

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: Geolgocial Formations: Surface - Hermosa Bottom - Pardox

(No file) Bul. 50

DATE FILED Prior OGCC

LAND: FEE & PATENTED STATE LEASE NO.

PUBLIC LEASE NO.

INDIAN

DRILLING APPROVED: Prior OGCC

SPUDDED IN:

COMPLETED:

INITIAL PRODUCTION:

GRAVITY A. P. I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH: 3,367

WELL ELEVATION: ?

DATE ABANDONED: 1-2-43

FIELD OR DISTRICT: Moab ^{3/86} Wildcat

COUNTY: Grand

API # 43-019-20407

WELL NO. Great Lakes Carbon Corp. #1

LOCATION: 16 FT. FROM (N) (S) LINE,

FT. FROM (E) (W) LINE. SESESE QUARTER - QUARTER SEC. 35

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
25 S	21 E	35	GREAT LAKES CARBON CORP.				

UTAH GEOLOGICAL AND MINERALOGICAL SURVEY
AFFILIATED WITH
THE COLLEGE OF MINES AND MINERAL INDUSTRIES
UNIVERSITY OF UTAH
SALT LAKE CITY, UTAH

DRILLING RECORDS

FOR OIL AND GAS IN UTAH

COMPILED UNDER THE DIRECTION OF
GEORGE H. HANSEN, H. C. SCOVILLE,
AND THE
UTAH GEOLOGICAL AND MINERALOGICAL SURVEY



*From the Records of the Oil and Gas Leasing Branch of the
Conservation Division of the U.S. Geological Survey*

Bulletin 50

February 1955

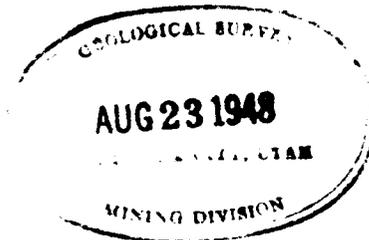
Price \$5.00

10-74	W NWNE 16-22S19E S	Utah Drilling & Development Co: #1	Crescent	10-?-45	4729	Mancos	Morrison		Oil show Jm 1055-80'.	1,215	Abd
10-75	NENENE 16-22S19E S	Reeder Corp. #1	Salt Valley	12?-?-41	4750?	Mancos	?			1,426	Abd
10-76	SESESW 20-22S19E Pu	Grand Pyramid Oil Inc. #1	Crescent	7-?-53	4630	Mancos	?	Kd 1430'.		1,430	Abd
10-77	NWSE 23-22S19E Pu	Big Six Oil Co. #1	Salt Valley	12-?-41	4670	Mancos	Morrison?			1,130	DSI
10-78	SESE 9-22S20E Pu	Raddatz-Vogel-Travis #1	Thompson	10-3-25	4830	Mancos	Morrison			1,450	Abd
10-79	NWNE 21-22S20E Pu	Hope Syndicate #1	Thompson	10-22-25	5250	Mancos	Morrison			1,400	Abd
10-80	NWNW 33-22S22E Pu	Utah Southern Oil Co. #1	Cisco	4-?-37	4785	Morrison	Hermosa		Water well temperatures at following depths: 60° F, 100'; 66.6°, 1000'; 76.1°, 2000'; 86.8°, 3000'; 96.5°, 4000'; 106.9°, 4800'.	6,715	Abd
10-81	SESE 6-22S23E Pu	P. D. Jones #1	Saleratus Creek	1900	4600	Mancos	Morrison		No shows of oil or gas.	1,800	P&A
10-82	NWNWNE 25-23S18E Pu	British-American Petroleum Co. #1	Ten Mile Wash	1912	4800?	Morrison	Entrada		Water at 350'.	530	Abd
10-83	NWNW 36-23S18E S	W. P. Whisnant, et al #1	Ten Mile Wash	12-23-43	?	Mancos	Wingate			1,136	P&A
10-84	SESE 18-23S19E Pu	Hagen #1	Ten Mile Wash	1913	4800?	Mancos	Morrison		Fresh water at 425', salt water 600' and 870', showing of oil 910'.	920	Abd
10-85	NWSW 26-23S19E Pu	Moab Oil Co. #1	Ten Mile Wash	1912	4800?	Mancos	Mancos			700	Abd
10-86	SWSNW 2-23S20E S	Pure Oil Co. #1	Northeast Salt Valley	2-4-49	5242	San Rafael Group	Paradox	Jw 1275', Rc 1565', Rsh 1980', Rm 2060', Cpp 2480', Salt 2780'.	Schlumberger run at 1385'.	3,036	P&A
10-87	SESE 5-23S20E Pu	Western Allies #1	Salt Valley	1919	?	Jurassic	Paradox		Show of oil and gas, salt and epsomite at 775-825', small show of gas and oil at 825'.	825	P&A
10-88	SENESE 13-23S20E Pu	Utah Southern Oil Co. #1	Salt Valley	10-23-29	5100?	Kayenta	Paradox	Salt sequence 1570' to total depth.	Salt water 1478-1480' Cph.	3,829	Abd
10-89	NENWNW 32-23S21E S	King Oil Co. #1	Salt Valley	11-26-53	4870	Paradox	Paradox		Show oil 3294-3358'. Shot with 308 quarts nitroglycerin, but no oil or gas by balling.	3,550	Abd
10-90	C NWNW 32-23S21E G	Utah Southern Oil Co. #1	Salt Valley	10-27-32	4870	Paradox	Paradox	Cpp 6120'.	Log is available on photostats. Oil showings from 3387-3436'. Water sands 840-850'.	6,120	P&A
10-91	SWNWNE 36-24S22E S	Grand River Oil & Gas Co. #1	Castle Creek	1-5-50	3999	Moenkopi	Granite Wash-Rico	Pr 1930'.	Hole left open above 350'. May be used for water.	3,711	Abd
10-92	SWNESE 12-24S23E Pu	Harry P. Hubbard #1	Onion Creek	5-15-51	4481	Cutler	Paradox Member of Hermosa ?		Entire column was Arkosic in character.	7,955	P&A
10-93	SESE 2-25S20E S	Great Lakes Carbon Corp. #1	Seven Mile	8-15-46	?	Rico	Paradox			3,655	Abd
10-94	SWSE 12-25S20E Pu	Columbia Crude Corp. #1	Seven Mile	10-26-38	4700	Rico	Paradox	Salt 2440'.	Only creditable showing of oil was in three feet of sand from 2130-2133'.	4,243	Abd
10-95	NESW 20-25S21E Pu	Empire Petroleum Co. #1	Moab	7-?-26	4400	San Rafael ?				235	Abd
10-96	NENE 27-25S21E Pu	Embar Oil Co. #1	Moab	1926	4030	Jurassic	?			300	Abd
10-97	SENEW 34-25S21E Pu	Embar-Big Six Oil Cos. #1	Moab	3-2-28	4000	Hermosa	Paradox		Oil and gas showing at 2380-2420', 2870', 3000', 4303', and 4880'.	5,345	Abd
10-98	SESESE 35-25S21E P	Great Lakes Carbon Corp. #1	Moab	1-?-43	?	Hermosa	Paradox			3,367	Abd
10-99	NESE 16-25S23E S	Grand River Oil & Gas Co. Sid Pace #1	Castle Creek	11-?-50	?	Alluvium	?			1,725	Abd
10-100	SENNW 11-26S19E Pu	Glen M. Ruby #1	Big Flat	8-22-51	6040	Kayenta	Moenkopi	Rm 928'.	Unable to recover tools due to caving.	1,008	Abd
10-101	SENNW 11-26S19E Pu	Glen M. Ruby #1-A	Big Flat	5-26-53	6033	Kayenta	Devonian	Jw 230', Rc 550', Rsh absent, Rm 925', Pcu-Pr 1395', Cphu 2085', Cph-Cpp 4100', Salt 4158-7520', Cpmo 7821' -4" only - Cml 7821', D 8105'.		8,213	Abd

Note: Wells for each county are "spotted" on the accompanying map.

Note: For abbreviated legend data see explanation before tables.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Geochemistry and Petrology



Report No. P-736

For

Great Lake Carbon Corp.
State #1, Grand County, Utah.

OCURRENCES OF SYLVITE AND CARNALLITE

Depth			Sylvite	Carnallite
2800'-11"	- 2801'-1"	0'-2"	---	Trace.
2802'-10"	- 2803'-0"	1'-2"	---	Little. 2 Fracture-like fillings Dip 35°.
2851'-0"	- 2859'-0"	8'-0"	Trace.	Little, (Ranges over the 8'
3014'-10"	- 3021'-11"	7'-1"	Trace, scattered blobs.	--- (thin fracture fillings)
3037'-10"	- 3044'-10"	7'-0"	---	Trace (fractures in shale
3080'-0"	- 3081'-7"	1'-7"	High, estimated K ₂ O as 30%	--- (and mud.)
3081'-7"	- 3085'-3"	3'-8"	Low, Est. 5% K ₂ O	---
3085'-3"	- 3090'-3"	5'-0"	High, Est. 15% K ₂ O	---
3090'-3"	- 3095'-3"	5'-0"	High, Est. 15-20% K ₂ O	---
3095'-3"	- 3100'-3"	5'-0"	Low, Est. 2-5% K ₂ O	---
3110'-0"	- 3113'-0"	3'-0"	Little, small blebs and fractures.	---
3226'-11"	- 3230'-11"	4'-0"	Low, Est. 5-10% K ₂ O	---
3233'-6"	- 3235'-6"	2'-0"	Low, Est. 5-10% K ₂ O	---
3237'-9"	- 3244'-9"	7'-0"	Low, Est. 10-15% K ₂ O	---
3341'-0"	- 3345'-0"	4'-0"	---	Little, Carnallite in small seams
3349'-0"	- 3351'-0"	2'-0"	Low, Est. 5% K ₂ O in thin seams.	

August 12, 1946

By R. K. Bailey

Reported May 17, 1948

Earl Ingerson
Chief, Section of Geochemistry & Petrology

R. K. Bailey

**SUBURBAN GAS SERVICE, INC.
2021 NORTH TONNE AVENUE
POMONA, CALIFORNIA**

January 29, 1960

**Lynn K. Thatcher
Executive Secretary
Utah Water Pollution Control Board
45 Fort Douglas Boulevard
Salt Lake City 18, Utah**

Dear Sir:

Suburban Gas Service, Inc. respectfully requests authority to dispose of salt water brines in subsurface brackish water sands near HQAB, UTAH. A plat is attached showing area of disposal.

A resume of the proposed operation, which results in the production of these brines, is attached.

The proposed subterranean storage facility cannot be constructed unless some practical means of brine disposal can be developed. Dumping of brine into the COLORADO RIVER has not been viewed with favor by governmental authorities. Subterranean disposal seems to be the only solution to our disposal problems.

Conservation of natural resources will be effected by the storage operation, the operation will produce revenues for the State, and the general public will be benefitted because of a stabilization of supply of materials stored for their consumption as well as the business brought into the local area of operation.

Massive salt formations lie under the HQAB Valley. These formations have been "extruded" from great depths by geological processes into long, thick ridges protruding through the overlaying formations, with the top of the ridge being some 1200' to 1500' below the ground surface. Various water bearing formations were penetrated by this extrusive salt mass; since these water sands are in contact with the salt body, the water contained within them is now brackish. This water is of course unfit for domestic or industrial consumption.

The subsurface location of these sands will be determined by running Electrical Surveying instruments into the bore hole of the storage well. A bore hole will then be drilled from the surface to and through the brackish water sands. A casing string will be run and cemented back to the surface. This casing isolates all the fresh water sands from the brackish water sands (i.e., from the brine disposal area). The casing is slotted across the brackish water sands and a tubing string is run to a point inside this slotted area.

A brine disposal pump picks water up from the brine disposal pit, forces it down the tubing, thence into the brackish water sands. These sands are isolated from the overlying fresh water sands by intervening impervious formations and/or gravity separation. The sands' ability to "take water" is generally of great magnitude because of its "pore space"

January 29, 1980

and tremendous outage in the brackish water reservoir. It is estimated that some 90-100 ac. ft. of brine will be disposed of within a period of six months. It is anticipated that brackish water sands 30' to 50' in thickness will exist under the area of operations.

This brine disposal method (as well as industrial liquid waste disposal) is used in numerous areas of the United States, particularly in the Gulf Coast and West Texas areas.

It would be greatly appreciated if permission would be granted at the earliest practicable date to dispose of brines by the above procedures. The storage facility is needed for use in the early part of July.

If you have any questions please do not hesitate to call on me.

Very truly yours,

Neal E. Van Fossan,
Engineer

NEvFics

cc: Office of State Engineer
State of Utah
408 Capitol
Salt Lake City, Utah



000111 93 1

UTAH STATE DEPARTMENT OF HEALTH

45 FORT DOUGLAS BLVD.
SALT LAKE CITY 13, UTAH

STATE BOARD OF HEALTH

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LYNN M. THATCHER EXEC. SEC'Y.

February 15, 1960

MEMORANDUM TO: Utah Water Pollution Control Board Members

FROM: Lynn M. Thatcher, Executive Secretary

SUBJECT: Tentative Agenda for Board Meeting Scheduled for
2 P.M. Friday, February 19, 1960 at 45 Ft. Douglas
Boulevard

1. Approval of minutes of previous meeting.
2. Bear River Conference progress report.
3. Request of Suburban Gas Service, Inc. for permit to discharge brine into underground aquifer.
4. Attorney General's opinion on Blanding sewage disposal problem.

MEMORANDUM TO THE COMMISSION - L P G

March 2, 1960

On January 28, 1960, Mr. Neal E. Van Fossan of the Texas Natural Gas Company contacted me for the purpose of obtaining permission from the Oil and Gas Conservation Commission to construct and use a subterranean chamber for the storage of liquified petroleum gases in the Moab Valley, approximately two miles north of Moab, on Highway 160.

After checking the Utah Code, I advised Mr. Van Fossan that there was apparently no state agency with clear-cut authority to grant permission for the installation and operation of this type of facility. Therefore, I suggested that he contact the State Engineer's Office, the Industrial Commission and the Water Pollution and Control Board. I felt certain that at least the State Engineer's Office and the Water Pollution and Control Board would be vitally interested in the salt water disposal well, which would be a necessary part of this operation.

I referred Mr. Van Fossan to Rule C-11 of our rules and regulations concerning the procedure for the underground disposal of salt or brackish water and explained to him that I felt that if we followed the procedure outlined, we would have no problems with respect to this part of the operation.

On February 19, 1960, Doc and I attended a meeting of the Water Pollution and Control Board. At this meeting it was decided that the **Water Pollution and Control Board would not give final approval of this project,** as requested by Mr. Van Fossan, until a determination had been made

as to what zone or horizons would be used for the salt water injection. It was agreed that the Water Pollution and Control Board would accept the findings of this office and the State Engineer's Office with respect to the adequacy of the zones which would be utilized. It was also agreed at this meeting that the **Oil and Gas Conservation Commission would accept primary responsibility for this project.**

The underground storage of LPG involves the injection of gas under high pressure into depleted gas and oil fields or salt zones or other sub-surface strata capable of maintaining the gas. The storage fields are replenished during the summer months, thus allowing the pipelines to operate at a peak capacity throughout the year. As a conservation measure, it involves the saving of residue gas from the natural gasoline plants that would otherwise be flared during the summer months and continues production from wells that must be produced daily to justify economic operations.

After carefully checking the Oil and Gas Conservation Act, I can **find nothing that would give this Commission express jurisdiction over a facility of this nature.** Unfortunately, our statute, which is patterned after the Colorado Oil and Gas Conservation Act, in its definition of "waste" with respect to gas, does not include the additional wording (underlined) that the New Mexico statute has, I quote:

"The term 'waste' as applied to gas shall include the escape, blowing or releasing, directly or indirectly, into the open air or gas from wells productive of gas only, or gas in an excessive or unreasonable amount from wells producing oil or both oil and gas; and the production of gas in quantities or in such manner as will unreasonably reduce reservoir pressure or unreasonably diminish the

quantity of oil or gas that might ultimately be produced; excepting gas that is reasonably necessary in the drilling, completing and testing of wells and in furnishing power for the production of wells and the use of inefficient underground storage of natural gas."

It is my understanding that in order to cover this type of situation, Colorado, as well as New Mexico, has adopted an act specifically applicable to the underground storage of natural gas.

In attempting to find some cases involving this problem, I made a thorough research of Sumner's "Oil and Gas" and "The Oil and Gas Reporter", and I could find nothing directly in point. However, I did find a couple of interesting cases that could indirectly support the proposition that a gas injection and producing well could be considered strictly as a gas well for all intents and purposes, and thus be regulated as such, with respect to the method of drilling and completing.

Contemporary authority appears to support the proposition that there is no liability for the migration of injected substances on a theory of trespass. What may be called a "negative rule of capture" appears to be developing; just as under the rule of capture a landowner may capture such oil or gas as will migrate from the adjoining premises to a well bottomed on his own land, so also may he inject into a formation substances which may migrate through the structure to the land of others, even if this results in displacement under such land, of more valuable with less valuable substances.

In the case of Central Kentucky Natural Gas Company vs. Smallwood, 252 SW 2nd 866, the court was called upon to determine between the surface and the mineral owner as to who was entitled to the rentals accruing

under a lease for the subterranean storage of gas. With respect to that question, the court held that one does not own the gas in the sense that one owns the surface or solid minerals. Such ownership is limited to the exclusive legal right to explore, and if the gas should be found, to reduce the same to possession and ownership. But the mineral owner has the right to exclude all others from attempting to exercise the right on this premises. Unless restricted by the terms of a lease, the mineral owner would have exclusive right to explore for and produce gas released for storage as well as native gas. The court in this case cited the case of Hammond vs. Central Kentucky Natural Gas Company, 75 SW 2nd 204, which involved a question of ownership of gas after its storage. In the Hammond case, the plaintiff owned a small tract of land located within the boundaries of the reservoir utilized for gas storage, but which was not leased to the gas company. A geologic basin or dome extended under the property of the Hammonds, and when the gas was forced into the ground, it penetrated this cavity and was being withdrawn as the company pumped its adjacent wells. In a suit for trespass, the landowner claimed the gas was placed in and under the property without her knowledge or consent. The court held that the company ceased to be the exclusive owner of the gas after its injection into the ground, and not being owner of the gas, was not responsible for trespass on account of its storage beneath the property of the landowner. The ownership of gas once being captured and then released by injection into the ground was held as being analogous to wild animals. In this connection it was said that if one captures a fox in the forest and turns it loose in another, or if he catches a fish and puts it back into the stream at one point, has he not done with that migratory-form of

property just what the defendants have done with the gas in this case. Did the company not lose its exclusive property in the gas when it restored the substance to its natural habitat. The court goes on to say that under the analogy recognized in the Hammond case, it is apparent that there is no distinction in the title of gas once recovered and released for subterranean storage, and native gas before its initial recovery.

I have been somewhat concerned over the fact that the Federal Power Commission might be in some way involved in this project. Under the Natural Gas Act, 15 USCA Section 717(6), 1948, every natural gas company, as defined by said act, must secure approval from the FPC for all construction, acquisition or operation of facilities utilized in interstate transportation of natural gas. I discussed this problem with Mr. Van Fossan, and he states that the Federal Power Commission is not interested in the storage of LPG. Mr. Van Fossan states that actually LPG is the storage of butane and propane under artificial conditions, and, in his opinion, is not considered as a natural gas. Therefore, his company has never filed an application with the Federal Power Commission.

This, of course, is not our problem, however, it does bring up the question of whether LPG would be considered natural gas in the state of Utah, should we ever be required to argue for acceptance of the ruling in the Hammond case before a Utah court.

The Utah Oil and Gas Conservation Act defines gas as "all natural gases and other liquid hydrocarbons not defined herein as oil."

The word "oil" is defined as "crude petroleum oil and anyother hydrocarbons, regardless of gravities, produced at the well in liquid form by ordinary production methods and not the result of condensation of gas before or after it leaves the reservoir."

"The Manual of Oil and Gas Terms" defines "liquid hydrocarbons" as those hydrocarbons which are liquid at surface temperature and pressure. Said manual also defines "LPG" as "liquid petroleum gases being liquified propanes and butanes as separately or in mixture."

Dorsay Hager in his book "Practical Oil Geology" states that methane, ethane, propane, and butane are all gases under ordinary atmospheric conditions. Pentane, hexane and heptane are liquids and are the chief constituents of ordinary refinery gasoline.

From these definitions it would appear that we can conclude that L P G under the Utah definition is a natural gas in that it is not a liquid at surface temperature and pressure. It must, in effect, be compressed at a specific temperature in order to take on a liquified form.

In conclusion I would like to state that the Suburban Gas Services, Inc. has submitted to the jurisdiction of this Commission. They have already filed their notice of intention to drill their injection and storage well, and will submit a bond within the very near future.

I would like at this time to recommend that the Commission consider presenting a bill to the next legislature which would give it specific control over L P G storage facilities.

Cleon B. Feight

CLEON B. FEIGHT
EXECUTIVE SECRETARY

BEFORE THE BOARD OF OIL AND GAS CONSERVATION
DEPARTMENT OF NATURAL RESOURCES
in and for the STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF)
WILLIAMS ENERGY COMPANY FOR AN ORDER)
AUTHORIZING WATER PRODUCED FROM PROPANE)
UNDERGROUND SALT STORAGE CAVERN INTO) ORDER
OLD DISPOSAL WELL, GREAT LAKES - STATE)
NO. 1, SECTION 35, TOWNSHIP 25 SOUTH,) CAUSE NO. 147-1
RANGE 21 EAST, SLBM, GRAND COUNTY, UTAH,)
OR TO CONSTRUCT A NEW SALT WATER DISPOSAL)
PIT AND TO INCREASE THE CAPACITY OF SAID)
CAVERN.)

Pursuant to the Application of Williams Energy Company, this cause came on for hearing before the Board of Oil and Gas Conservation, Department of Natural Resources, State of Utah, at 10:00 A.M., Wednesday, March 14, 1973, in the Governor's Board Room, Second Floor-State Capitol Building; and continued at 9:00 A.M., Wednesday, April 25, 1973, in the Wildlife Resources' Auditorium, 1596 West North Temple, Salt Lake City, Utah.

The following Board Members were present:

Guy N. Cardon, Chairman, Presiding

Charles R. Henderson

Robert R. Norman

Evart J. Jensen

James P. Cowley

Also Present:

Cleon B. Feight, Esq., Director, Division of Oil and Gas Conservation

Paul W. Burchell, Chief Petroleum Engineer, Division of Oil and Gas Conservation

Paul E. Reimann, Special Assistant Attorney General

Gerald R. Daniels, District Engineer, United States Geological Survey

Appearances were made as follows:

For the Applicant: Verl Ritchie, Esq., Salt Lake City, Utah

For the Opposition: Leo Ware

Alan Cook

Russ Donahue

NOW, THEREFORE, the Board, having considered the testimony adduced and the exhibits received at said hearing, and being fully advised in the premises, now makes and enters the following:

FINDINGS

1. That the Board has jurisdiction over the matter covered by said application and over all parties interested therein, and has jurisdiction to make and promulgate the Order hereinafter set forth.

2. That Williams Energy Company purchased the gas storage facility under consideration sometime in February, 1971, and that Mr. Cook and Mr. Ware purchased the adjoining property approximately 10 months ago.

3. That Mr. Alan Cook and Mr. Leo Ware appeared in opposition to the application.

4. That due and regular notice of the time, place, and purpose of the hearing was given to all interested parties, including Mr. Cook and Mr. Ware, as required by law and the Rules and Regulations of the Board.

5. That the hearing was continued for over 30 days to allow Mr. Cook and Mr. Ware to submit additional testimony and evidence.

6. That the application has already received the approval of the Water Pollution and Control Board.

7. That the applicant is engaged in the business of distributing natural gas (propane) to ultimate consumers in the surrounding area.

8. That, with the increase in the demand and in the number of firm gas customers in its distribution area, and the developing natural gas shortage, applicant is being required to rely, to an ever-increasing extent, on natural gas storage to be able to meet its firm service requirements during periods of peak demand.

9. That there is sufficient overburden to permit the safe operation of the storage project at the pressures at which it will be operated, and these pressures cannot be reasonably anticipated to have any effect on the natural seismology of the area.

CONCLUSIONS

1. That Mr. Alan Cook and Mr. Leo Ware were given adequate notice and opportunity to appear and be heard.

2. That enlarging the storage cavern and constructing an additional pit will not constitute a hazard to the health and welfare of the community.

3. That the development and operation of this natural gas (propane) storage project can be carried out without adversely affecting the development of and continued surface use of the area, and without any other serious adverse impact on the area.

4. That the successful development and operation of this proposed natural gas (propane) storage project will assist in the conservation of natural gas.

5. That the successful development and operation of this proposed natural gas (propane) storage reservoir is necessary and in the public interest.

ORDER

IT IS THEREFORE ORDERED:

1. That Williams Energy Company be, and is herewith authorized to enlarge its propane gas storage cavern and to construct an additional salt water storage and evaporating pit, provided that:
 - a. Plans for the construction of, or any changes thereto, of the salt water evaporation and storage pit will be submitted to the Division of Oil and Gas Conservation for approval prior to commencement of any operations thereon.
 - b. Upon completion of the new evaporation and water storage pit, it is not to be utilized until the the Division of Oil and Gas Conservation has made an on-site inspection and granted verbal approval, based upon its adequacy.
 - c. As soon thereafter as possible, the old pit is to be re-lined, reconditioned, and submitted to the Division's inspection for approval prior to being utilized again.
2. That Williams Energy Company take such steps as might be necessary to protect any and all surrounding lands from any spillage, overflow, or leakage from this facility.
3. That Williams Energy Company shall take adequate steps to monitor the existing evaporation and storage pits, as well as, the LPG storage facility, for evidence of leakage.
4. That Williams Energy Company submit to this Board semi-annual reports stating the results of its leak-monitoring activities.
5. That the original bore hole drilled for the injection of fresh water to wash out the LPG storage chamber, be located and properly plugged in accordance with the Rules and Regulations of the Division of Oil and Gas Conservation.
6. That the disposal of any water in excess of the capacity of the evaporation and storage pits, must be approved by the Water Pollution Control Board and the Division of Oil and Gas Conservation.
7. That this Order shall remain in full force and effect until further order of this Board.

MADE AND ENTERED this 25th day of April, 1973.

BOARD OF OIL & GAS CONSERVATION

/s/ Guy N. Cardon
Guy N. Cardon, Chairman

/s/ Charles R. Henderson
Charles R. Henderson
Board Member

..... /s/ Robert R. Norman
..... Robert R. Norman
..... Board Member

..... /s/ Evert J. Jensen
..... Evert J. Jensen
..... Board Member

..... /s/ James P. Cowley
..... James P. Cowley
..... Board Member

March 10, 1960

Mr. Neal E. Van Fossan
Manager, Storage & Terminals
Texas Natural Gasoline Corporation
800 Enterprise Building
Tulsa 3, Oklahoma

Dear Mr. Van Fossan:

This office is in receipt of your bond from the Aetna Casualty and Surety Company covering the well which you intend to drill in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 35, Township 25 South, Range 21 East, S11M.

It is suggested that if the disposal well is to be located on private land, you attach an endorsement on this bond covering said well. This will, of course, save you the expense of another bond.

Approval is hereby granted to drill the LPG storage well No. 1 in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 35, Township 26 South, Range 21 East, S11M, Grand County, Utah.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
EXECUTIVE SECRETARY

CBF:co

cc: Suburban Gas Service, Inc.
Pomona, California

E. J. MAYHEW
CONSULTING
ENGINEERS AND GEOLOGISTS
March 14, 1960

Mr. H. L. Coontz
Utah Oil & Gas Conservation Commission
Box 266
Moab, Utah

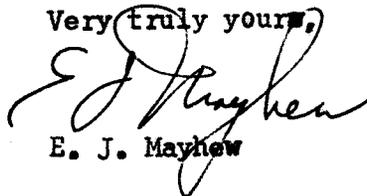
Dear Mr. Coontz:

In connection with the proposed use of the Great Lakes State # 1, as a brine disposal well by Texas Natural Gas Company during its construction of an underground butane storage reservoir.

I located and supervised the drilling and coring of the Great Lakes well and have all the casing, cementing and other data regarding the well. I am positive that it contains zones below and protected from the fresh water zones that will be satisfactory for brine injection. The surface casing was set through the unconsolidated gravels and cemented to isolate the fresh water and protect it from the brines that were used in coring. Circulation was lost in cracks and crevasses immediately on the top of the salt in shales, anhydrite and halite, this lost circulation continued on down past 1373' where 8-5/8" casing was set and cemented to prevent the further loss of circulation.

The fresh water zones in this well were from the surface to a depth of 365' and they were protected by the surface casing set at 408'. The zone from 365' to approximately 800' is competent shale and hard anhydrite. The zone from 800' to below 1373' is full of cracks and should be ideal for the disposal of any material not desirable in the fresh water zones. The casing (8-5/8") will be tested prior to perforating to be sure there are no leaks and if there are leaks they will be cemented off. You will be notified well before any such actions are taken and are invited to be present.

Very truly yours,



E. J. Mayhew

MEMORANDUM TO THE COMMISSION
TEXAS NATURAL GAS COMPANY SALT WATER DISPOSAL

March 15, 1960

The following is a study of the project in which Texas Natural Gas Company, as operators, plan to use a now existing well; namely The Great Lakes Carbon Corporation-State No. 1 located in ~~SE 1/4~~ ²⁵ NW 1/4 Section 35, Township ~~35~~ South, Range 21 East, SLBM, Grand County, Utah, as a salt water disposal well. This well was drilled in 1942.

A geologist and drillers report of daily operations of the above well was obtained and studied. From this report a schematic diagram of the well was drawn showing the existing casing, the structural zones encountered, and other pertinent information. The drawing is included in this report. Included also is a copy of the core report of Mr. R. K. Bailey, geochemist for the U. S. Geological Survey. This report shows the occurrence of potash and magnesium bearing strata. As can be seen, these deposits are well below the proposed injection zone.

The operator plans to attempt salt water injection into the zones between 800 feet and 1373 feet; since as can be seen from the drawing, the zones are capable of receiving fluids and are primarily salt. If injection in this area is not successful, other plans will have to be considered.

According to Mr. Mayhew, the consultant engineer of this project, the fresh water zones have been protected by surface casing.

The core hole, (Fig. 1.) was made at the location of the proposed L. P. G. injection well for several reasons, two of which are; (1) to correlate horizons between the L. P. G. well and the salt water disposal well, (2) and to obtain the depth of bedrock.

CONCLUSIONS AND RECOMMENDATIONS:

The casing in The Great Lakes well, having been cemented in place in 1942, should be pressure tested above the perforations which are at 1260 feet and 1290 feet. This would assure both the commission and the operators that no salt water could enter zones above the proposed injection zone. The hole below the injection zones should be plugged off prior to injection; however, this may not be necessary since the geological structures between 1300 feet and the bottom of the hole are primarily salt.

The zones into which salt water is to be injected appears to be satisfactory from the standpoint of the operators and the commission. Serious loss of circulation occurred in these zones while they were being drilled which is evidence they will receive fluids. The zones are primarily salt consequently it appears injection of salt water would do little harm. The existance of the black shale above the salt section tends to provide a barrier between the upper zones and the injection zones.

The top of the perforations for the injection zone should be sufficiently below 830 feet to assure no salt water by-passes the casing cement.

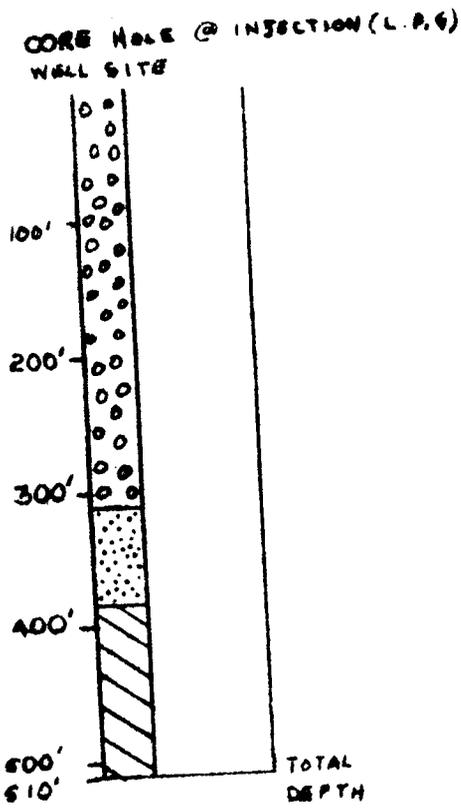
It appears in terms of figures the section between 900 feet and 1400 feet well depth is satisfactory for the proposed salt water injection.

Harvey L. Coonts
Petroleum Engineer

Enclosures 4

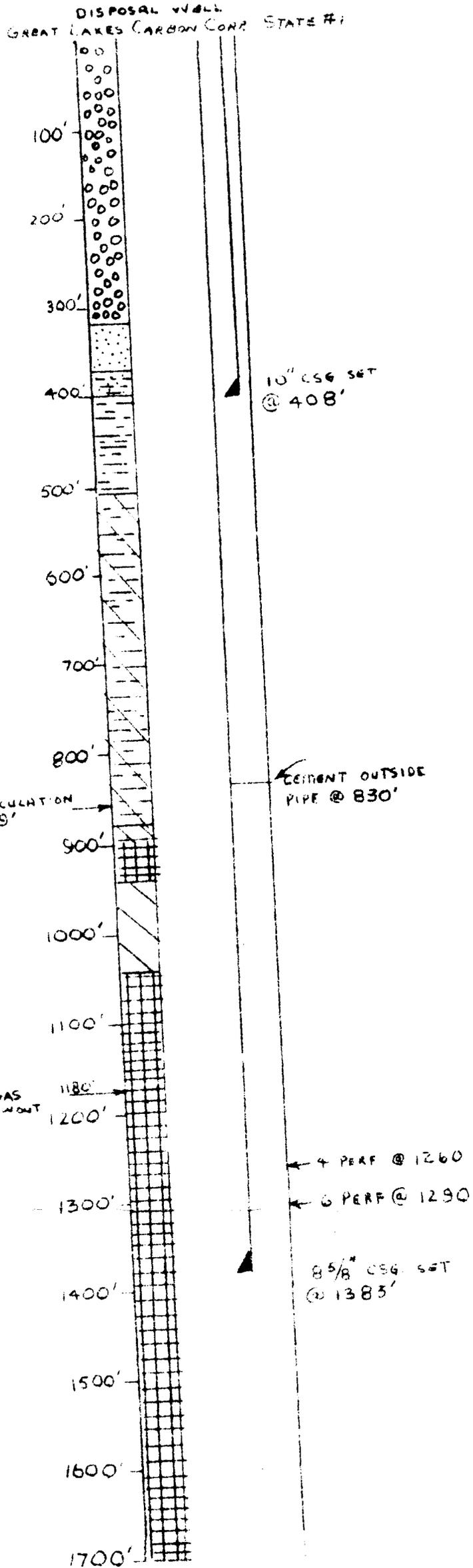
L.P.G. STORAGE AND SALT WATER DISPOSAL PROJECT

FIG. 1



-  SAND & GRAVEL
-  SANDSTONE
-  BLACK SHALE
-  ANHYDRITE
-  SALT

FIG. 2



HAD PRACTICALLY
CONTINUOUS LOSS
OF CIRCULATION
IN THIS AREA.
PROPOSED INTENTION
ZONE

STRUCTURAL DESCRIPTION FROM DRILLERS REPORT

DEPTH FROM Ground-Level	STRUCTURAL DESCRIPTION
0-42	MUD, SAND, CLAY, GRAVEL
42-80	GRAVEL
80-126	"
126-184	" , CLAY
184-326	GRAVEL
326-365	SANDSTONE
365-400	SANDSTONE & BLACK SHALE
400-503	Gypsum & BLACK SHALE
503-507	BLACK SHALE
508-587	" " , ANHYDRITE
587-735	" " , " , SANDSTONE MEMBERS
735-789	" " " "
879-982	ANHYDRITE
982-986	SALT
936-1043	ANHYDRITE , SOME SHALE
1043-1300	SALT
1300-1500	SALT
1500-1820	SALT
1820-1835	SALT , ANHYDRITE, CARBONACEOUS SHALE
1835-3200	SALT,

Moab, Utah
March 22, 1960

Utah Oil & Gas Conservation Commission
310 Newhouse Bldg.
10 Exchange Place
Salt Lake City 11, Utah

Attention: Cleon B. Feight, Executive Secretary

Gentlemen:

I am forwarding OGCC-1 form covering the conversion of a P & A potash test hole to a brine disposal well. Enclosure to OGCC-1 makes reference to previous correspondence and reports concerning procedures and places.

If you have any questions please do not hesitate to call me, collect, in Tulsa at Luther 4-1421. Our schedule has been accelerated and we are quite anxious to proceed with completion of the disposal well. We would greatly appreciate anything that you are able to do to expedite approval of our request.

Thank you.

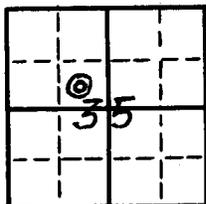
Yours very truly.


Neal E. Van Fossan
Engineer

*Endorsement to previous board to be forwarded
to you 3/22/60 Air Mail Special Delivery*

Van Fossan

NEAL E. VAN FOSSAN



STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION
SALT LAKE CITY, UTAH

Fee and Patented.....
State
Lease No.
Public Domain
Lease No.
Indian
Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill.....		Subsequent Report of Water Shut-off.....	
Notice of Intention to Change Plans.....		Subsequent Report of Altering Casing.....	
Notice of Intention to Redrill or Repair.....		Subsequent Report of Redrilling or Repair.....	
Notice of Intention to Pull or Alter Casing.....	X	Supplementary Well History.....	
Notice of Intention to Abandon Well.....			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

March 22, 19.60

Well No. 1 is located 3300 ft. from {S} line and 3300 ft. from {W} line of Sec. 35

SE 1/4 NW 1/4 Sec. 35, T. 25 S., R. 21 E., S. L. B. M.
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Grand County Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is 3962 feet.

A drilling and plugging bond has been filed with

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)
Enter Plugged & Abandoned Great Lakes Carbon Corporation #1 Potash Test Hole and perforate for brine disposal well. Permission granted by Great Lakes and Land Owner.
Existing casing program: 93' of 12 1/2", 408' of 10-3/4", 1373' of 8-5/8".
Suburban proposes to perforate in loss circulation zones at app., 835'. This area is in a brackish water zone and isolated from lowermost fresh water sand (365') by two cemented casing strings. Total Depth of potash test hole was 3365'. A bridging plug will be set at appx, 1000' in the 8-5/8" casing and casing tested hydrostatically to 300 psig. Injection pressures of disposal water expected to be less than 100 psig., surface pressure.

NOTE: Refer to attached additional details.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company Suburban Gas Service Inc.
Address 2021 N. Towne Ave.
Pomona, California

Neal E. Van Fossan
By Neal E. Van Fossan
Engineer
Title

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders. There are no producing wells in this area. There are no lands now under Oil & Gas lease within one half mile of this location.

DETAILS OF WORK (Cont'd)

ENCLOSURE TO

NID UOGCC Dated March 21, 1960 covering Suburban Gas Service Inc., disposal well.

Water to be injected is appx 95% saturated brines produced during the development of a 100,000 bbl., L.P.G. (Propane) Storage Chamber. Volumes of brine injected range from 0 bbl./day to a maximum of 6000 bbl./day. Total amount to be injected within first year of operations is 600,000 bbl. After chamber has been developed, (first year of operations) brine injection volumes will be negligible.

Notice has been given to, and permission granted by the following interested parties for this disposal well;

Owner of Mineral Rights:

Great Lakes Carbon Corporation
2200 National Bank of Tulsa Bldg.
Tulsa, Oklahoma

Owner of Surface:

9604 → The Palmetto Corporation
6409 S. Main
Houston 25, Texas
Attention: Bert Wheeler, President

Reference:

1. Suburban Gas Service Inc., letter to UOGCC dated 2-1-60.
2. Suburban Gas Service Inc., letter to Utah Water Pollution Control Board dated 1-29-60.
3. Suburban Gas Service Inc., letter to office of State Engineer dated 1-29-60.
4. E. J. Mayhew letter to Mr. H. C. Coonts UOGCC dated 2-14-60.
5. Mr. H. C. Coonts report to UOGCC .

NOTE: Bond to follow under seperate cover.

402561/2

THE STATE OF UTAH
OIL AND GAS CONSERVATION COMMISSION

BOND

KNOW ALL MEN BY THESE PRESENTS,

That UNION TEXAS NATURAL GAS CORPORATION
we: (FORMERLY) TEXAS NATURAL GASOLINE CORPORATION
of the _____ in the _____
County of: Tulsa State of: Oklahoma
as Principal and: THE AINA CASUALTY AND SURETY COMPANY, Hartford, Connecticut

as surety, authorized to do business in this State, are held and firmly bound unto the State in the penal sum as indicated, lawful money of the United States, for which payment, well and truly to be made to the State of Utah for the use and benefit of the Oil and Gas Conservation Commission, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents.

The condition of this obligation is that whereas the above bounden principal proposes to drill a well or wells for oil, gas or stratigraphic purposes in and upon the following described land situated within the State of Utah, to wit:

(may be used as blanket bond or for single well)
Salt Water Disposal Well, Southeast Quarter (SE/4) Northwest Quarter (NW/4),
Section Thirty-five (35), Township Twenty-five (25) South, Range Twenty-one (21) East,
Grand County, covered by OGBC one (1)

NOW, THEREFORE, if the above bounden principal shall comply with all of the provisions of the laws of this State, and the rules, regulations and orders of the Conservation Commission of the State, including, but not limited to, the proper plugging of said well or wells, and filing with the Oil and Gas Conservation Commission of the State, all notices and records required by said Commission, then this obligation is void; otherwise, the same shall be and remain in full force and effect.

Penal Sum of FIVE THOUSAND AND NO/100 - - - - - (\$5,000.00) State of Utah

Witness our hands and seals, this 22nd day of March, 1960

UNION TEXAS NATURAL GAS CORPORATION
(FORMERLY) TEXAS NATURAL GASOLINE CORPORATION
BY: R C Frederick
V.P. Principal

Witness our hands and seals, this 22nd day of March, 1960

ATTEST: Dott I. Justice

THE AINA CASUALTY AND SURETY COMPANY
BY: Emery S. Smith

THE STATE OF UTAH
OIL AND GAS CONSERVATION COMMISSION

B O N D

KNOW ALL MEN BY THESE PRESENTS,

That UNION TEXAS NATURAL GAS CORPORATION
we: (FORMERLY) TEXAS NATURAL GASOLINE CORPORATION
of the _____ in the _____
County of: Tulsa State of: Oklahoma
as Principal
and: THE AETNA CASUALTY AND SURETY COMPANY, Hartford, Connecticut

as surety, authorized to do business in this State, are held and firmly bound unto the State in the penal sum as indicated, lawful money of the United States, for which payment, well and truly to be made to the State of Utah for the use and benefit of the Oil and Gas Conservation Commission, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents.

The condition of this obligation is that whereas the above bounden principal proposes to drill a well or wells for oil, gas or stratigraphic purposes in and upon the following described land situated within the State of Utah, to wit:

(may be used as blanket bond or for single well)
Salt Water Disposal Well, Southeast Quarter (SE/4) Northwest Quarter (NW/4),

Section Thirty-five (35), Township Twenty-five (25) South, Range Twenty-one (21) East,

Grand County, covered by OGBC one (1)

NOW, THEREFORE, if the above bounden principal shall comply with all of the provisions of the laws of this State, and the rules, regulations and orders of the Conservation Commission of the State, including, but not limited to, the proper plugging of said well or wells, and filing with the Oil and Gas Conservation Commission of the State, all notices and records required by said Commission, then this obligation is void; otherwise, the same shall be and remain in full force and effect.

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Witness our hands and seals, this 22nd day of March, 1960

UNION TEXAS NATURAL GAS CORPORATION
(FORMERLY) TEXAS NATURAL GASOLINE CORPORATION
BY: R C Frederick
V.P., Principal

Witness our hands and seals, this 22nd day of March, 1960

ATTEST: Letty J. Prontice
Resident Assistant Secretary

THE AETNA CASUALTY AND SURETY COMPANY
BY: Emery R. Smith
Resident Vice President

Approved as to form and execution:

ATTORNEY GENERAL
STATE OF UTAH

BY _____

Date: _____

(If the principal is a corporation, the bond should be executed by its duly authorized officers, with the seal of the corporation affixed. When principal or surety executes this bond by agent, power of attorney or other evidence of authority must accompany this bond.)

The Aetna Casualty and Surety Company

Hartford, Connecticut

Power of Attorney and Certificate of Authority of Resident Vice Presidents and Resident Assistant Secretaries.

KNOW ALL MEN BY THESE PRESENTS, That *The Aetna Casualty and Surety Company*, a corporation organized under the laws of the State of Connecticut and having its principal office in the City of Hartford, State of Connecticut, by its duly authorized officer, does hereby appoint the following resident officers, with business address indicated below but without territorial restriction, and does grant full power and authority to each Resident Vice President to sign and execute on its behalf, and to each Resident Assistant Secretary to seal and attest on its behalf, any and all bonds, recognizances, contracts of indemnity, or writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and all such instruments signed by any one of said Resident Vice Presidents, when sealed and attested by any other person named below as one of said Resident Assistant Secretaries, shall be as valid and binding upon the Company as if the same had been signed by the President and duly sealed and attested:

RESIDENT VICE PRESIDENTS

A. M. McMekin
M. C. Kirk
Emory L. Smith

RESIDENT ASSISTANT SECRETARIES

A. M. McMekin
M. C. Kirk
Emory L. Smith
Betty F. Prentice

BUSINESS ADDRESS

Tulsa,
Oklahoma

These appointments are made under and by authority of the following provisions of the by-laws of the Company which provisions are now in full force and effect and are the only applicable provisions of said by-laws:

ARTICLE IV—Section 9. The President, any Vice President, or any Secretary may from time to time appoint Resident Vice Presidents, Resident Assistant Secretaries, Attorneys-in-Fact, and Agents to act for and on behalf of the Company and may give any such appointee such authority as his certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors may at any time remove any such appointee and revoke the power and authority given him.

ARTICLE IV—Section 11. Any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President or a Vice President or by a Resident Vice President, pursuant to the power prescribed in the certificate of authority of such Resident Vice President, and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary or by a Resident Assistant Secretary, pursuant to the power prescribed in the certificate of authority of such Resident Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact pursuant to the power prescribed in his or their certificate or certificates of authority.

This Power of Attorney and Certificate of Authority is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of *The Aetna Casualty and Surety Company* at a meeting duly called and held on the 18th day of July, 1958.

Resolved, that, whereas the President or any Vice President or any Secretary, has the power and authority to appoint by a power of attorney, for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, one or more Resident Vice Presidents, Resident Assistant Secretaries and Attorneys-in-Fact;

Now therefore the signature of Guy E. Mana, Vice President, or of A. H. Anderson, Vice President, or of J. A. Swearingen, Secretary, and the seal of the Company may be affixed to any such power of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

IN WITNESS WHEREOF, *The Aetna Casualty and Surety Company* has caused this instrument to be signed by its Secretary, and its corporate seal to be hereto affixed, this 10th day of September, A. D., 1959.

The Aetna Casualty and Surety Company,



By *J. A. Swearingen*
Secretary

State of Connecticut, County of Hartford—ss:

On this 10th day of September, A. D., 1959, before me personally came J. A. SWEARINGEN, to me known, who, being by me duly sworn, did depose and say: that he is Secretary of *The Aetna Casualty and Surety Company*, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the by-laws of said corporation and that he signed his name thereto by like authority.



George A. Perry, Jr.
Notary Public

My Commission Expires Mar. 31, 1961.

CERTIFICATE

I, the undersigned, Secretary of *The Aetna Casualty and Surety Company*, a stock corporation of the State of Connecticut, DO HEREBY CERTIFY that the foregoing and attached Power of Attorney and Certificate of Authority remains in full force and has not been revoked; and furthermore, that Article IV Sections 9 and 11, of the By-Laws of the Company, and the Resolution of the Board of Directors, as set forth in the Certificate of Authority, are now in force.

Signed and Sealed at the Home Office of the Company, in the City of Hartford, State of Connecticut, this 22nd day of March, A. D., 1960.



J. A. Swearingen
Secretary

ENGLE BAUTER & STACY

816 ENTERPRISE BLDG.

TULSA, OKLAHOMA

PHONE LU 7-2441



March 23, 1960

AIR MAIL

Utah Oil & Gas Conservation Commission
310 Newhouse Building
10 Exchange Place
Salt Lake City 11, Utah

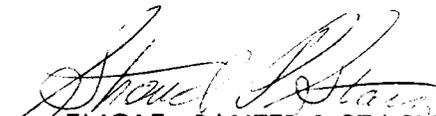
Attention: Mr. Cleon B. Feight, Executive Secretary

Gentlemen:

We enclose Oil and Gas Bond No. 4055422 properly executed by the Aetna Casualty and Surety Company in behalf of Union Texas Natural Gas Corporation, principal, on the following described land:

Salt Water Disposal Well, Southeast Quarter (SE/4) Northwest Quarter (NW/4), Section Thirty-five (35), Township Twenty-five (25) South, Range Twenty-one (21) East, Grand County, Utah.

Yours very truly,


ENGLE, BAUTER & STACY

bk
Encl.



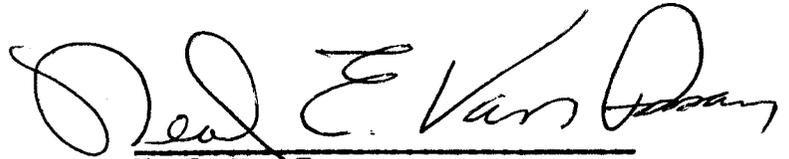
THE AETNA CASUALTY AND SURETY COMPANY

Affiliate of: AETNA LIFE INSURANCE COMPANY • THE STANDARD FIRE INSURANCE COMPANY

I, N. E. Van Fossan certify that Suburban Gas Service Inc., has received permission from the mineral owner and the surface owner of property on which the disposal well referred to in OGCC-1 dated 3-22-60 to conduct brine disposal operations thereon and there under.

I further certify that there are no producing O & G wells within $\frac{1}{2}$ mile of the proposed disposal well and that, to the best of my knowledge there are no lands under Oil & Gas lease within $\frac{1}{2}$ mile of the disposal well location.

Dated this 23 day of March, 1960.

A handwritten signature in cursive script, reading "N. E. Van Fossan". The signature is written in dark ink and is positioned above a horizontal line.

N. E. Van Fossan
Engineer



STATE BOARD OF HEALTH

R.O. PORTER M.D. CHAIRMAN
J.R. BACHMAN
JACK D. HEINZ
LEONARD A. HIGGINS
J. POULSON HUNTER M.D.
L.A. POULSON D.D.S.
CHARLES RUGGERI JR. M.D.
GEORGE W. SOFFE M.D. DIRECTOR

THE STATE OF UTAH
DEPARTMENT OF PUBLIC HEALTH

45 FORT DOUGLAS BLVD.
SALT LAKE CITY 13, UTAH

WATER POLLUTION CONTROL BOARD

WILLIAM F. SIGLER CHAIRMAN
GRANT K. BORG
DORIS B. BOYCE
E. J. FJELDSTED
R. A. MOSS
MILES P. ROMNEY
GEORGE W. SOFFE M.D.
WELBY YOUNG
LYNN M. THATCHER EXEC. SEC'Y.

March 30, 1960

Mr. Neal E. Van Fossen, Engineer
Suburban Gas Service, Inc.
2021 North Towne Avenue
Pomona, California

Dear Sir:

The Utah Water Pollution Control Board has considered your proposal to dispose of salt water brines in subsurface brackish water sands near Moab, Utah, and has taken the following position in this matter.

The proposed method of brine disposal will be acceptable to the Board provided evidence obtained during drilling operations, as evaluated by competent engineers, provides assurance that waters of useful character will not be damaged. In accepting assurance of suitable protection of useful waters the Board will rely on the opinion of various experts, including the Utah State Engineer and the Utah State Oil and Gas Conservation Commission.

Very truly yours,

UTAH WATER POLLUTION CONTROL BOARD

Lynn M. Thatcher
Executive Secretary

lmt-v

cc State Engineer
Oil and Gas Conservation Commission

UNION TEXAS NATURAL GAS CORPORATION

800 ENTERPRISE BUILDING

TULSA 3, OKLAHOMA

May 4, 1960

Utah Oil & Gas Conservation Commission
310 Newhouse Building
10 Exchange Place
Salt Lake City 11, Utah

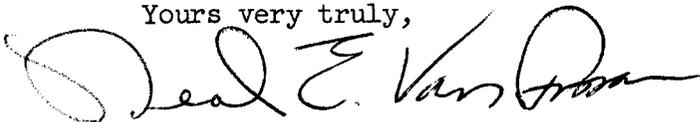
Attention Mr. Jack Fite , Executive Secretary

Gentlemen:

I am enclosing herewith copies of logs run on our LPG storage well #1 and disposal well #1. I will forward completion reports on these wells at a later date.

If you require additional information, please do not hesitate to call on me.

Yours very truly,



Neal E. Van Fossan
Manager, Storage & Terminals

NEVF:bh
enc.

*Suburban Gas Service Inc. Project at MoAB, UTAH
Van*

*Calixto
General Law Division*

UNION TEXAS NATURAL GAS CORPORATION

EIGHT HUNDRED ENTERPRISE BUILDING TULSA OKLAHOMA TELEPHONE LUTHER 4-1421



March 7, 1961

State of Utah
Oil & Gas Conservation Commission
State Capitol Building
Salt Lake City 14, Utah

ATTENTION: Mr. C. B. Feight, Executive Secretary

Gentlemen:

We refer to attached photostats of drilling and development bonds covering operations supervised by Union Texas Natural Gas Corporation in Grand County, Utah during 1960.

The bonds are due for renewal this month.

We respectfully request that the Commission waive further bonding requirements on the subject wells on the following grounds:

1. The LPG Storage well #1 was not drilled for the purpose of exploring for oil or gas.
2. LPG Storage well #1 is an operational storage facility that has a useful life of many years and is not susceptible to plugging in the sense of general oil field practices.
3. The salt water disposal well was developed by re-entry of an existing, but plugged and abandoned, potash test hole. It was not drilled by this Corporation. It was not originally drilled nor was it re-entered for the purpose of exploring for oil or gas.
4. The salt water disposal well is a necessary adjunct to operations of the LPG storage well. It will be used periodically during the operational life of the LPG storage well.

We trust that the Oil and Gas Commission will grant an exception to Rule C-1, under the terms of paragraph (a) of the General Rules and Regulations and Rules of Practice and Procedure, in regard to these two wells.



Mr. C. B. Feight

-2-

March 7, 1961

Our Corporation assisted Suburban Gas (the Owner of LPG Storage well #1 and authorized user of the salt water disposal well) in the development of these facilities. Various permits were obtained under our name. The facilities were completed on September 15, 1960 and were turned over to Suburban Gas on that date.

In the event that the Commission does not grant the above requested exceptions we ask that recognition be given to the fact that (in effect) a transfer of property has been made and release Union Texas Natural Gas Corporation from the bonding obligation.

The transferee, for the purpose of ownership and operations, is

Home Gas Service
Moab, Utah

We understand that Home Gas Service is a subsidiary of Suburban Gas and have requested, via carbon copy of this letter to Suburban Gas, that they either confirm this fact or give you proper ownership if such differs from the above.

Yours very truly,

UNION TEXAS NATURAL GAS CORPORATION


N. E. Van Fossan
Engineer

NEVF/pw

Enclosure

File in Storage well file

March 13, 1961

Mr. N. E. Van Fossan,
Engineer
Union Texas Natural Gas Corp.
800 Enterprise Building
Tulsa, Oklahoma

Dear Mr. Van Fossan:

As per your request of March 7, 1961, this letter is to advise you that liability under the bonds issued by The Aetna Casualty and Surety Company is hereby terminated. Said bonds were in the sum of \$5,000.00 and covered the following described wells:

LPG Storage Well No. 1, Northeast Quarter (NE $\frac{1}{4}$)
Northwest Quarter (NW $\frac{1}{4}$), Section Thirty-five (35),
Township Twenty-six (26) South, Range Twenty-one (21)
East, SLBM, Grand County

and

— Salt Water Disposal Well, Southeast Quarter (SE $\frac{1}{4}$)
Northwest Quarter (NW $\frac{1}{4}$), Section Thirty-five (35),
Township Twenty-five (25) South, Range Twenty-one (21)
East, SLBM, Grand County

At this time we would like to express our appreciation for your courtesy and cooperation concerning this matter.

Very truly yours,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FREIGHT,
EXECUTIVE SECRETARY

CBF:avg
cc: The Aetna Casualty & Surety Co.

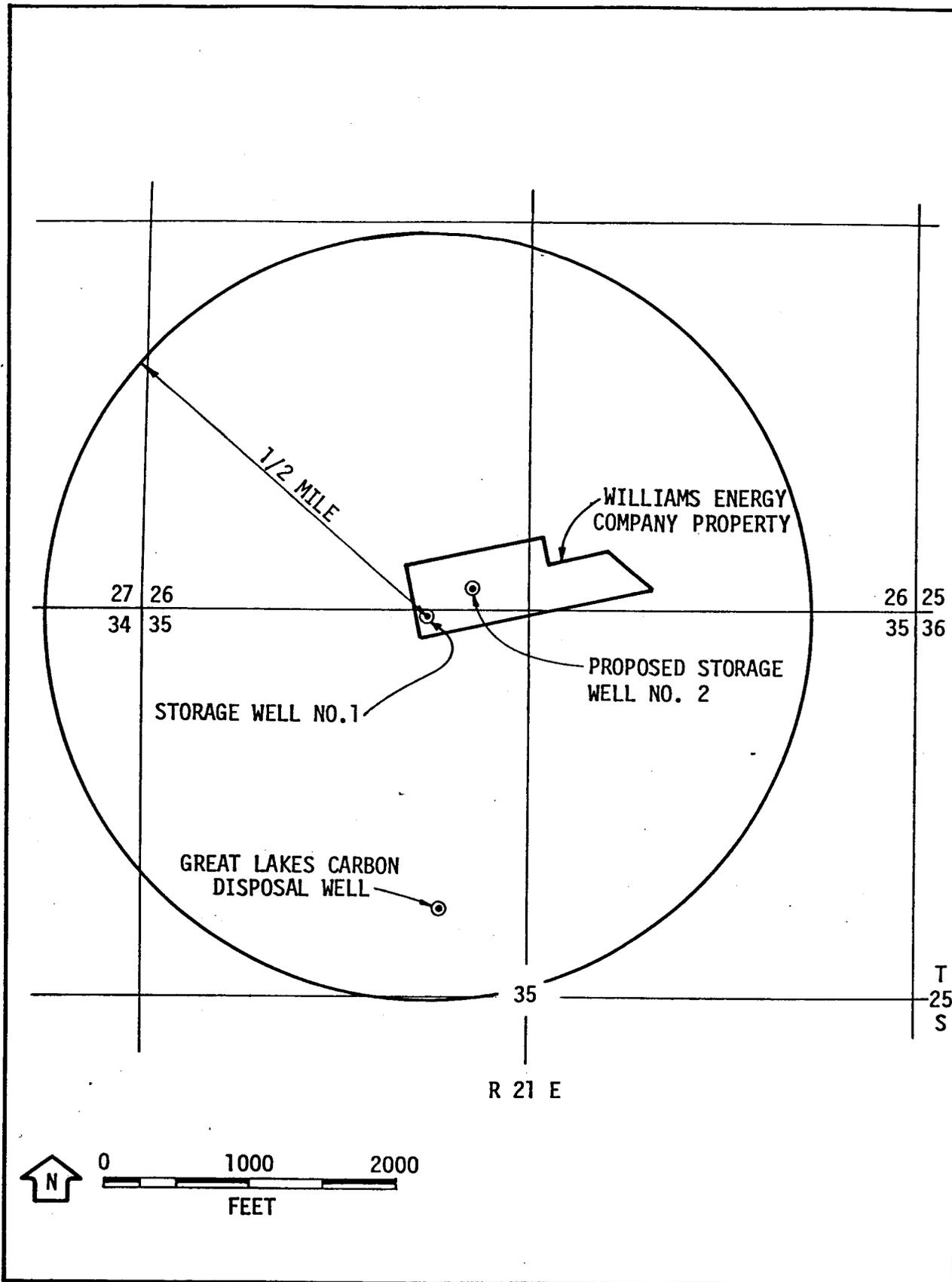


Figure 1. Location of Storage Well NO.1 Proposed to be Converted to Disposal Well NO.1