expenses of the operator?"

The first question on its face seems to imply that all cementing operations are taxable; however, the Opinion's answer thereto limits its scope to "a party who cements a casing seat of an oil or gas well . . ." The cost of the cement was held to be deductible from the gross receipts before computing the tax on this service. The Opinion also held that the furnishing of the "cement packer" was the furnishing of a material and that "if the furnishing and installing of the 'cement packer' in question is one of the four taxable operations named in the statute [or is performed in connection with one of said operations], the charge for furnishing the 'cement packer' should not be included in the receipts on which the tax is computed and the charge for furnishing the operator should be included." The previously quoted classification of the various cementing services is consistent with the results reached in Opinion O-3627.

This office has also specifically ruled that a temperature survey made to locate the top of the cement behind the casing for the purpose of determining the success of the cementing is a taxable service since it is performed in connection with the cementing of the casing seat. Att'y Gen. Op. V-1353 (1951).

We will next consider whether certain operations are taxable as services performed "in connection with . . . the shooting . . . the formation of such wells . . ." We quote the following discussion from the submitted report.

"Open hole shooting with explosives, projectiles, shaped charges, or jets

"Shooting of the formation is done in order to commence or increase the flow of fluids into the well bore. It is done by detonating an explosive charge in an open hole below the casing seat. This operation can be performed with the use of explosives,

projectiles, shaped charges, or jets. The operation may be performed any time during the life of the well when the operator believes he can commence or increase the flow of oil or gas into the well bore.

"This process is 'shooting the formation' in the language and meaning of the act, Article 7060-a; hence, is taxable.

" . . .

"Perforating pipe to provide opening in pipe

"In oil field terminology, shooting for the purpose of perforating pipe is the creation of openings or holes in the pipe by explosive means. There are several methods:

- (1) The use of projectiles, and
- (2) The use of shaped charges or jets.

"The operation is performed any time during the life of a well when it is believed production may be commenced or increased by providing means of fluid flow from a formation into the casing.

"The operation is performed as follows:

"A device called a gun which contains a number of explosive charges is lowered on an insulated cable to a predetermined depth in a well. Electric current sets off the charges. In the case of a perforating gun, openings or holes are created by detonation of the charges causing projectiles to pierce the pipe. In the case of shaped charges or jets, openings or holes are created by detonation of explosives which generate jets of high temperature, high velocity gases. These gases disintegrate the metal of the pipe. This operation is not the shooting of the formation in an oil or gas well, and therefore is not taxable.

"Shooting off pipe or casing  
Shooting to recover casing

"These terms mean, generally, salvage operations.

"Salvage operations may be necessitated by several occurrences, notably:

(1) In a dry hole where casing has been installed and cemented in the well bore and it is desirable to recover as much of the casing as possible for use elsewhere;

(2) When drill pipe has been stuck in the well due to the sloughing of the formation into the well bore, and it is desirable to recover as much of the string of pipe as possible;

(3) When a well has produced its ultimate recovery and can no longer be produced economically, and it is desirable to recover as much of the casing as possible for use elsewhere.

In all of these cases, the casing or pipe is cut with an explosive charge lowered on a wire line. The form of the explosive charge may vary widely, consisting of dynamite, solid or liquid nitroglycerin, or specially designed shaped charges known as jet casing cutters.

"Since these operations concern salvage of materials rather than action on productive formations, they are non-taxable.

"Shooting to recover or remove fish in fishing operations

" 'Fish' are any obstructions in a well bore which are not natural. These may include drill bits or parts of them which have been broken off or otherwise disconnected from the drill pipe. The fish may be any number of sections of pipe and drill collars which have twisted off in the threads or broken in two along their length. The fish may be hand tools or other metal objects which have fallen into the well bore from the surface.

"Shooting to recover or remove fish is done for the purpose of breaking these obstructions into small pieces with an explosive charge. The smaller pieces are picked up more readily by magnets or special baskets.

"The disintegration can be accomplished by an ordinary nitroglycerin charge lowered on a wire line and exploded on contact with the fish. This usually causes sloughing of the formation. The preferred method is to use the shaped charge, similar to that used in casing perforations. In this case, it is pointed directly downward and the jet effect is concentrated directly on the obstruction which is under attack.

"The procedure of using an explosive charge to clean out obstructions is not concerned with any formation fracturing and is not taxable.

"String shot shooting to open screen or perforations

" 'String Shot', 'Cord Shot', or 'Primacord Shot' are similar terms used to describe a light explosive charge lowered into the well to clean the plugged openings of the screen or perforations.

" 'Cord' is an abbreviation of 'Primacord'.

" 'Primacord' is the trade name for an impregnated fuse cord which has explosive power. Normally used as a booster explosion for detonating dynamite, it has enough power of its own to do cleanout jobs without rupturing screens or casing.

" 'String Shot' is a colloquialism which describes the cord.

"When the string shot is detonated, fluid is forced through the openings in the screen or the perforations, removing the solid matter from the exterior surfaces so that flow of oil will resume.

"This is a cleaning out or restoring of fluid flow through the screen slots and not an action of shooting the formation, and, therefore, is a non-taxable service."

The above quoted conclusions as to the taxability of the described operations are in accord with prior rulings of this office. In Attorney General Opinion O-3627 (1941) it was held that perforating the casing with a cutting tool called a "perforator" did not constitute "shooting" in the sense attributed to that word by the

oil and gas industry. It is suggested in the brief that was furnished us that Opinion O-3627 holds that shooting for the purpose of cleaning out an oil well is subject to tax even though it was not shown that a formation of the earth was shattered. We do not so interpret Opinion O-3627 since we think such interpretation would be inconsistent with the discussion of "shooting" given at pp. 7-9 of the Opinion. Shooting for the purpose of cleaning out a well is subject to tax only if the shooting operation is done in connection with one of the named taxable operations. Attorney General Opinion O-3784 (1941) held that the use of a gun perforator in an open hole to fire bullets into the formations of the earth served the purpose of "shooting" even though the use of a mechanical perforator or a gun perforator in its ordinary manner and not in connection with a named taxable operation was not a taxable service. Attorney General Opinions O-4261 (1942) and V-1353 (1951) also recognize that perforating is nontaxable unless performed in connection with a taxable service.

" . . . acidizing the formation of such wells . . . ", as well, of course, as services performed "in connection with" acidizing formations, is a taxable service. The submitted report classifies as nontaxable the following services: acidizing to recover stuck fish or stuck drill pipe or casing; acidizing to clean screens; acidizing to dissolve mud sheaths; and acidizing soluble metals. With this we agree since no formations of the earth are acidized. It has been suggested that Opinion O-3627 holds that acidizing to clean out a well is taxable without any showing that a formation of the earth was acidized. We do not think that the Opinion can be so interpreted in view of the definition of acidizing, quoted at page 9, as a "process of introducing acid into the pore space of an acid-soluble producing formation . . . "; however, that there may be no doubt on this point, we expressly hold that acidizing which does not have for its purpose the dissolution of a formation is not a taxable service unless it is performed in connection with a taxable service.

The report has classified as taxable as services "performed in connection with . . . the surveying . . . of the sands or other formations of the earth in any . . . oil or gas wells" the following operations: electric logging to record geological formations, radioactive logging, magnetic logging and dip recording. Radioactive logging is separated into gamma ray logging and neutron logging. Magnetic logging is still in the experimental stage. In Attorney General Opinion O-3698 (1941), it was held that a dip survey was a taxable service. All of the other above enumerated services are clearly "surveys" of the formations of the earth and are taxable. See Petroleum Production Practice by F. B. Plummer, Part I, Sec. 24, (1939).

Deflection or deviation surveys are explained in the submitted report as follows:

"A survey made in a well while drilling which utilizes an instrument on a wire line or on pipe to record an angle of the drill hole from vertical. The purpose of this survey is to determine the course of the drill hole in order to reach the desired objective and not to survey formations."

Consistently with some of the conclusions reached in Opinion O-3698, this service would be considered taxable; however, we are of the opinion that the above described operation is in fact a survey of the drill hole rather than a survey of the formations of the earth and is not a taxable service under Article 7060a.

"Depth measurement" is described in the report as "a survey for the purpose of determining the depth of a point in a well by the use of a weighted wire and a calibrated measuring device." Opinion O-3698 said of "depth determination":

"This operation consists of locating the depth in the well of certain objects or parts of the well equipment, and it clearly comes within the definition of a survey."

We agree that the operation is a "survey" but think it properly should be treated as a survey of a portion of the well bore. Since it is not a survey "of the sands or other formations of the earth," it is not a taxable service; and Opinion O-3698 is overruled on this point.

Surveys to locate the free point of stuck pipe are explained in the report as follows:

"A survey of this type involved the use of instruments to measure the stretch of the pipe so that the point of seizure can be determined. An instrument is lowered into the pipe and measures the stretch of the pipe. This operation is repeated at various depths until no further stretch is indicated. This indicates the point of seizure."

We do not consider that this operation constitutes a survey "of the sands or other formations of the earth" and therefore hold that it is not taxable under Article 7060a. For the same reason, we hold that the following operations, as explained in the report, are not subject to tax.

"Caliper logs

"This survey (sometimes called section gage) involves the use of instruments with mechanical feelers or arms run in an uncased hole on a wire line or insulated electric cable to determine the size or diameter of the hole which has been drilled. The recording can be made at the surface simultaneous with the running, or it can be made by means of mechanical stylus contained within the instrument itself. This survey is for the primary purpose of assisting drilling operations by knowing the diameter of the hole being drilled.

"Collar location

"A survey run in the well to locate the depth of the collars in the producing casing string. It is performed by means of mechanical feelers run on a wire line. This type survey is often run in conjunction with radioactive logs for the purpose of substantiating or measuring the depth of the collars.

"Electric log to locate junk or fish in the hole

"This survey involves the use of electric log or 'Schlumberger' to determine by means of surface recording of depth and electrical resistivity the point at which pipe, tools, or other objects have been lost and embedded in the wall of the bore hole. The electric log in this case is a useful tool to the drilling operator as a substitute for mechanical feelers.

"Corrosion surveys

"Surveys run inside pipe of an oil or gas well to determine the extent of corrosion of the metal. These surveys involve the use of an instrument with mechanical feelers run on a wire line with recordings at the surface or within the instrument itself.

" . . .

"Fluid level surveys

"Fluid level surveys are made after a well has ceased to flow naturally and is being produced by

artificial means. The level of the fluid is usually obtained by a sonic device which measures the period of time for a sound wave to travel from the surface to the fluid level and back to the surface. By knowing the speed of the sound wave and the time for the reflected wave to return, it is possible to calculate the height of the fluid in the well. The data obtained are of value in determining if a decrease in production is due to the pump or gas lift valves being set too high or if the equipment is not functioning properly. If the fluid level is near or at the depth where the pump or gas lift valve is set, the equipment is set too high. On the other hand, if the fluid level is found relatively higher than where the pump or gas lift valve is set, the decreased production may be due to the equipment not operating properly."

We are urged to reconsider and overrule the holdings of Opinions O-3698 and V-1353 on the taxability of "temperature surveys". The following question was considered in Opinion O-3698.

"4. There is performed in drilling for oil and gas a service known as 'temperature determination.' By lowering into the well an electrical resistance thermometer and recording at the surface in the form of a graph all its readings, the temperature of the entire length of the well is available. By deduction from the known cooling effects of flowing gas, the less cooling effects of flowing oil, the heat generative effects of hardening cement, the following results are made possible:

- "a. Location of oil and gas bearing formations and differentiation between the two.
- "b. Location of cement top behind the casing.
- "c. Determination of the base of the gas to permit the casing to be set at the proper depth.

"Please tell me whether or not this service would be subject to this tax?"

The following reply was made to the above quoted query.

"Ascertaining the temperature in the various parts of the well is clearly a form of survey, according to the definitions of well survey. See 'Petroleum Production Practice,' Part I, supra. In a booklet entitled 'Schlumberger Auxiliary Services,' recently published by Schlumberger Well Surveying Corporation, on page 2, is a discussion of 'temperature determination' in wells, and the discussion is headed 'Temperature Surveys' and reads in part as follows:

" 'It has long been realized that the study of temperature in a drill hole could be of great value if it could be accurately and practically measured . . .

" 'In the last few years an electrical-resistance thermometer has been evolved which responds to temperature variations rapidly and records them within 0.2 degrees Fahrenheit of accuracy. This thermometer is lowered into the well at the end of the insulated cable used for electrical logging and all temperature readings are recorded at the surface, in the form of a continuous graph.

" 'The most profitable purpose served by this type of temperature survey is the location of oil and gas bearing formations in limestone. In West Texas and Kansas this has been accomplished in several hundred temperature surveys which, in conjunction with electrical logging, located the pay and differentiated between oil and gas.' (Underscoring ours)

"Our answer to your fourth question is that the service of 'temperature determination' in the manner you describe in a survey within the meaning of the statute and is therefore a taxable service."

In so far as this answer goes, we believe it is correct; but we do not think it covered the entire question. The quoted authority was dealing with a type temperature survey which resulted in locating and defining various formations of the earth. It thus accomplished a survey of the sands or other formations of the earth, just as electric logging does, and is, in our opinion, a taxable service. However, we do agree with the proposition submitted in the brief and report that not all temperature surveys

are surveys of the formations of the earth. Temperature surveys made in the course of producing operations to check the mechanical condition of equipment in the hole are not surveys of the formations of the earth and are not taxable. A temperature survey made to check the success of a nontaxable cementing job is not taxable for the same reason. To the extent that Opinion O-3698 holds to the contrary, it is hereby overruled. However, as we have previously stated, we think that a temperature survey made for the purpose of determining the success of the cementing of the casing seat is a taxable service since it is a service rendered in connection with one of the enumerated taxable services. This, as we interpret it, is the holding of Opinion V-1353; and it is hereby affirmed. We believe a general test of the taxability of temperature surveys can be stated in these terms: Temperature surveys are taxable only if made for the purpose of surveying the sands or other formations of the earth or if they are made in connection with one of the named taxable services.

In Opinion O-3698 it was held that a "water-flow survey" was a taxable service. As stated in the submitted report:

"Fluid ingress surveys are obtained whenever it is suspected fluid is entering a well at a point where such flow is not desired or when it is suspected certain sections of a horizon are taking a disproportionate volume of the injected fluid. Exit surveys are run whenever it is thought fluid is leaving a well at a point where such flow is not wanted or when it is thought certain strata of a horizon are producing a disproportionate volume, principally water, of the produced fluid. This may be determined in various ways but probably the most common method is by use of a mechanical device lowered in the hole to measure the relative volume of fluid flowing at any given point. One of the principal methods used is called a 'spinner survey'."

We think that a determination of the relative volume of fluid flowing at a given point or in a given formation constitutes a survey of that formation within the meaning of the statute, and Opinion O-3698 is affirmed on this point.

The last enumerated taxable service is "testing of the sands or other formations of the earth in any . . . oil or gas wells . . ." The submitted report has defined "sands" and "formations" as not including the "fluids" - liquid and gaseous materials - which

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may be contained in or produced from the porous space of the formation or sand. If this definition is the correct guide to the meaning of the statute, Attorney General Opinions O-3698, O-4188 and V-1353 are erroneous either in part or in toto.

We quote the following excerpt from Attorney General Opinion O-4188 (1942).

"The services described in paragraphs II, III and IV all relate to tests of the properties of fluids and gas in wells as distinguished from tests of solid materials found in the wells. The statute expressly enumerates 'the surveying or testing of the sands or other formations of the earth in any such oil or gas wells.' We believe that this language is intended to embrace not only the solid material actually composing the sand, but the gas, oil or water with which the sand may be saturated or other formations permeated. It is to be remembered that the purpose of drilling oil and gas wells is to produce oil or gas. It would be strange indeed if a statute, patently designed to tax technical services customarily rendered by persons other than the driller in connection with the efficient completion and operation of oil and gas wells, were construed so as to tax the testing of non-productive formations through which the drill must necessarily pass, and exempt the testing of the properties of the very product, i.e., gas and oil, which is sought to be produced. We therefore are of the opinion that analysis of bottom-hole fluids, the testing of pressures at various points in the well and ascertainment of the productivity index of the well are all services which come within the intended scope of the statute under consideration."

In Opinion O-3698 (1941) the following ruling was made:

"Testing of the sands or other formations of the earth of oil and gas wells is the taking of samples of the earth formations and fluid contents from the walls or bottom of the well and analyzing the same so as to ascertain the composition of said earth formations and fluid contents. See 'Fundamentals of the Petroleum Industry,' by Dorsey Hogar, 1939, pages 226 to 231, and 'Drilling Practices,' by Charles Cyrus, 1939, pages 182 to 195."

Bottom hole pressure tests, depth pressure tests, productivity index tests, gas-oil ratio testing, bottom hole sampling and analysis, open flow potential tests and gas-condensate well tests were held taxable services in Opinion V-1353 (1951). All of these tests are tests of "fluids".

In Sheppard v. Rotary Engineering Co., 208 S.W.2d 656 (Tex.Civ.App. 1948), the court held that the service of operating a portable laboratory, set up on the well location, for the purpose of analyzing drill cuttings was a taxable service under Article 7060a. We quote the following excerpts from page 657 of the opinion:

"The service performed is the analysis of drill cuttings which are taken possession of by appellee after the same have been brought to the surface and separated from the drilling fluid by means of a shale-shaker. . . . The test made on the drill cuttings is to determine the gas and oil contents of the strata or formations of the earth encountered by the drill bit. The laboratory findings are furnished to the well owner and appellee is paid for the service.

"It is not necessary to here further set out the methods employed by appellee since it is not material to the issue to be here decided; except it may be added the laboratory of appellee consists of such equipment as enables it to make the analysis of the cuttings it takes possession of."

An examination of the record before the court in this case shows that the plaintiff taxpayer performed, among others, the following tests:

"A We take the cuttings and put them in a quart container. We put one pint of cuttings in this container, and we put one-quarter of the volume of water. . . . We seal this container and put it in what we call an agitator . . . then we hook two hoses to this container. One is a suction hose, and the other is the return. There is a compressor motor in this system, and we pull a vacuum on these cuttings equivalent to four inches of mercury. By leaving the return valve closed, and opening up the suction side, we create a vacuum, and reduce the cuttings below atmospheric pressure, which is sufficient with four inches of mercury to release any

contained gases that are in the pore spaces or interstitial spaces. [S.F., pp. 6 & 7]

"Q Now, what is the diagram, Plaintiff's Exhibit No. 2?

"A This is a diagram of a Wheatstone Bridge gas analyzer. [S.F., p. 8]

" . . .

"Q So you arrive at two conclusions by the use of this device; namely, the volume of the gas contained in the cuttings, and some notion of the quality of the gas?

"A It is a qualitative analysis, that's right. . . .

"Q After you have completed the gas analysis, what is your next step?

"A We take these samples and wash them very thoroughly and subject them to ultra-violet ray radiation. . . .

"Q What is the purpose of that process?

"A Ultra-violet rays coming in contact with liquid hydro-carbons will cause them to be energized and to fluoresce and become visible to the naked eye. . . . [S.F., pp. 11,12]"

The following further details as to these tests were also included in the record:

"Q And then you take those cuttings into the portable laboratory and you test these samples to determine the volume of the gas in it, and also to test whether or not, if there is gas there, it is high or low fraction gas?

"A Yes.

"Q And you test it for that purpose?

"A Yes.

"Q And if you think it is in what you think is oil -- liquid hydro-carbons, I believe you call it?

"A Yes.

"Q If you find some evidence of that, or if you believe it should be there, you put it through the other part of your laboratory, which you call ultra-violet radiation?

"A Yes, sir.

"Q And you look at it and you can tell from that, in a general way, at least, as to whether or not it is a low gravity oil or a high gravity oil, according to the difference in color?

"A That's right."

Thus it is apparent that at least some of the services which were held to be taxable in the Rotary case were tests of "fluids". This being so, we think that the words "sands" and "formations" must be interpreted as including the fluid contents of said "sands" and "formations". Indeed, we think the Rotary case is decisive of this question.

In this connection, we think it pertinent that the Legislature has met twice since the decision in the Rotary case. Since it has not seen fit to amend Article 7060a by excluding from taxable services the testing of "fluids," it must be presumed to have acquiesced in the judicial interpretation of legislative intent.

It is also submitted that analyses of cuttings are not analyses but inspections. Microscopic inspections of cuttings was one of the services performed by the taxpayer in the Rotary case. For the reason just stated we think such service is a taxable one.

In Opinions O-3698 and V-1353 it was held that side wall sampling was a taxable service. We are urged to make a distinction between the taking of the sample and the testing of the sample for the reason that many samples are never tested. There is presently pending before the Court of Civil Appeals for the Third Supreme Judicial District of Texas Robert S. Calvert and William B. Davis v.

A-1 Bit and Tool Company. A decision in this case could be decisive of this question and for that reason we deem it improper for us to reconsider it at this time.

#### SUMMARY

Cementing "liners" (strings of casing whose tops are situated below the surface) is a taxable service under Article 7060a, V.C.S., if the liners are used as extensions of the oil string as distinguished from liners used to repair defective casing. The following operations are not taxable under Article 7060a because they do not constitute nor are they done in connection with cementing the casing seat: cementing conductor, surface, intermediate or protective casing strings; cementing to control wells; cementing for lost circulation; plug-back operations; cementing for abandonment; squeeze cementing operations; cementing liners for remedial or repair operations; cementing for whipstock operations. Temperature surveying done to determine the success of cementing a casing seat is a taxable service since it is performed in connection with cementing the casing seat. Shooting operations which are not concerned with formation fracturing and which are not performed in connection with one of the taxable services enumerated in Article 7060a are not taxable services. Acidizing operations which do not have for their purpose the dissolution of a formation are not taxable services unless they are performed in connection with a taxable service. Electric logging to record geological formations, radioactive logging, magnetic logging and dip recording are taxable services. A deflection or deviation survey is a survey of the drill hole rather than a survey of the formations of the earth and such surveying is not a taxable service. Neither depth measurement surveys nor surveys to locate the free point of stuck pipe, nor caliper logging, nor surveys to locate the depth of collars, nor electric logging to locate junk or fish in the hole, nor corrosion surveys, nor fluid level surveys are taxable surveys because they are not surveys of the formations of the earth. Temperature surveys are taxable only if made for the purpose of surveying the formations of the earth or if they are made in connection with a taxable service. To the extent that Attorney General Opinion O-3698 (1941) holds to the contrary it is overruled.

Hon. Robert S. Calvert, page 20 (V-1567)

Water-flow surveys are taxable as a survey of the formations of the earth. The words "sands" and "formations" must be interpreted as including the fluid contents of said "sands" and "formations". Sheppard v. Rotary Engineering Co., 208 S.W.2d 656 (Tex.Civ.App. 1948). Therefore bottom hole pressure testing, depth pressure testing, productivity index testing, gas-oil ratio testing, bottom hole sampling and analyzing, open flow potential testing and gas-condensate well testing are taxable services. Microscopic inspection of drill cuttings is a taxable service. Sheppard v. Rotary Engineering Co., supra.

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Yours very truly,

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