CANADA
DEPARTMENT OF MINES
AND
TECHNICAL SURVEYS

GEOLOGICAL SURVEY OF CANADA

WATER SUPPLY PAPER No. 66

PRELIMINARY REPORT

GROUND-WATER RESOURCES OF THE RURAL MUNICIPALITY OF SILVERWOOD NO. 123 SASKATCHEWAN

By

B. R. MacKay, H. N. Hainstock, & P. D. Bugg

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BUREAU OF ECONOMIC GEOLOGY

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GROUND WATER RESOURCES OF THE RURAL MUNICIPALITY OF SILVERWOOD, NO. 123, SASKATCHEWAN

INTRODUCTION

Lack of rainfall during the years 1930 to 1934 over a large part of the Prairie Provinces brought about an acute shortage both in the larger supplies of surface water used for irrigation and the smaller supplies of ground water required for domestic purposes and for stock. In an effort to relieve the serious situation the Geological Survey began an extensive study of the problem from the standpoint of domestic uses and stock raising. During the field season of 1935 an area of 80,000 square miles, comprising all that part of Saskatchewan south of the north boundary of township 32, was systematically examined, records of approximately 20,000 wells were obtained, and 720 samples of water were collected for analyses. The facts obtained have been classified and the information pertaining to any well is readily accessible. The examination of so large an area and the interpretation of the data collected were possible because the bedrock geology and the Pleistocene deposits had been studied previously by McLearn, Warren, Rose, Stansfield, Wickenden, Russell, and others of the Geological Survey. The Department of Natural Resources of Saskatchewan and local well drillers assisted considerably in supplying several hundred well records. The base maps used were supplied by the Topographical Surveys Branch of the Department of the Interior.

Publication of Results

The essential information pertaining to the ground water conditions is being published in reports, one being issued for each municipality. Copies of these reports are being sent to the secretary treasurers of the municipalities and to certain Provincial and Federal Departments, where they can be consulted by residents of the municipalities or by other persons, or they may be obtained by writing direct to the Director, Bureau of Economic Geology, Department of Mines, Ottawa. Should anyone require more detailed information than that contained in the reports such additional information as the Geological Survey possesses can be obtained on application to the director. In making such request the applicant should indicate the exact location of the area by giving the quarter section, township, range, and meridian concerning which further information is desired.

The reports are written principally for farm residents, municipal bodies, and well drillers who are either planning to sink new wells or to deepen existing wells. Technical terms used in the reports are defined in the glossary.

How to Use the Report

Anyone desiring information about ground water in any particular locality should read first the part dealing with the municipality as a whole in order to understand more fully the part of the report that deals with the place in which he is interested. At the same time he should study the two figures accompanying the report. Figure 1 shows the surface and bedrock geology as related to the ground water supply, and Figure 2 shows the relief and the location and type of water wells. Relief is shown by lines of equal elevation called "contours". The elevation above sea-level

is given on some or all of the contour lines on the figure.

If one intends to sink a well and wishes to find the approximate depth to a water-bearing horizon, he must learn: (1) the elevation of the site, and (2) the probable elevation of the water-bearing bed. The elevation of the well site is obtained by marking its position on the map, Figure 2, and estimating its elevation with respect to the two contour lines between which it lies and whose elevations are given on the figure. Where contour lines are not shown on the figure, the elevations of adjacent wells as indicated in the Table of Well Records accompanying each report can be used. The approximate elevation of the water-bearing horizon at the well-site can be obtained from the Table of Well Records by noting the elevation of the water-bearing horizon in surrounding wells and by estimating from these known elevations its elevation at the well-site.[1] If the water-bearing horizon is in bedrock the depth to water can be estimated fairly accurately in this way. If the water-bearing horizon is in unconsolidated deposits such as gravel, sand, clay, or glacial debris, however, the estimated elevation is less reliable, because the water-bearing horizon may be inclined, or may be in lenses or in sand beds which may lie at various horizons and may be of small lateral extent. In calculating the depth to water, care should be taken that the water-bearing horizons selected from the Table of Well Records be all in the same geological horizon either in the glacial drift or in the bedrock. From the data in the Table

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[1] If the well-site is near the edge of the municipality, the map and report dealing with the adjoining municipality should be consulted in order to obtain the needed information about nearby wells.

of Well Records it is also possible to form some idea of the quality and quantity of the water likely to be found in the proposed well.

GLOSSARY OF TERMS USED

Alkaline. The term "alkaline" has been applied rather loosely to some ground-waters. In the Prairie Provinces, a water is usually described as "alkaline" when it contains a large amount of salts, chiefly sodium sulphate and magnesium sulphate in solution. Water that tastes strongly of common salt is described as "salty". Many "alkaline" waters may be used for stock. Most of the so-called "alkaline" waters are more correctly termed "sulphate waters".

Alluvium. Deposits of earth, clay, silt, sand, gravel, and other material on the flood-plains of modern streams and in lake beds.

Aquifer or Water-bearing Horizon. A water-bearing bed, lens, or pocket in unconsolidated deposits or in bedrock.

Buried pre-Glacial Stream Channels. A channel carved into the bedrock by a stream before the advance of the continental ice-sheet, and subsequently either partly or wholly filled in by sands, gravels, and boulder clay deposited by the ice-sheet or later agencies.

Bedrock. Bedrock, as here used, refers to partly or wholly consolidated deposits of gravel, sand, silt, clay, and marl that are older than the glacial drift.

Coal Seam. The same as a coal bed. A deposit of carbonaceous material formed from the remains of plants by partial decomposition and burial.

Contour. A line on a map joining points that have the same elevation above sea-level.

Continental Ice-sheet. The great ice-sheet that covered most of the surface of Canada many thousands of years age.

Escarpment. A cliff or a relatively steep slope separating level or gently sloping areas.

Flood-plain. A flat part in a river valley ordinarily above water but covered by water when the river is in flood.

Glacial Drift. The loose, unconsolidated surface deposits of sand, gravel, and clay, or a mixture of these, that were deposited by the continental ice-sheet. Clay containing boulders forms part of the drift and is referred to as glacial till or boulder clay. The glacial drift occurs in several forms:

(1) Ground Moraine. A boulder clay or till plain (includes areas where the glacial drift is very thin and the surface uneven).

(2) Terminal Moraine or Moraine. A hilly tract of country formed by glacial drift that was laid down at the margin of the continental ice-sheet during its retreat. The surface is characterized by irregular hills and undrained basins.

(3) Glacial Outwash. Sand and gravel plains or deltas formed by streams that issued from the continental ice-sheet.

(4) Glacial Lake Deposits. Sand and clay plains formed in glacial lakes during the retreat of the ice-sheet.

Ground Water. Sub-surface water, or water that occurs below the surface of the land.

Hydrostatic Pressure. The pressure that causes water in a well to rise above the point at which it is struck.

Impervious or Impermeable. Beds, such as fine clays or shale, are considered to be impervious or impermeable when they do not permit of the perceptible passage or movement of the ground water.

Pervious or Permeable. Beds are pervious when they permit of the perceptible passage or movement of ground water, as for example porous sands, gravel, and sandstone.

Pre-Glacial Land Surface. The surface of the land before it was covered by the continental ice-sheet.

Recent Deposits. Deposits that have been laid down by the agencies of water and wind since the disappearance of the continental ice-sheet.

Unconsolidated Deposits. The mantle or covering of alluvium and glacial drift consisting of loose sand, gravel, clay, and boulders that overlie the bedrock.

Water Table. The upper limit of the part of the ground wholly saturated with water. This may be very near the surface or many feet below it.

Wells. Holes sunk into the earth so as to reach a supply of water. When no water is obtained they are referred to as dry holes. Wells in which water is encountered are of three classes.

(1) Wells in which the water is under sufficient pressure to flow above the surface of the ground. These are called Flowing Artesian Wells.

(2) Wells in which the water is under pressure but does not rise to the surface. These wells are called Non-Flowing Artesian Wells.

(3) Wells in which the water does not rise above the water table. These wells are called Non-Artesian Wells.

NAMES AND DESCRIPTIONS OF GEOLOGICAL FORMATIONS, REFERRED TO IN THESE REPORTS

Wood Mountain Formation. The name given to a series of gravel and sand beds which have a maximum thickness of 50 feet, and which occur as isolated patches on the higher parts of Wood Mountain. This is the youngest bedrock formation and, where present, overlies the Ravenscrag formation.

Cypress Hills Formation. The name given to a series of conglomerates and sand beds which occur in the southwest corner of Saskatchewan, and rests upon the Ravenscrag or older formations. The formation is 30 to 125 feet thick.

Ravenscrag Formation. The name given to a thick series of light-coloured sandstones and shales containing one or more thick lignite coal seams. This formation is 500 to 1,000 feet thick, and covers a large part of southern Saskatchewan. The principal coal deposits of the province occur in this formation.

Whitemud Formation. The name given to a series of white, grey, and buff coloured clays and sands. The formation is 10 to 75 feet thick. At its base this formation grades in places into coarse, limy sand beds having a maximum thickness of 40 feet.

Eastend Formation. The name given to a series of fine-grained sands and silts. It has been recognized at various localities over the southern part of the province, from the Alberta boundary east to the escarpment of Missouri coteau. The thickness of the formation seldom exceeds 40 feet.

Bearpaw Formation. The Bearpaw consists mostly of incoherent dark grey to dark brownish grey, partly bentonitic shales, weathering light grey, or, in places where much iron

is present, buff. Beds of sand occur in places in the lower part of the formation. It forms the uppermost bedrock formation over much of western and southwestern Saskatchewan and has a maximum thickness of 700 feet or somewhat more.

Belly River Formation. The Belly River consists mostly of non-marine sand, shale, and coal, and underlies the Bearpaw in the western part of the area. It passes eastward and northeastward into marine shale. The principal area of transition is in the western half of the area where the Belly River is mostly thinner than it is to the west and includes marine zones. In the southwestern corner of the area it has a thickness of several hundred feet.

Marine Shale Series. This series of beds consists of dark grey to dark brownish grey, plastic shales, and underlies the central and northeastern parts of Saskatchewan. It includes beds equivalent to the Bearpaw, Belly River, and older formations that underlie the western part of the area.

WATER BEARING HORIZONS OF THE MUNICIPALITY

The rural municipality of Silverwood, No. 123, comprises an area of 324 square miles in southeastern Saskatchewan. It consists of nine townships described as tps. 13, 14, and 15, ranges 1, 2, and 3, W. 2nd mer. The village of Burrows is on the northern boundary of this municipality and is approximately 100 miles east of Regina.

Pipestone creek enters the municipality on the west at the southern corner of township 15, range 3, and flows in a southwesterly direction, leaving the municipality in township 13, range 1. The creek valley is less than ½ mile wide and at least 100 to 150 feet deep.

The municipality is mantled by glacial drift. Deposits of till or boulder clay occur in a narrow strip along Pipestone creek, and in small areas in the northeastern and southwestern corners. A large area of glacial outwash sands and gravels occurs in the southwestern corner, and a small area in the northeastern corner. The remainder of the municipality is mantled by terminal moraine.

Water-Bearing Horizons of the Unconsolidated Deposits

The uppermost water-bearing horizon that is encountered in the glacial drift is formed by pockets of sand and gravel that occur within the upper 30 feet of the till or boulder clay, and within the upper 40 feet of the moraine deposits, and by the deposits of glacial outwash sands and gravels. To the south of Pipestone creek these sand gravel pockets are more numerous in the drift, and the outwash gravels are fairly extensive, so that they form the main source of water supply in the southern half of the municipality. To the north of the creek many holes are dug before a water-bearing gravel pocket is located, and then the supply obtained is usually intermittent. All the wells tapping this

horizon are dependant upon the amount of the annual precipitation for their supply, and so are greatly affected by long periods of drought.

A second water-bearing horizon is encountered at a depth of 50 to 75 feet throughout most of the municipality. This aquifer is formed by a bed of sand or gravel that occurs between two impervious beds of blue clay. The water is highly mineralized, due to the proximity of the clay, but it is being used for drinking as water of a superior quality is not obtainable. This horizon is the main source of supply for township 14, range 1. In the area enclosed by the "A" boundary on the map an abundant supply of water is being obtained from this horizon at a depth of approximately 45 feet. The water obtained in this area is of better quality than obtained elsewhere from the horizon. It is under hydrostatic pressure and maintains a fairly constant level, 15 feet below the surface. The supply from individual wells tapping this horizon is usually sufficient for 200 head of stock.

In the area enclosed on the map by the "B" boundary the water is being obtained from depths of 100 to 250 feet. The most extensive horizon from which water is derived occurs at a depth of 100 to 150 feet, and it is probable that it extends throughout the greater part of the municipality. The waters are seldom used for drinking as they contain fairly large amounts of iron and other mineral salts in solution. The horizon that is tapped at depths of approximately 250 feet appears to be confined to the area as outlined on the map as deeper wells have not encountered it in other parts of the municipality.

Water-bearing Horizons in the Bedrock

The Marine Shale series underlies the glacial drift throughout the municipality. It is encountered at varying depths, and it appears that its pre-Glacial surface was uneven. In a narrow area extending from sec. 12, tp. 13, range 1, to sec. 16,

tp. 14, range 2, the bedrock is pierced at several places at an elevation of 2,050 feet above sea-level. In [illegible], range 3, it is encountered at an elevation of 1,900 feet. In section 36, of the same township and range, and also in township 15, range 2, it lies at a depth of 265 feet, or an elevation of 1,750 feet above sea-level. No water-bearing horizons have been encountered in the Marine Shale series in this municipality, although in a few wells small amounts of water are obtained from small cracks and fissures in the upper few feet of the shale. On the NE. ¼ sec. 16, tp. 14, range 2, a well 450 feet in depth was drilled into the Marine Shale without encountering any water. It is generally considered that this formation yields little, or no, usable water.

GROUND WATER CONDITIONS BY TOWNSHIPS

Township 13, Range 1

Pipestone creek has entrenched a deep valley, approximately 150 feet in depth, in sections 33 to 36 of this township. Abundant supplies of water are obtained from the deposits of sand and gravel that occur in the tributary ravines of the valley. Water is also obtained from the pockets of sand and gravel that occur in the uppermost 30 feet of the glacial till and the moraine deposits. These deposits of sand and gravel constitute the uppermost water-bearing horizon in the unconsolidated deposits and it is the main source of water supply for this township. The amount of water derived varies with the individual well, but generally the supply is sufficient for 50 to 100 head of stock. Many of the farmers are using two or more similar wells. The water is medium hard to soft in most instances, but a few wells in section 24, which passed through a few feet of black clay, yield a bitter water that is unfit for use. Springs are common along the main valley and tributary ravines, and are used for stock.

A second water-bearing horizon is formed by a bed of sand and gravel that occurs at a depth of 35 to 60 feet in the drift. This horizon may extend throughout the township, but its areal extent has not been defined, as it has been tapped by only a few wells. It is improbable that the deposits forming this horizon occur as a continuous layer. The water obtained from this aquifer is hard and slightly "alkaline", but it is being used for both domestic and stock requirements. The individual wells will supply from 50 to 100 head of stock.

No water-bearing horizons have been located in the bedrock of this township. On the SW. ¼, section 24, bedrock was encountered at a depth of 100 feet, or at an elevation of 1,930 feet, and penetrated for a distance of 200 feet, and no water was encountered.

In certain areas, however, such as in the SW. ¼, section 12, a small supply of water can be obtained from small cracks and fissures occurring in the upper few feet of the formation, but it is generally considered that this formation is practically non-water-bearing.

Township 13, Range 2

The greater part of this township is mantled by terminal moraine deposits. Small areas that are mantled by till or boulder clay occur in the northeastern and southeastern corners, and glacial outwash sands and gravels mantle an area composed of sections 7, 8, 17, and 18, in the southwestern corner.

Two water-bearing horizons occur in the glacial drift. The uppermost lies within 30 feet of the surface and is formed by the deposits of glacial outwash sands and gravels, and by the scattered pockets of sand that occur within the weathered zone of the boulder clay. These pockets of sand and gravel are hard to locate and in places many dry holes are dug before an adequate supply of water is encountered. This horizon, however, is the main source of water supply for the township. The quantity of water varies with the individual wells and in many sections farmers have sunk a number of wells each of which yields only a small quantity of water. The best supply is obtained from the outwash sands and gravels. The quality of the water from this horizon also varies with the individual wells, some wells yielding water that is suitable for domestic purposes, whereas others yield water that is fit only for stock.

The second water-bearing horizon is probably continuous throughout the township, but due to the fact that a sufficient supply of water is obtained from the first horizon it has not been necessary to try to locate another source of supply. This horizon is formed by a bed of sand and gravel, overlain by yellow clay, and underlain by impervious blue clay, and it is encountered at

depths of 35 to 60 feet. The water is hard and "alkaline", but it can be used for domestic purposes, if water of better quality is not available. This township does not experience a shortage of water and it is possible that other water-bearing horizons may exist within the upper 200 feet of the drift. One well, on the SE. $\frac{1}{4}$, section 6, encountered an abundant supply of excellent water in a gravel bed at a depth of 100 feet. Similar water-bearing horizons may be located in other parts of the township.

Township 13, Range 3

Terminal moraine deposits mantle the northeastern corner of this township. The central part is covered by glacial outwash sands and gravel, and the southwestern corner is mantled by till or boulder clay.

The uppermost water-bearing horizon is formed by the glacial outwash gravels and sands. This horizon yields an abundant supply of hard, drinkable water, and wells tapping it are from 15 to 30 feet in depth. It has not been necessary to try and locate deeper water-bearing horizons in the area covered by glacial outwash, as the supply of water obtained is ample for farm requirements.

A second water-bearing horizon is encountered in the southwestern and northeastern corners of the township. In the southwestern part the aquifer is a bed of gravel that lies between twobeds of impervious blue clay at an approximate depth of 65 feet. It yields an abundant supply of hard water that is used for all requirements. It is under pressure and rises to a level 20 feet below the surface, where it maintains a constant level. The supply from this horizon is little affected by drought conditions. The wells in the northeastern corner derive their water from a fine sand that occurs within the blue clay at adepth of 60 to 65 feet. The supply in this area is also abundant and the water is of good quality. The hydrostatic pressure is

sufficient to cause the water to rise to a level 10 to 12 feet below the surface, where it maintains a constant level.

A well on the SE. ¼, section 1, taps a water-bearing horizon at a depth of 100 feet. It is formed by a bed of gravel that is overlain by blue clay, and it yields an abundant supply of hard water. It is probable that this horizon could be located at other places in the township.

Township 14, Range 1

Pipestone creek flows through the southwestern corner of this township. Its valley is approximately one-eighth of a mile wide and 150 feet deep. Along this valley, and a small strip in the eastern edge of the township, the glacial drift is in the form of till or boulder clay. The remainder of the township is mantled by terminal moraine.

The water supply in this township is obtained from two water-bearing horizons in the drift mantle. The uppermost lies within the upper 30 feet of the glacial drift, and is composed of pockets of sand and gravel that occur in the yellow clay. These pockets of sand and gravel are quite extensive in the township and the amount of water derived from individual wells is sufficient for 50 to 100 head of stock. The water is suitable for domestic purposes.

The second horizon is encountered at depths of 40 to 60 feet and appears to be fairly continuous throughout the township. It is formed by a bed of sand and gravel that is overlain by a 10-foot bed of blue clay and underlain by an impervious bed of blue clay of unknown thickness. It yields a fair supply of hard "alkaline" water, that is being used for domestic purposes, although it has a laxative effect upon those who are not accustomed to its use.

A well located on the SW. ¼, section 6, appears to have encountered the Marine Shale bedrock at a depth of 28 feet. This

is the only locality where the bedrock comes close to the surface. No water was encountered in this bedrock formation, and it is doubtful if any water will be obtained from it in other localities.

The supply of water in this township is sufficient for local needs. The run-off waters could be conserved by the construction of dams and the excavation of dugouts; locations for which are numerous in this township.

Township 14, Range 2

Pipestone creek flows in an easterly direction through the southern half of the township. The area is deeply dissected by the main valley and its numerous tributaries. The southwestern half of the township is largely mantled by till or boulder clay, whereas the northeastern half is covered by terminal moraine deposits.

South of Pipestone creek the main source of water is derived from a horizon that occurs in the upper 30 feet of glacial drift. This water-bearing horizon is composed of pockets of sand and gravel that occur in the yellow clay, and by deposits of sand and gravel that have been deposited along the slopes of the numerous ravines. The supply from this horizon is dependant upon the size of the gravel or sand pocket that is tapped, and upon the amount of seasonal precipitation. Wells tapping fairly large pockets yield adequate supplies, but those tapping small pockets yield intermittent supplies. The water is suitable for all requirements. It is probable that other water-bearing horizons could be located at greater depths in this township.

In the area to the north of Pipestone creek two water-bearing horizons are encountered. The uppermost horizon is formed by a bed of sand that is overlain by a fine-textured, blue clay, and it is encountered at depths of 40 to 75 feet. This sand bed varies in thickness, being only a few feet thick in the western

part of the township and from 10 to 15 feet in the eastern part. The water from this horizon is very hard, and is strongly "alkaline". It is satisfactory for stock, but is rarely used as drinking water. The water also contains a considerable amount of iron that settles as a red precipitate upon exposure to the air. Some wells, however, are being used for domestic purposes as water of superior quality is not obtainable.

The second water-bearing horizon in the area to the north of Pipestone creek is apparently confined to a narrow strip extending from the northwestern corner of the township to the NW. ¼, section 14. This area is shown on the accompanying map. This horizon is formed by a bed of gravel that is overlain by blue clay and underlain by sand. The wells that have tapped this horizon are from 100 to 140 feet deep, and the aquifer appears to occur at an approximate elevation of 1,900 feet. It is possible that this horizon is underlain directly by the Marine Shale bedrock which is located at this elevation in section 14. This horizon yields an abundant supply of highly mineralized water that is rarely used for domestic purposes. The water is "alkaline", has a high iron content, and is strongly laxative.

Bedrock of the Marine Shale series occurs 20 to 70 feet below the surface in sections 14 and 16, but is at greater depths elsewhere in the township. The well on the NE. ¼, section 16, encountered the shale at a depth of 50 feet, and was continued in it for a distance of 400 feet. No water was encountered, and it is doubtful if any water supply will be obtained from this formation. Farmers are advised not to drill into the Marine Shale.

Township 14, Range 3

This area is drained by Pipestone creek, which flows in an easterly direction along the northern boundary and through the northeastern corner, and by Montgomery creek, which flows in a northerly direction along the western edge of the township. Many

small tributary ravines also occur.

The township is overlain by a 150- to 280-foot mantle of glacial drift. The larger part of the area is mantled by glacial till or boulder clay, but deposits of glacial outwash sands and gravels occur in the southwestern corner, and the southeastern corner is covered by terminal moraine deposits.

The uppermost water-bearing horizon in this drift lies within 30 feet of the surface. It is formed by the deposits of outwash sands and gravels, and by scattered pockets of sand and gravel that occur within the yellow clay, or weathered zone of the boulder clay. Wells tapping the outwash gravels yield a fairly abundant supply of usable water, but those that tap the pockets of sand and gravel yield varying amounts of water that may or may not be suitable for domestic purposes.

A second water-bearing horizon, which extends over the southern two-thirds of the township, is located at a depth of 40 to 70 feet below the surface. It is formed by a bed of sand and gravel that occurs between beds of impervious blue clay. This aquifer decreases in thickness towards the north, and apparently disappears about 2 miles south of the northern boundary of the township. It yields an abundant supply of hard water that is being used for household purposes.

In the northern third of the township water is obtained at depths of 100 to 250 feet. These wells are apparently tapping scattered pockets of sand and gravel that occur at different depths in the blue boulder clay. Two wells located on the NE. $\frac{1}{4}$, section 28, and the SW. $\frac{1}{4}$, section 27, are deriving their water from a bed of sand that is overlain by blue clay. The other wells derive an abundance of water from a bed of gravel at an approximate depth of 215 feet. The hydrostatic pressure is sufficient to cause the water to rise to a level 70 to 90 feet below the surface.

The water is used for domestic purposes, although it has a high iron content. This horizon appears to be fairly extensive as wells in the township to the north are obtaining water from the same depth.

Bedrock is located in section 17 at a depth of 155 feet, or an elevation of 1,900 feet above sea-level. Two wells in the southern half of section 36, which are 280 feet deep, are obtaining water from a bed of sand and gravel that apparently is immediately underlain by the Marine Shale, as it occurs at this elevation, 1,740 feet, in the SE. ¼, section 6, tp. 15, range 2. It is very doubtful if any water will be encountered in the Marine Shale.

Township 15, Range 1

The northeastern and southwestern corners of this township are overlain by terminal moraine deposits. With the exception of a small area in the northwestern corner that is covered by glacial outwash sands and gravels, the remainder of the township is mantled by till or boulder clay. The upper 30 feet of this drift mantle is largely composed of yellow clay, in which pockets of water-bearing sand and gravel are located. In the moraine areas these pockets are more numerous than in the areas covered by boulder clay. In sections 2, 3, 8, 9, and 16 an abundant supply of usable water is obtained from fairly extensive deposits of sand and gravel. In the northeastern part of the township the gravel deposits are small, and the yield of water is dependant to a great extent upon seasonal precipitation.

A second water-bearing horizon occurs at a depth of 40 to 70 feet. It is a sand bed that is overlain and underlain by impervious beds of blue clay. This horizon has been tapped by a number of wells and appears tobe fairly continuous throughout

the township. The water is "alkaline", but is used for domestic purposes. It has a laxative effect until one becomes accustomed to its use. The individual wells tapping this horizon yield a supply of water that is sufficient for 50 to 60 head of stock.

A third horizon has been encountered by a number of wells, at depths of 90 to 130 feet. This aquifer is a bed of sand and gravel that is overlain by impervious blue clay, the lower few feet of which is very hard and is commonly called "hardpan". When this hardpan layer is penetrated, the water rushes out with considerable force. The water is very hard, and has a fairly high iron content. It is used for domestic purposes as water of superior quality is not obtainable in these localities. The hydrostatic pressure is sufficient to cause the water to rise to a level 20 to 40 feet below the surface, where it maintains a constant level. It is probable that this water-bearing horizon occurs throughout the township.

Township 15, Range 8

With the exception of a small area in sections 25 and 36 that is mantled by till and glacial outwash gravels, this township is covered by terminal moraine. There are no large hills and valleys in the township, but numerous small depressions and ridges, which trend in an east to west direction.

The uppermost water-bearing horizon in the glacial drift is formed by pockets of sand and gravel that occur within 30 feet of the surface. An abundant supply of water is obtained from this horizon in sections 4, 18, and 32, but elsewhere in the township only a small supply of water is derived from the pockets of sand and gravel. The supply is dependent upon the amount of annual precipitation. Many dry holes are dug in places before a pocket of sand or gravel is located.

A second water-bearing horizon that appears to be continuous throughout the township is formed by a bed of sand or gravel at a depth of from 50 to 70 feet. The water from this horizon is very hard, but it is used for domestic purposes as water of better quality is not available. Individual wells tapping this horizon yield a supply of water that is sufficient for 50 to 100 head of stock throughout the year.

A third water-bearing horizon is located at a depth of 100 to 150 feet. It is formed by a bed of sand that occurs between impervious beds of blue clay. This sand bed is fairly continuous as water is obtained at this level throughout the township. The water is exceptionally hard, "alkaline", and has a strong laxative effect on any one not accustomed to its use. The water in some instances is not used for drinking and in others it would not be used if water of better quality were available. There is a sufficient quantity of water from the individual wells to supply 300 to 400 head of stock. The water rises to a level 30 to 40 feet below the surface, where it maintains a constant level.

In sections 6 and 7 two wells were drilled to a depth of 265 feet and water was located in a bed of quicksand that is overlain by impervious blue clay and underlain by dark shale. This shale is part of the Marine shale series. These two wells yield a supply of hard water that is being used for domestic purposes. The quantity is reported to supply about 300 head of stock. The water is under strong hydrostatic pressure and rises to a level 68 feet below the surface. It is hardly probable that this water-bearing horizon continues throughout the township, as in other localities similar horizons have proved to be only of local areal extent.

The run-off waters may be conserved in this township by the contruction of dams, or the excavation of deep dugouts.

Drilling into the Marine Shale is not advised as only a small supply of highly mineralized water, or no water at all, will be encountered.

Township 15, Range 3

With the exception of a small area of glacial till, or boulder clay, that parallels Pipestone creek on the north, the glacial drift of this township is in the form of a terminal moraine. The surface of the township is rolling and characterized by numerous small valleys and ravines, and the area is not well settled.

Intermittent supplies of water are obtained from pockets of sand and gravel that occur within the upper 30 feet of the glacial drift. Many holes are sunk before water is located and only a few wells in sections 4, 5, and 6, are obtaining a satisfactory supply. They are entirely dependent upon the amount of seasonal precipitation.

Wells in sections 22, 23, 24, and 25 are obtaining a fair supply of hard water, that is being used for domestic purposes, from a gravel bed at a depth of from 85 to 100 feet. The water rises to a level 60 to 80 feet below the surface and the supply is sufficient for 50 to 60 head of stock.

The main source of supply is obtained from a water-bearing horizon at a depth of 175 to 200 feet. The aquifer is a bed of gravel lying between impervious beds of blue clay at an average elevation of 1,850 feet above sea-level. Most of the wells tapping this horizon produce an abundant supply of water that is used for all purposes, and individual wells will supply 300 to 400 head of stock throughout the year. The water rises to a level 75 to 90 feet below the surface. This water-bearing horizon apparently extends throughout the township.

In sections 5 and 9 wells have tapped a water-bearing horizon at a depth of 250 to 300 feet, or an elevation of approximately 1,750 feet. The aquifer is a sand bed, and it yields an abundance of hard, usable water. The hydrostatic pressure is sufficient to cause the water to rise to a level 60 feet below the surface. This sand bed may extend throughout the township, but there is no evidence that it does.

This township has three possible water-bearing horizons from which an abundance of water may be obtained. They occur at depths of 60 to 80 feet, 175 to 200 feet, and 250 to 300 feet. The second horizon is probably the best source of supply.

STATISTICAL SUMMARY OF WELL INFORMATION IN RURAL MUNICIPALITY OF SILVERWOOD, NO.123, SASKATCHEWAN

West of 2nd meridian	Township / Range	13 / 1	13 / 2	13 / 3	14 / 1	14 / 2	14 / 3	15 / 1	15 / 2	15 / 3	Total No. in Municipality
Total No. of Wells in Township		68	40	62	73	60	53	81	57	45	539
No. of wells in bedrock		3	0	0	1	9	1	0	2	0	16
No. of wells in glacial drift		65	40	62	72	51	52	81	55	45	523
No. of wells in alluvium		0	0	0	0	0	0	0	0	0	0
Permanency of Water Supply											
No. with permanent supply		45	29	53	58	37	46	48	39	28	383
No. with intermittent supply		3	6	2	2	9	5	4	3	6	40
No. dry holes		20	5	7	13	14	2	29	15	11	116
Types of Wells											
No. of flowing artesian wells		0	0	0	0	0	0	0	0	0	0
No. of non-flowing artesian wells		44	7	20	16	14	23	26	27	21	198
No. of non-artesian wells		4	28	35	44	32	28	26	15	13	225
Quality of Water											
No. with hard water		44	34	49	52	43	48	47	41	33	391
No. with soft water		4	1	6	8	3	3	5	1	1	32
No. with salty water		0	0	0	0	0	0	0	0	1	1
No. with "alkaline" water		6	2	8	9	5	4	8	5	2	49
Depths of Wells											
No. from 0 to 50 feet deep		59	38	47	66	36	33	40	30	13	362
No. from 51 to 100 feet deep		5	2	15	6	14	13	27	19	10	111
No. from 101 to 150 feet deep		1	0	0	1	6	0	13	3	8	32
No. from 151 to 200 feet deep		1	0	0	0	1	3	1	2	7	15
No. from 201 to 500 feet deep		2	0	0	0	3	4	0	3	7	19
No. from 501 to 1,000 feet deep		0	0	0	0	0	0	0	0	0	0
No. over 1,000 feet deep		0	0	0	0	0	0	0	0	0	0
How the Water is Used											
No. usable for domestic purposes		55	31	51	57	39	45	47	40	29	374
No. usable for domestic purposes		13	4	4	3	7	6	5	2	5	49
No. usable for stock		48	35	54	60	44	50	50	41	33	415
No. not usable for stock		0	0	1	0	2	1	2	1	1	8
Sufficiency of Water Supply											
No. sufficient for domestic needs		48	33	53	60	38	50	47	41	34	405
No. insufficient for domestic needs		0	2	2	0	7	1	5	1	0	18
No. sufficient for stock needs		39	24	40	43	41	43	38	35	27	330
No. insufficient for stock needs		9	11	15	17	5	8	14	7	7	93

ANALYSES AND QUALITY OF WATER

General Statement

Samples of water from representative wells in surface deposits and bedrock were taken for analyses. Except as otherwise stated in the table of analyses the samples were analysed in the laboratory of the Borings Division of the Geological Survey by the usual standard methods. The quantities of the following constituents were determined; total dissolved mineral solids, calcium oxide, magnesium oxide, sodium oxide by difference, sulphate, chloride, and alkalinity. The alkalinity referred to here is the calcium carbonate equivalent of all acid used in neutralizing the carbonates of sodium, calcium, and magnesium. The results of the analyses are given in parts per million--that is, parts by weight of the constituents in 1,000,000 parts of water; for example, 1 ounce of material dissolved in 10 gallons of water is equal to 625 parts per million. The samples were not examined for bacteria, and thus a water that may be termed suitable for use on the basis of its mineral salt content might be condemned on account of its bacteria content. Waters that are high in bacteria content have usually been polluted by surface waters.

Total Dissolved Mineral Solids

The term "total dissolved mineral solids" as here used refers to the residue remaining when a sample of water is evaporated to dryness. It is generally considered that waters that have less than 1,000 parts per million of dissolved solids are suitable for ordinary uses, but in the Prairie Provinces this figure is often exceeded. Nearly all waters that contain more than 1,000 parts per million of total solids have a taste due to the dissolved mineral matter. Residents

accustomed to the waters may use those that have much more than 1,000 parts per million of dissolved solids without any marked inconvenience, although most persons not used to highly mineralized water would find such waters highly objectionable.

Mineral Substances Present

Calcium and Magnesium

The calcium (Ca) and magnesium (Mg) content of water is dissolved from rocks and soils, but mostly from limestone, dolomite, and gypsum. The calcium and magnesium salts impart hardness to water. The magnesium salts are laxative, especially magnesium sulphate (Epsom salts, $MgSO_4$), and they are more detrimental to health than the lime or calcium salts. The calcium salts have no laxative or other deleterious effects. The scale found on the inside of steam boilders and tea-kettles is formed from these mineral salts.

Sodium

The salts of sodium are next in importance to those of calcium and magnesium. Of these, sodium sulphate (Glauber's salt, Na_2SO_4) is usually in excess of sodium chloride (common salt, NaCl). These sodium salts are dissolved from rocks and soils. When there is a large amount of sodium sulphate present the water is laxative and unfit for domestic use. Sodium carbonate (Na_2CO_3) "black alkali", sodium sulphate "white alkali", and sodium chloride are injurious to vegetation.

Sulphates

Sulphates (SO_4) are one of the common constituents of natural water. The sulphate salts most commonly found are sodium sulphate, magnesium sulphate, and calcium sulphate ($CaSO_4$). When the water contains large quantities of the sulphate of sodium it is injurious to vegetation.

Chlorides

Chlorides are common constituents of all natural water and are dissolved in small quantities from rocks. They usually occur as sodium chloride and if the quantity of salt is much over 400 parts per million the water has a brackish taste.

Iron

Iron (Fe) is dissolved from many rocks and the surface deposits derived from them, and also from well casings, water pipes, and other fixtures. More than 0.1 part per million of iron in solution will settle as a red precipitate upon exposure to the air. A water that contains a considerable amount of iron will stain porcelain, enamelled ware, and clothing that is washed in it, and when used for drinking purposes has a tendency to cause constipation, but the iron can be almost completely removed by aeration and filtration of the water.

Hardness

Calcium and magnesium salts impart hardness to water. Hardness of water is commonly recognized by its soap-destroying powers as shown by the difficulty of obtaining lather with soap. The total hardness of a water is the hardness of the water in its original state. Total hardness is divided into "permanent hardness" and "temporary hardness". Permanent hardness is the hardness of the water remaining after the sample has been boiled and it represents the amount of mineral salts that cannot be removed by boiling. Temporary hardness is the difference between the total hardness and the permanent hardness and represents the amount of mineral salts that can be removed by boiling. Temporary hardness is due mainly to the bicarbonates of calcium and magnesium and iron, and permanent hardness to the sulphates and chlorides of calcium and magnesium. The permanent hardness

can be partly eliminated by adding simple chemical softeners such as ammonia or sodium carbonate, or many prepared softeners. Water that contains a large amount of sodium carbonate and small amounts of calcium and magnesium salts is soft, but if the calcium and magnesium salts are present in large amounts the water is hard. Water that has a total hardness of 300 parts per million or more is usually classed as excessively hard. Many of the Saskatchewan water samples have a total hardness greatly in excess of 300 parts per million; when the total hardness exceeded 3,000 parts per million no exact hardness determination was made. Also no determination for temporary hardness was made on waters having a total hardness less than 50 parts per million. As the determinations of the soap hardness in some cases were made after the samples had been stored for some time, the temporary hardness of some of the waters as they come from the wells probably is higher than that given in the table of analyses.

Analyses of Water Samples from the Municipality of Silverwood, No. 123, Saskatchewan

LOCATION						Depth of Well Ft.	Total dis'vd solids	HARDNESS		CONSTITUENTS AS ANALYSED					CONSTITUENTS AS CALCULATED IN ASSUMED COMBINATIONS							Source of Water
No.	Qtr.	Sec.	Tp.	Rge.	Mer.			Total	Perm.	Cl	Alka-linity	CaO	MgO	SO_4	Solids	$CaCO_3$	$CaSO_4$	$MgSO_4$	Na_2SO_4	NaCl	$CaCl_2$	
1.	NE.	30	14	2	2	127	1,460	1,050	1,050	11	120	230	223	910	1,345	120	396	654	157	18		xl
2.	SE.	30	14	3	2	57	3,068								3,068	(3)	(1)	(2)	(4)		(5)	xl

Water samples indicated thus, xl, are from glacial drift.
Analyses are reported in parts per million; where numbers (1), (2), (3), (4), and (5) are used instead of parts per million, they represent the relative amounts in which the five main constituents are present in the water.
Hardness is the soap hardness expressed as calcium carbonate ($CaCO_3$).
Analysis No. 2 by Provincial Analyst, Regina.
For interpretation of this table read the section on Analyses and Quality of Water.

Water from the Unconsolidated Deposits

Two samples of ground water from the glacial drift were analysed and their results are listed in the accompanying table. The waters from the glacial drift in this municipality contain the same mineral salts in solution, but may differ in the amounts of these mineral salts contained. In the samples analysed the "total dissolved solid content" exceeds 1,000 parts per million. The water is being used for domestic purposes in most cases, as water of a superior quality is not obtainable. It is not advisable to use for domestic purposes waters that have a total dissolved solid content greatly exceeding 1,000 parts per million, although in some cases such waters are being used without any apparent ill effects. The waters analysed are extremely hard and cannot be softened by boiling.

It has been found that purer water is obtained from large deposits of sand or gravel occurring near the surface than from sand and gravel deposits that occur as small pockets overlain by thick deposits of clay. Care should be taken to see that shallow wells dug into deposits of sand and gravel near the surface are not polluted by surface waters. Waters from these types of wells, which are being used for domestic purposes, should be frequently analysed for bacteria content.

Water from the Bedrock

Water that is obtained from the upper part of the Marine Shale series is mainly seepage water from the overlying glacial drift. It has the same characteristics as water obtained from the glacial drift. Any water that is encountered at depth in this formation will likely prove to be too highly mineralized to be used either for domestic or stock purposes.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD, NO. 123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
1	S.W.	1	13	1	2	Dug	15	2,100	- 11	2,089	12	2,088	Glacial sand	Hard, clear		D, S	Sufficient for 60 head stock.
2	N.W.	2	"	"	"	"	12	2,125	- 4	2,121	7	2,118	" gravel	" "		D, S	" " 100 " " .
3	S.W.	2	"	"	"	"	8	2,130	- 3	2,127	3	2,127	" "	Soft, "		D, S	" " 100 " "; shallow well also.
4	S.E.	4	"	"	"	"	16	2,185	- 8	2,177	16	2,169	" stones	Hard, "		S	" " 200 " "; 28 foot well also.
5	S.E.	5	"	"	"	Bored	28	2,200	- 14	2,186	24	2,176	" sand	" "		D, S	Intermittent supply; several dry holes.
6	S.E.	8	"	"	"	Dug	28	2,200	- 25	2,175	24	2,176	" "	" "		D, S	Sufficient for 20 head stock.
7	S.E.	9	"	"	"	"	10	2,160	- 4	2,156	0	2,160	" clay	" "		S	Sufficient for 100 head stock.
8	S.W.	10	"	"	"	"	35	2,150	- 20	2,130	20	2,130	" sand	"alkaline" Hard, clear		D	" " 40 " " ; house well also.
9	S.W.	10	"	"	"	"	26	2,160	- 15	2,135	22	2,126	" "	Hard, clear, "alkaline"		S	" " 125 " " .
10	S.E.	10	"	"	"	Bored	40	2,125	- 25	2,100	35	2,090	" gravel	Hard, clear		D, S	" " 100 " " ; several dry hole
11	S.W.	11	"	"	"	Dug	22	2,105	- 8	2,097	18	2,087	" "	" "		D, S	" " 100 " " .
12	S.W.	12	"	"	"	"	20	2,040	- 12	2,028	20	2,020	Marine shale	" "		S	" " 100 " " ; 55 foot dry hole
13	S.W.	13	"	"	"	"	10	2,050	0	2,050	0	2,050	Glacial gravel	" "		S	Intermittent well, good supply in summer; also a 60 foot dry hole.
14	N.W.	13	"	"	"	"	30	2,035					"				Dry hole.
15	N.E.	14	"	"	"	"	8	2,020	- 4	2,016	0	2,020	" gravel	Hard, clear			Sufficient for 60 head stock.
16	S.W.	14	"	"	"	"	15	2,070	- 10	2,060	13	2,057	" sand	" "		D, S	Yields 250 gallons a hour.
17	N.W.	14	"	"	"	"	30	2,030	- 10	2,020	23	2,007	"	" "		S	Sufficient for 50 head stock; also house well.
18	S.W.	15	"	"	"	Bored	30	2,110	- 10	2,100	15	2,095	" sand	" "		D, S	Insufficient for 20 head stock.
19	N.W.	15	"	"	"	Dug	12	2,130	- 5	2,125	3	2,127	" "	" "		D, S	Sufficient for 50 head stock.
20	S.W.	16	"	"	"	Bored	20	2,140			18	2,122	" "	" "		D, S	Sufficient for domestic use and 10 head stock.
21	N.W.	16	"	"	"	Dug	29	2,100	- 18	2,082	20	2,080	" "	" "		D, S	Sufficient for 50 head stock; holes with "alkaline" water also.
22	S.E.	18	"	"	"	"	15	2,130	- 3	2,127	10	2,120	" gravel	" "		D, S	Sufficient for local needs.
23	N.W.	18	"	"	"	"	16	2,180	- 10	2,170	12	2,168	" "	" "		D, S	Sufficient for 300 head stock.
24	N.E.	19	"	"	"	Bored	65	2,130	- 20	2,110	58	2,072	" "	" "		D, S	Sufficient for 45 head stock if well cleaned.
25	N.W.	20	"	"	"	Dug	17	2,125	- 13	2,112	10	2,115	" "	Soft, "		D, S	Sufficient for 50 head stock.
26	N.E.	21	"	"	"	"	35	2,110	- 20	2,090	35	2,075	" sand	Hard, "		D, S	Insufficient for 10 head stock; two dry holes.
27	N.E.	22	"	"	"	"	15	2,030	- 3	2,027	3	2,027	" "	Hard, clear, "alkaline"		D, S	Sufficient for 150 head stock; two other wells.

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO.123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
28	NW.	23	13	1	2	Dug	16	2,040	- 8	2,032	11	2,029	Glacial sand	Hard, clear		D, S	Sufficient for 40 head stock; fills with sand.
29	SW.	23	"	"	"	"	8	2,040	- 2	2,038	0	2,040	" "	" "		D, S	Sufficient for 100 head stock.
30	SE.	23	"	"	"	"	28	2,045	-13	2,032	15	2,030	" "	" "		D, S	Insufficient for 15 head stock.
31	SW.	24	"	"	"	"	20	2,030	- 14	2,016	14	2,016	" "	" "		S	" " 15 " " .
32	SW.	24	"	"	"	Drilled	300	2,030					Marine shale	"alkaline"			Dry hole.
33	SE.	24	"	"	"	Dug	21	2,025	- 13	2,012	16	2,009	Glacial sand	Hard, clear		D, S	Sufficient for 40 head stock; also dry hole.
34	NE.	24	"	"	"	"	18	1,990	- 8	1,982			" clay	" "		S	Insufficient for local needs; also 20 foot well.
35	SE.	26	"	"	"	"	26	2,035	- 10	2,025	32	2,003	" sand	" "		D, S	Sufficient for 20 head stock.
36	SE.	28	"	"	"	"	15	2,040	- 8	2,032	13	2,027	"	" "		S	Sufficient for 20 head stock.
37	NW.	28	"	"	"	"	25	2,100	- 12	2,088	20	2,080	" sand	"alkaline" Hard, clear		D, S	Sufficient for 6 head stock; fills with sand.
38	NE.	29	"	"	"	Spring		2,040	+ 4	2,044	0	2,040	" gravel	" "		D, S	Continuous flow.
39	SE.	30	"	"	"	Dug	6	2,130	- 2	2,128	0	2,130	" "	" "		S	Sufficient for 40 head stock.
40	SW.	30	"	"	"	"	20	2,140	- 10	2,130	15	2,125	" sand	" "		D, S	Sufficient for 20 head stock.
41	NW.	32	"	"	"	"	20	2,090	- 16	2,072	14	2,076	" gravel	" "		D, S	Sufficient for domestic use and horses; also has spring that flows year round.
42	SW.	32	"	"	"	"	2	2,120	+ 2	2,122	0	2,120	" "	Soft, "		S	Sufficient for 100 head stock; also has house well.
43	SE.	32	"	"	"	"	35	2,085	- 32	2,053	16	2,069	" "	Hard, "		D, S	Sufficient for 100 head stock, abundant supply.
44	SW.	33	"	"	"	Bored	35	2,090	- 32	2,058	32	2,058	" sand	" "		D, S	Sufficient for local needs.
45	NW.	34	"	"	"			1,950					"	" "		D, S	Sufficient for local needs; abundant supply.
46	SW.	36	"	"	"	Dug	22	1,985	- 18	1,967	20	1,965	" gravel	" "		D, S	Sufficient for 17 head stock; many dry holes.
1	SW.	4	13	2	2	Dug		2,185					Glacial	Hard, clear			
2	SW.	5	"	"	"	"	24	2,180	- 22	2,158			" sand	" "	41	D, S	Sufficient for 15 head stock.
3	SE.	6	"	"	"	Bored	100	2,184	- 50	2,134	100	2,084	" gravel	" "	40	D, S	Oversufficient for local needs.
4	SE.	6	"	"	"	Dug	30	2,185	- 20	2,165			" "	" "	40	D, S	Sufficient for domestic use only.
5	NW.	7	"	"	"	"	4	2,155	+ 1	2,156	4	2,151	" sand	" "		D, S	Sufficient for 50 head stock.
6	NE.	7	"	"	"	Spring		2,140					" "	" "			
7	NW.	9	"	"	"	Bored	42	2,190	- 30	2,160			" gravel	" "	43	D, S	Sufficient for 56 head stock; also another well.
8	NW.	10	"	"	"	"	20	2,195	- 16	2,179	20	2,175	" sand	" "		D, S	Sufficient for 10 head stock.

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO. 123, SASKATCHEWAN

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE: Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED: Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
9	NE.	12	13	2	2	Bored	30	2,207	- 13	2,194			Glacial gravel	Hard, clear		D, S	Sufficient for local needs.
10	NE.	14	"	"	"	Dug	20	2,203	- 12	2,191	16	2,187	" "	" "		D, S	Sufficient for 10 head stock; varies with rainfall.
11	NE.	17	"	"	"	Bored	22	2,185			22	2,163	" "	Soft, clear		D, S	
12	NW.	17	"	"	"			2,165					"	Hard, clear		D, S	Sufficient for local needs.
13	NW.	18	"	"	"	Dug	15	2,120	- 0	2,120	15	2,105	" sand	" "		D, S	Sufficient for 150 head stock; 38 foot dry hole, also two other wells with poor supply.
14	SW.	19	"	"	"	Bored	50	2,170	- 20	2,150	50	2,120	" "	"alkaline" Hard, cloudy		D, S	Sufficient for 25 head stock; another poor well.
15	SW.	20	"	"	"	Dug	35	2,175					"	" clear		D, S	Sufficient for local needs.
16	NW.	20	"	"	"	"	37	2,165	- 20	2,165	37	2,148	" gravel	Hard, clear		D, S	
17	NW.	22	"	"	"	Bored	41	2,210	- 26	2,184	26	2,184	" "	" "		D, S	Sufficient for 5 head stock; another similar well.
18	NE.	23	"	"	"	Dug	12	2,180	- 4	2,176	16	2,164	" "	" "		D, S	Sufficient for 30 head stock; several springs
19	NE.	26	"	"	"	"	8	2,100	- 5	2,095	0	2,100	" "	" "		D, S	Sufficient for 10 head stock; very good supply.
20	SE.	27	"	"	"	"	60	2,205	- 35	2,170			" clay	" "		D, S	Sufficient for domestic use only; slough nearby used for stock.
21	NE.	27	"	"	"	"	9	2,100	0	2,100			" sand	" "		D, S	Sufficient for 60 head stock; many springs.
22	NW.	27	"	"	"	"	18	2,100	- 10	2,090			" "	" "		D, S	Intermittent supply, varies with rainfall.
23	SE.	28	"	"	"	Bored	45	2,104	- 35	2,069	43	2,061	" "	" "		D, S	Sufficient for 35 head stock.
24	SW.	28	"	"	"	Dug	20	2,190	- 16	2,174	19	2,171	" "	" "		D	Insufficient for local needs.
25	SW.	28	"	"	"	"	20	2,192	- 17	2,175	22	2,170	" "	" "		D, S	Sufficient for 12 head stock.
26	SW.	29	"	"	"	"	32	2,210	- 28	2,182	28	2,182	" "	" cloudy	40	D, S	Sufficient for 8 head stock, fills with sand.
27	NE.	31	"	"	"	"	50	2,190	- 20	2,170			" gravel	" clear	43	D, S	Sufficient for domestic use only; many dry holes
28	SW.	32	"	"	"	Bored	42	2,190	- 30	2,160			" sand	" "		D, S	Sufficient supply but only used at times.
29	SE.	32	"	"	"	Dug	25	2,180	- 20	2,160	23	2,157	" gravel	"alkaline" Hard, clear		S	Sufficient for 20 head stock; house well also.
30	NE.	32	"	"	"	Bored	38	2,200	- 12	2,188	34	2,166	" "	" "		S	Sufficient for 300 head stock; also two shallow wells.
31	SW.	35	"	"	"	Dug	50	2,130	- 48	2,082			" "	"alkaline" Hard, clear		D, S	Intermittent supply; has spring also.
1	SE.	1	13	3	2	Drilled	98	2,180					Glacial gravel	Hard, clear		D, S	Sufficient for local needs; good supply.
2	SE.	2	"	"	"	Bored	60	2,200	- 50	2,150			" clay	" "		D, S	Intermittent supply.
3	NE.	2	"	"	"			2,200	- 14	2,186			" gravel	"alkaline" Hard	42	D, S	Sufficient for local needs.
4	SW.	3	"	"	"	Dug	28	2,150	- 24	2,126			" "	" clear	45	D, S	" " " " .

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO.123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
5	SE.	4	13	3	2	Dug	30	2,155	- 22	2,133	22	2,133	Glacial sand	Hard, clear		D, S	Sufficient for 20 head stock.
6	SW.	5	"	"	"	Bored	52	2,150	- 22	2,128			" clay	" "		D, S	Sufficient for 20 head stock, several dry holes
7	NE.	6	"	"	"	Drilled	65	2,145	- 17	2,128	65	2,080	" gravel	" "		D, S	Abundant supply; several shallow wells.
8	SW.	7	"	"	"	Bored	60	2,150	- 15	2,135	60	2,090	" "	" "		D, S	" " .
9	NE.	7	"	"	"	Drilled	65	2,140	- 15	2,125	65	2,075	" "	" "		D, S	" " ; also a shallow well.
10	SW.	8	"	"	"	Bored	60	2,140	- 20	2,120	60	2,080	" "	" "		D, S	" " .
11	W½.	8	"	"	"	"	20	2,150	- 12	2,138	20	2,130	" "	" "	41	D, S	Sufficient for local needs.
12	NW.	10	"	"	"	"	62	2,155	- 40	2,115	53	2,102	" sand	" "		D, S	Sufficient for 80 head stock.
13	SE.	12	"	"	"	Dug	36	2,215	- 26	2,189	0	2,215	" "	"alkaline" Hard, clear		D	Sufficient for domestic use, also a stock well.
14	NW.	12	"	"	"	"	24	2,180	- 14	2,166	15	2,165	" "	" "		S	" " local needs.
15	NW.	13	"	"	"		19	2,155	- 13	2,142	16	2,139	" "	" "		S	
16	SE.	14	"	"	"	Bored	30	2,175	- 20	2,155	30	2,145	" gravel	" "		D, S	Sufficient for local needs.
17	SW.	14	"	"	"	Dug	23	2,175	- 15	2,160			" sand	" "		D, S	" " " 25 head stock.
18	NE.	14	"	"	"	"	28	2,160	- 10	2,150	14	2,146	" "	" "		D, S	" " 40 " " .
19	SW.	15	"	"	"	"	60	2,160	- 54	2,106	55	2,105	" "	" "		D, S	" " 50 " " .
20	NE.	16	"	"	"	Drilled	75	2,155	- 25	2,130	75	2,080	" gravel	" "		D, S, I	Abundant supply.
21	SE.	18	"	"	"	"	65	2,130	- 20	2,110	65	2,065	" "	" "		D, S	" " .
22	SE.	19	"	"	"	Bored	36	2,125	- 12	2,113	36	2,089	" sand	" "		D, S	Sufficient for 25 head stock.
23	NW.	20	"	"	"	Dug	28	2,120	- 20	2,100			"	"alkaline" Hard, clear		D, S, I	Sufficient for 45 head stock.
24	NE.	20	"	"	"	"	28	2,105	- 26	2,079	28	2,077	" gravel	" "		D, S	Sufficient for local needs; another similar well.
25	NW.	21	"	"	"	"	18	2,115	- 10	2,105	14	2,101	" sand	"alkaline" Hard, clear		D, S	Sufficient for 50 head stock; three other wells.
26	NE.	21	"	"	"	"	16	2,135	- 13	2,122	12	2,123	" "	" "		D, S, I	Sufficient for 20 head stock, increased in 1936.
27	SW.	22	"	"	"	"		2,145	- 7	2,138			"			S	
28	SE.	24	"	"	"	"	26	2,145	- 18	2,127	26	2,119	" gravel	Hard, clear		D, S	Sufficient for 30 head stock; also house well.
29	NW.	24	"	"	"	Bored	40	2,130	- 7	2,123	40	2,090	" sand	Soft, clear		D, S	Sufficient for 100 head stock.
30	SW.	25	"	"	"	Dug	38	2,140	- 12	2,128	38	2,102	" "	" "		D, S, I	Sufficient for 35 head stock.
31	NW.	25	"	"	"	Bored	30	2,140	- 10	2,130	30	2,110	"	Hard, clear		D, S	Sufficient for 20 head stock.

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO. 123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE: Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED: Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
32	NE.	26	13	3	2	Bored	68	2,130	- 16	2,114	68	2,062	Glacial sand	Soft, clear		D, S, I	Sufficient for 400 head stock; four dry holes.
33	NW.	27	"	"	"	Dug	20	2,125	- 16	2,109	20	2,105	" gravel	Hard, clear		D, S	Sufficient for 15 head stock; two other wells.
34	NW.	28	"	"	"	"	20	2,100	- 17	2,083			"	" "		D, S	Sufficient for 50 head stock; also two other wells.
35	NW.	28	"	"	"	"	12	2,080	- 7	2,073	3	2,077	" gravel	Soft, "		D, S	Sufficient for local needs.
36	SE.	30	"	"	"	Bored	30	2,120	- 18	2,102			" clay	Hard		D, S	Not used now; caved in.
37	NE.	30	"	"	"	Dug	26	2,110	- 20	2,090	22	2,088	" sand	Hard, clear, "alkaline"		D, S	Sufficient for 50 head stock.
38	SE.	32	"	"	"	Bored	50	2,105	- 20	2,085	50	2,055	" gravel	Hard, clear		D, S	Oversufficient for 100 head stock.
39	NW.	33	"	"	"	Dug	25	2,095	- 18	2,077	20	2,075	" sand	" "		D, S	Insufficient for 6 head stock.
40	NE.	33	"	"	"	"	25	2,105	- 20	2,085	24	2,081	" gravel	" "		N	
41	NW.	34	"	"	"	Bored	53	2,105	- 18	2,087	46	2,059	" "	" "		D, S	Sufficient for 50 head stock; 90 foot dry hole.
42	NE.	35	"	"	"	Dug	42	2,150	- 36	2,114	24	2,126	" "	"alkaline" Hard, clear, "alkaline"		D, S, I	" " 20 " " .
43	NE.	36	"	"	"	"	18	2,190	- 14	2,176	12	2,178	" "	Hard, clear		D, S	" " 100 " " ; also 76 foot dry hole.
1	SE.	1	14	1	2	Dug	45	1,955	- 43	1,912			Glacial	Hard, clear, iron		D, S	Insufficient for 5 head stock; two other wells.
2	SE.	2	"	"	"	"	30	1,950	- 25	1,925	28	1,922	" gravel	Hard, clear		D, S	Sufficient for 100 head stock; also a spring.
3	NW.	2	"	"	"	"	18	1,975	- 14	1,961	14	1,961	" sand	" "	41	D, S	Sufficient for 50 head stock.
4	SW.	2	"	"	"	"	26	1,975	- 20	1,955	22	1,953	" "	" "		D, S	Sufficient for 60 head stock.
5	SE.	3	"	"	"	"	12	1,990	- 5	1,985	12	1,978	" gravel	" "		D, S	Sufficient for 150 head stock; very large supply.
6	SW.	3	"	"	"	"	30	2,000	- 22	1,978	22	1,978	" clay	" "		D	Sufficient for domestic use only; another shallow well; also a dry hole.
7	SW.	6	"	"	"	"	28	2,100	- 6	2,094	14	2,086	Marine shale	" "		D, S	Sufficient for 20 head stock; four other similar wells.
8	SE.	8	"	"	"	"	12	1,900	- 5	1,895	5	1,895	Glacial gravel	Soft, clear		D, S 3	Oversufficient supply; also a spring.
9	SW.	9	"	"	"	"	22	2,000	- 4	1,996	20	1,980	" "	" "		D, S	Insufficient for local needs; also a spring.
10	NE.	10	"	"	"	"	13	1,975	- 8	1,967	12	1,963	" sand	Hard, clear, "alkaline"		D, S, I	Sufficient for local needs; good supply.
11	SE.	10	"	"	"	"	22	1,980	- 19	1,961	18	1,962	" "	Hard, clear		D, S, I	Oversufficient for 60 head stock.
12	NE.	12	"	"	"	"	18	1,960	- 10	1,950	15	1,945	" "	Hard, clear, "alkaline"		D, S	Sufficient for 40 head stock; three similar wells.
13	NE.	14	"	"	"	Bored	28	1,955	- 18	1,937	28	1,927	" gravel	Hard, clear		D, S, I	Sufficient for 25 head stock.
14	SW.	14	"	"	"	"	42	1,965	- 20	1,945	42	1,923	"	Hard, clear, "alkaline"		S	Sufficient for 20 head stock; also a shallow well.
15	NE.	15	"	"	"	Dug	25	1,970	- 22	1,948	20	1,950	" clay	Hard, clear		D, S	Sufficient for 6 head stock; some dry holes.

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO.123, SASKATCHEWAN.

WELL No.	LOCATION					TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE		PRINCIPAL WATER-BEARING BED			CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
	¼	Sec.	Tp.	Rge.	Mer.				Above (+) Below (−) Surface	Elev.	Depth	Elev.	Geological Horizon				
16	SW.	15	14	1	2	Dug	18	1,980	- 14	1,966	16	1,964	Glacial sand	Soft, clear		D, S	Sufficient for 60 head stock; also 25 foot well bitter water.
17	NE.	16	"	"	"	Bored	45	1,990	- 15	1,975	45	1,945	" "	Hard, "		D, S	Oversufficient for local needs.
18	SW.	16	"	"	"	"	43	1,995	- 38	1,957	43	1,952	" "	" "		D, S	Sufficient for 10 head stock.
19	SW.	18	"	"	"	Dug	38	2,010	- 30	1,980	38	1,972	" "	"alkaline" Hard, clear, iron		D, S	" " 20 " " .
20	NW.	18	"	"	"	"	42	1,990	- 20	1,970	42	1,948	" gravel	Hard, clear		D, S	" " 60 " " .
21	SW.	20	"	"	"	"	22	1,985	- 17	1,968	21	1,964	" "	" "		D, S, I	Yields 250 gallons a day.
22	NE.	20	"	"	"	"	28	1,970	- 18	1,952	28	1,942	" "	" "		D, S	Sufficient for 100 head stock; similar well for domestic use.
23	NW.	21	"	"	"	"	20	1,975	- 16	1,959	16	1,959	" "	" "		D, S	Sufficient for 15 head stock; similar wells beside.
24	NW.	22	"	"	"	"	32	1,955	- 17	1,938	22	1,933	" "	" "		D, S	Sufficient for 50 head stock; 30 foot dry hole.
25	SW.	22	"	"	"	"	13	1,970	- 2	1,968	7	1,963	" sand	" "		D, S	Sufficient for 25 head stock; also 36 foot dry hole.
26	SW.	24	"	"	"	"	30	1,950	- 18	1,932	30	1,920	" gravel	" "		S	Sufficient for 60 head stock; also a house well.
27	SE.	24	"	"	"	Bored	30	1,950	- 20	1,930	30	1,920	" sand	" "		D, S	Sufficient for 13 head stock; 12 foot soft water well.
28	NE.	25	"	"	"	"	55	1,945	- 30	1,915	55	1,890	" gravel	" "		D, S	Sufficient for 40 head stock; also two dry holes.
29	NE.	27	"	"	"	"	60	1,955	- 20	1,935	60	1,895	" sand	" "		D, S	" " 30 " " .
30	SE.	27	"	"	"	"	53	1,955	- 14	1,941	53	1,902	" "	" "	42	D, S	Oversufficient for 100 head stock; also 30 foot dry hole.
31	NE.	28	"	"	"	"	40	1,965	- 20	1,945	40	1,925	" "	" "		S	Sufficient for 100 head stock; also a house well.
32	NW.	28	"	"	"	Dug	12	1,960	- 8	1,952	9	1,951	" gravel	Soft, "		D, S	Sufficient for 40 head stock.
33	SW.	28	"	"	"	Bored	32	1,955	- 17	1,938	32	1,923	" sand	Hard, "		D, S	" " 60 " " ; also 20 foot well.
34	SW.	29	"	"	"	Dug	18	1,960	- 9	1,951	18	1,942	" gravel	"alkaline" Hard, clear		D, S	" " 100 " " .
35	SE.	30	"	"	"	Bored	25	1,975	- 21	1,954	25	1,950	" "	" "		D, S	" " 12 " " ; not good supply.
36	NE.	31	"	"	"	"	35	1,970	- 23	1,947	35	1,935	" sand	Soft, "		D, S	" " 15 " " .
37	SE.	31	"	"	"	"	26	1,980	- 12	1,968	22	1,958	" "	Hard, clear		D, S	" " 15 " " .
38	SW.	32	"	"	"	Dug	30	1,970	- 27	1,943	30	1,940	" "	" cloudy	43	D, S	" " 30 " " ; needs cleaning.
39	NW.	33	"	"	"	"	40	1,960	- 28	1,932	40	1,920	" "	Soft, "		D, S	" " 40 " " .
40	NW.	34	"	"	"	Bored	54	1,945	- 8	1,937	54	1,891	" "	Hard, " iron		D, S	" " 35 " " ; also 39 foot dry hole.
41	NE.	34	"	"	"	Dug	15	1,940	- 12	1,928	12	1,928	" "	Hard, clear		D, S, I	Sufficient for 9 head stock.
42	NW.	36	"	"	"	Bored	65	1,940	- 12	1,928	65	1,875	" "	" " iron		D, S	Very good supply.

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(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO.123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE: Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED: Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
45	NE.	36	14	1	2	Dug	20	1,940	- 18	1,922			Glacial clay	Hard, clear		D, S	Intermittent well; several dry holes.
1	NW.	2	"	2	2	Dug	20	2,102					Glacial	Hard, clear		D, S	Sufficient for domestic needs. also a spring.
2	SE.	4	"	"	"	"	30	2,155	- 28	2,127	30	2,125	" gravel	" "		D, S	" " local needs.
3	NW.	4	"	"	"		30	2,150	- 24	2,124			" sand	" "		D, S	" " " " ; good supply.
4	SE.	5	"	"	"	"		2,175					"	" "		D, S	" " " " .
5	SE.	5	"	"	"	"		2,175					"	" "		D, S	" " " " .
6	NE.	6	"	"	"	"	27	2,155	- 25	2,130	8	2,147	" gravel	Soft, "		D, S	Oversufficient for local needs.
7	SW.	6	"	"	"	"	22	2,175	- 17	2,158			"	Hard, "		D, S	Sufficient for 90 head stock.
8	SE.	7	"	"	"	Bored	33	2,125	- 9	2,116	26	2,099	"	" "		D, S, I	Sufficient for local needs, also 14 foot well.
9	NW.	8	"	"	"	Dug	14	2,125	- 12	2,113	2	2,123	" sand	" "		D, S	" " 8 head stock.
10	NW.	8	"	"	"	Bored	40	2,125	- 30	2,095			" clay	" "		N	Poor supply.
11	NW.	8	"	"	"	"	40	2,115	- 22	2,093			" sand	" "		D, S	Oversufficient for local needs.
12	SE.	12	"	"	"	"	10	2,075	- 6	2,069			" gravel	"alkaline" Hard, clear		D, S	Sufficient for 50 head stock; a similar well also.
13	SE.	13	"	"	"	"	65	2,008	- 45	1,963	65	1,943	" sand	" "		D, S	Insufficient supply; uses creek.
14	SE.	14	"	"	"	Drilled	70	2,000	- 30	1,970	50	1,950	Marine shale	" red		D, S	Sufficient for local needs; several dry holes.
15	SW.	14	"	"	"	Bored	60	2,000					" "				Dry hole; many similar holes.
16	NW.	14	"	"	"	Drilled	128	2,035	- 40	1,995			Glacial gravel	Hard, clear		D, S	Sufficient for 200 head stock; abundant supply.
17	NE.	16	"	"	"	"	450	2,000					Marine shale				Dry hole; many dry holes.
18	NE.	16	"	"	"	Dug	46	2,000	- 44	1,956	44	1,956	Glacial gravel	Hard, clear		D, S	Sufficient for 10 head stock only; 450 foot dry hole.
19	NW.	19	"	"	"	Bored	60	2,005					" clay	Hard, clear, iron		D	Sufficient for domestic use and 1 team; good supply from 10 foot well in creek.
20	SE.	20	"	"	"	Dug	40	2,005					" sand	Hard, clear		D, S	Sufficient for 50 head stock.
21	NE.	20	"	"	"	Bored	80	2,015					" clay				Dry hole; hauls water from creek.
22	NW.	22	"	"	"	Drilled	115	2,004	- 35	1,969	105	1,899	" sand	Hard, clear, iron		D, S	Sufficient for local needs; cannot lower.
23	SE.	22	"	"	"	"	138	2,040	- 40	2,000	138	1,902	" gravel	Hard, clear		D, S	" " " " ; cannot pump dry.
24	NW.	24	"	"	"	Bored	30	1,998	- 25	1,973	30	1,968	" sand	" "		D, S	Abundant supply; well originally 63 feet deep, caved in.
25	SE.	24	"	"	"	"	75	2,010			47	1,963	" "	" "		D, S	Sufficient for 40 head stock, wet year; varies with rainfall; many dry holes.
26	SW.	25	"	"	"	Drilled	50	1,990	- 25	1,965	50	1,940	" gravel	" "		D, S	Sufficient for local needs; will pump steady.

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(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO.123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
27	SE.	26	14	2	2	Dug	9	2,000	- 5	1,995			Glacial clay	Hard, "alkaline"			Water not fit for use; must haul water; 50 foot dry hole here.
28	SW.	26	"	"	"	"	11	2,000	- 1	1,999			" sand	Hard, clear		D, S	Sufficient for 15 head stock at times, but goes dry.
29	NW.	26	"	"	"	Bored	72	2,000	- 32	1,968	72	1,928	" "	Hard, clear, iron, "alkaline		D, S	Sufficient for 100 head stock; not fit for humans.
30	NE.	28	"	"	"	Drilled	120	2,020					Glacial	Hard, red		D, S	Usually sufficient for local needs.
31	NE.	28	"	"	"	"	160	2,000					" sand	" cloudy		D, S	Not good well; many dry holes.
32	NW.	28	"	"	"	Bored	95	2,015	- 54	1,961	95	1,920	" "	" clear, iron, "alkaline"		S	Sufficient for local needs, good supply.
33	NE.	29	"	"	"	Dug	8	2,015	- 4	2,011	2	2,013	" sand	Soft, clear		D	Intermittent well; small supply.
34	NE.	30	"	"	"	Drilled	127	2,025	- 67	1,958	127	1,898	" gravel	Hard, red		D, S	Sufficient for local needs. #
35	NE.	31	"	"	"	Bored	82	2,030	- 75	1,955	82	1,948	" sand	" clear		D, S	Sufficient for 15 head stock.
36	NW.	32	"	"	"	Dug	30	2,010	0	2,010	30	1,980	" "	Soft, "		D, I	Intermittent well; dependant on rainfall.
37	SE.	32	"	"	"	Drilled	120	2,020					"	Hard, red		S	Sufficient for local needs.
38	NE.	32	"	"	"	Bored	40	2,015					"	" clear		D	Sufficient for domestic use only, hauls water.
39	SE.	33	"	"	"	"	75	2,020	- 35	1,985	75	1,945	" sand	" dark colour		N	Caved in.
40	SW.	34	"	"	"	"	70	2,000	- 30	1,970	70	1,930	" "	Hard, clear, "alkaline"		D, S	Sufficient for 100 head stock.
41	NE.	34	"	"	"	Dug	40	1,995	- 45	1,950			" "	Hard, clear		S	Insufficient for local needs.
42	NW.	36	"	"	"	"	39	1,980	- 33	1,947	38	1,942	" gravel	" "		D, S	Sufficient for 20 head stock.
43	SE.	36	"	"	"	"	24	1,980	- 20	1,960	24	1,956	" "	" "		D, S	" " 25 " " ; other "alkaline" wells.
1	SE.	1	14	3	2	Dug	30	2,160			30	2,150	Glacial	Hard, clear		D, S	Very poor supply.
2	SW.	1	"	"	"	"	40	2,150	- 36	2,114	0	2,150	" sand	Soft, "	45	D, S	Insufficient supply; should be deepened.
3	SW.	2	"	"	"	Bored	60	2,135	- 46	2,089	60	2,075	"	Hard "		D, S	Oversufficient for local needs.
4	SW.	3	"	"	"	"	45	2,105	- 15	2,090	45	2,060	" gravel	" "		D, S	Sufficient for local needs; cannot pump dry.
5	SW.	3	"	"	"	Dug	14	2,100	- 6	2,094	10	2,090	"	" "		S	Sufficient for 20 head stock; also another well.
6	SE.	4	"	"	"	"	42	2,110	- 24	2,086	42	2,068	" gravel	Hard, clear, iron		D, S	Sufficient for 40 head stock; two similar wells.
7	NE.	4	"	"	"	Bored	23	2,085	- 15	2,070	20	2,065	" "	Hard		D, S	Sufficient for 25 head stock.
8	NE.	5	"	"	"	Dug	25	2,050	- 5	2,045	25	2,025	" "	Soft,		D, S	Sufficient for local needs, very good supply.
9	SW.	5	"	"	"	"	16	2,050	- 12	2,038	16	2,034	" "	Soft		D, S	Sufficient for local needs; very good supply.

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO. 123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
10	NW.	5	14	3	2	Dug	35	2,050	- 31	2,019	35	2,015	Glacial gravel	Hard, clear		D, S	Sufficient for 30 head stock; also 50 foot well.
11	SW.	7	"	"	"	Bored	45	2,050	- 39	2,011	45	2,005	" sand	" "		D, S	Sufficient for 6 head stock.
12	SE.	7	"	"	"	"	50	2,055	- 40	2,015	50	2,005	" "	" "		D, S	" " 35 " " .
13	NW.	10	"	"	"	"	48	2,065	- 35	2,030	48	2,017	" gravel	" "		D, S	" " 40 " " .
14	SE.	11	"	"	"	Dug	32	2,130	- 30	2,100	30	2,100	" clay	iron Hard, clear		D, S	" " 60 " " .
15	SE.	14	"	"	"	Bored	28	2,110	- 25	2,085	25	2,085	"	" "		D, S	" " local needs; good supply.
16	NE.	14	"	"	"	Dug	30	2,085	- 28	2,057	28	2,057	" sand	" "		D, S	Oversufficient for local needs.
17	NW.	15	"	"	"	"	20	2,050	- 18	2,032			" clay	" "	43	D, S	Sufficient for local needs.
18	SW.	15	"	"	"	Bored	75	2,075	- 45	2,030			" sand	" "	43	D, S	" " " " .
19	NW.	16	"	"	"	Dug	62	2,060	- 47	2,013	62	1,998	" "	" "		D, S, I	" " 30 head stock; springs in creek.
20	NW.	17	"	"	"	Drilled	155	2,050	- 40	2,010	55	1,895	" gravel and Marine shale	" "		D, S	Oversufficient for local needs.
21	NW.	20	"	"	"	"	157	2,000	- 72	1,928	157	1,843	Glacial gravel	" "		D, S	" " " " .
22	SE.	20	"	"	"	Bored	55	2,030	- 40	1,990	55	1,975	" sand	" "		D, S	Sufficient for local needs; good supply.
23	SW.	22	"	"	"	"	60	2,065	- 52	2,013			" clay	" "		D, S	Insufficient supply; uses creek.
24	SW.	24	"	"	"	Dug	65	2,055	- 63	1,992	35	2,020	" gravel	"alkaline" Hard, clear, iron		D, S	Sufficient for local needs; abundant supply.
25	SE.	24	"	"	"	"	74	2,055	- 73	1,982	74	1,981	" "	Hard, clear		D	" " " "; also springs.
26	SE.	25	"	"	"	"	35	2,015	0	2,015			"	" "		D, S	Intermittent supply; well caving in.
27	SW.	26	"	"	"	Drilled	72	2,025	- 53	1,972	72	1,953	" gravel	Hard, red		D, S	Sufficient for local needs.
28	SW.	27	"	"	"	"	156	2,065	- 90	1,975	156	1,909	" sand	" clear		D, S	Oversufficient for local needs.
29	NE.	28	"	"	"	"	94	2,060	- 74	1,986	86	1,974	" "	" "		D, S	New well not tested; also shallow well.
30	SW.	29	"	"	"	"	14	2,060	- 8	2,052	14	2,046	" gravel	" "		D, S	Sufficient for 30 head stock; good supply.
31	SW.	29	"	"	"	Dug	9	2,050	- 6	2,044	9	2,041	" sand	Soft, cloudy		D, S	Sufficient for 25 head stock;
32	SE.	30	"	"	"	Bored	57	2,000	- 45	1,955	57	1,943	" "	Hard, clear		S	Insufficient for 30 head stock. #
33	NE.	30	"	"	"	Drilled	42	2,030	- 15	2,015	42	1,988	" sand	" red "alkaline"		D, S	Sufficient for local needs; good supply.
34	SW.	31	"	"	"	Dug	22	2,020	- 17	2,003	22	1,998	" gravel	Hard, clear		D, S	Sufficient for local needs.
35	NW.	32	"	"	"	"	10	2,050	- 6	2,044	10	2,040	" "	Hard, clear, "alkaline"		S	Sufficient for 40 head stock.
36	SW.	32	"	"	"	Drilled	214	2,060	- 90	1,970	214	1,846	" "	Hard, clear		D, S	Sufficient for 70 head stock; also a soakage well.

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(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO. 123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE: Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED: Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
37	NE.	33	14	3	2	Drilled	207	2,030	- 80	1,950	193	1,837	Glacial gravel	Hard, clear, iron		D, S, I	Sufficient for local needs; abundant supply.
38	SE.	33	"	"	"	"	180	2,060			180	1,880		Hard, clear, "alkaline"		S	Insufficient supply; poor quality.
39	NW.	34	"	"	"	Dug	60	2,025					Glacial blue clay				Dry hole; haul water.
40	SW.	34	"	"	"	"	16	2,040	- 12	2,028	16	2,024	" clay	Hard, clear		D, S	Intermittent supply; hauls water at times.
41	SE.	34	"	"	"	"	8	2,020	0	2,020	0	2,020	" sand	" "		D, S	Sufficient supply; continuous flow.
42	NW.	35	"	"	"	"	14	1,940	- 10	1,930	14	1,926	" "	" "		D	Sufficient for domestic use only.
43	NW.	35	"	"	"	Drilled	65	1,940	- 30	1,910	25	1,915	" "	" red		S	Oversufficient for local needs.
44	SE.	36	"	"	"	"	284	2,020	- 84	1,936	284	1,736	" "	" clear		D, S	Sufficient for local needs; cannot lower.
45	SW.	36	"	"	"	"	280	2,020			280	1,740	" "	" clear		N	Very difficult to pump.
1	SW.	1	15	1	2	Drilled	130	1,940	- 25	1,915	130	1,810	Glacial sand	Hard, clear, iron		D, S	Sufficient for 100 head stock.
2	SE.	2	"	"	"	Bored	80	1,945	- 20	1,925	65	1,880	" "	Hard, clear		D, S	Sufficient for 10 head stock; also 12 foot well, dry hole.
3	SW.	2	"	"	"	"	62	1,935	- 32	1,903	62	1,873	" "	Hard, clear, iron		D, S	Sufficient for 10 head stock.
4	NW.	2	"	"	"	"	20	1,940	- 18	1,922	0	1,940	" "	Soft, clear		D, S	" " 6 " " .
5	NE.	3	"	"	"	Dug	6	1,935	- 3	1,932	0	1,935	" "	" "		D, S	Sufficient for local needs; very good supply.
6	SE.	6	"	"	"	Bored	35	1,965	- 18	1,947	35	1,930	" "	" "		D, S, I	Sufficient for 30 head stock; also another well
7	NW.	6	"	"	"	Drilled	70	1,970	- 24	1,946	70	1,900	"	Hard, " iron		D, S	Sufficient for local needs; good supply.
8	NE.	6	"	"	"	Bored	56	1,955	- 20	1,935	56	1,899	" gravel	Hard, clear	42	D, S	Sufficient for 50 head stock.
9	NW.	8	"	"	"	Dug	9	1,955	- 6	1,949	9	1,946	" "	Soft, "		D, S	" " 25 " " ; good supply.
10	NE.	8	"	"	"	"	8	1,950	- 5	1,945	8	1,942	" "	" "		D, S	" " 30 " " .
11	NE.	9	"	"	"	Bored	30	1,945	- 15	1,930	30	1,915	" "	Hard, "		D, S	" " 70 " " ; 78 foot dry hole
12	NE.	10	"	"	"	Dug	35	1,940	- 10	1,930			" clay	" " "alkaline"		S	Intermittent well; dependent on rainfall.
13	NW.	12	"	"	"	Bored	75	1,940	- 25	1,915	75	1,865	" sand	Hard, clear, "alkaline"		D, S	Sufficient for 50 head stock; many dry holes.
14	NE.	12	"	"	"	Dug	28	1,945	- 25	1,920	28	1,917	" "	Hard, clear, "alkaline"		S	Sufficient for 100 head stock; good supply.
15	NE.	13	"	"	"	"	20	1,940	- 4	1,936	26	1,914	" "	Hard, clear		D, S.	Sufficient for 25 head stock; similar house well.
16	SE.	14	"	"	"	"	60	1,935					" clay	""alka-line"		N	Yields only one pail a day.
17	NW.	14	"	"	"	Bored	107	1,940	- 57	1,883	107	1,833	" gravel	Hard, clear		D, S	Sufficient for local needs; good supply.
18	SE.	15	"	"	"	"	58	1,940	- 43	1,897	58	1,882	" sand	Hard, clear		D, S	Sufficient for 50 head stock.

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(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO. 123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE: Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED: Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
19	NE.	15	15	1	2	Bored	60	1,940					Glacial clay	Hard, "alkaline"		S	Yields four pails a day; 100 foot dry hole.
20	SW.	16	"	"	"	"	25	1,945	- 15	1,930	25	1,920	" gravel	Hard, clear		D, S	Sufficient for 40 head stock.
21	NE.	16	"	"	"	Dug	16	1,945	- 12	1,933	13	1,932	" sand	" "		D, S	" " 40 " " .
22	SW.	18	"	"	"	Bored	110	1,960	- 15	1,945	110	1,850	"	" "		D, S, I	" " 80 " " .
23	NW.	18	"	"	"	Drilled		1,955					"	" "		D, S	" " 80 " " .
24	NW.	19	"	"	"	Bored	86	1,955	- 25	1,930	86	1,869	" sand	iron Hard, clear		D, S	" " 75 " "; also another 8 foot well.
25	SE.	21	"	"	"	"	60	1,950	- 42	1,908	58	1,892	" "	" "		D, S	Sufficient for 35 head stock; several dry holes.
26	NW.	21	"	"	"	"	83	1,945	- 30	1,915	83	1,862	" gravel	" "	41	D, S	Oversufficient for local needs.
27	SE.	22	"	"	"	"	100	1,950	- 45	1,905	100	1,850	" "	" "		D, S	Sufficient for 50 head stock.
28	NW.	22	"	"	"	"	50	1,945					" clay	iron Hard, "alkaline"		N	Very poor supply.
29	SE.	23	"	"	"	Drilled	160	1,935	- 40	1,895	160	1,775	" sand	Hard, clear	43	D, S	Sufficient for 100 head stock; many dry holes.
30	SW.	24	"	"	"	Dug	16	1,935			10	1,925	" "	" "		D, S	Sufficient for 30 head stock; also a house well.
31	NW.	24	"	"	"	"	36	1,940	- 26	1,914	8	1,932	" "	" "	41	D, S, I	
32	SE.	25	"	"	"	"	25	1,935	- 10	1,925	15	1,920	" "	" "	44	D	Sufficient for domestic use only.
33	NW.	25	"	"	"	"	14	1,955					"	"alkaline" Hard, clear		D, S	Sufficient for local needs.
34	NE.	26	"	"	"	"	10	1,955	- 4	1,951	10	1,945	" gravel	" "		D, S	Sufficient for 15 head stock; also a 50 foot well.
35	SE.	27	"	"	"	Bored	106	1,945	- 14	1,931	80	1,865	" sand	" "		D, S	Sufficient for local needs; good supply.
36	SW.	28	"	"	"	"	106	1,945	- 19	1,926	106	1,839	"	" "		D, S	Sufficient for 150 head stock.
37	SW.	34	"	"	"	"	14	1,940	- 10	1,930	12	1,928	" gravel	" "		D, S	Sufficient for 90 head stock.
38	NW.	34	"	"	"	Dug	34	1,955	- 10	1,945	20	1,935	" sand	" "		D, S	Insufficient for local needs; also similar well.
39	NE.	34	"	"	"	Bored	47	1,950	- 23	1,927	47	1,903	" gravel	" "	41	D, S	Sufficient for 80 head stock; also a similar well.
40	SE.	36	"	"	"	Drilled	118	1,950	- 66	1,884	118	1,832	" "	iron Hard, clear, "alkaline"	42	D, S, I	Sufficient for local needs; very good supply.
41	NW.	36	"	"	"	Bored	125	1,955	- 10	1,945	125	1,830	" sand	Hard, clear		D, S	" " " " ; " " " .
1	SW.	2	15	2	2	Drilled	130	1,990	- 22	1,968	130	1,860	Glacial sand	Hard, clear	44	D, S	Sufficient for local needs.
2	NE.	4	"	"	"	Dug	12	1,990	- 3	1,987	3	1,987	" gravel	Soft, clear	50	D, S	" " 60 head stock; also 40 foot dry hole.
3	NE.	4	"	"	"	Bored	67	1,994	- 40	1,954	67	1,927	" sand	Hard "	42	D, S	Sufficient for 100 head stock.
4	SE.	4	"	"	"	Dug	8	1,998	- 3	1,995	0	1,998	" gravel	Hard, clear	50	D, S	Sufficient for 100 head stock; also a similar well.

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(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO. 123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
5	SW.	4	15	2	2	Bored	90	2,000	- 40	1,960	90	1,910	Glacial sand	Hard, clear, "alkaline"	44	D, S	Sufficient for local needs, good supply.
6	SE.	6	"	"	"	Drilled	265	2,015	-127	1,888			Marine shale	Hard, clear		D, S	Sufficient for 150 head stock.
7	SW.	6	"	"	"	"	186	2,015					Glacial		44	D, S	
8	SE.	7	"	"	"	"	265	2,005					Marine shale	Iron clear	44	D, S	Sufficient for 200 head stock.
9	SW.	7	"	"	"	"	166	2,000					Glacial			N	Yields 3½ gallons a minute.
10	SE.	9	"	"	"	Dug	10	1,985	- 1	1,984	0	1,985	Glacial sand	Hard, clear	51	D, S	Insufficient for 10 head stock.
11	NW.	10	"	"	"	Bored	97	1,984	- 32	1,952	97	1,887	" gravel	" "	42	D, S	Oversufficient for local needs.
12	NW.	12	"	"	"	"	52	1,970	- 30	1,940	52	1,918	" "	" "		D, S, I	Sufficient for 75 head stock; some dry holes.
13	SW.	13	"	"	"	"	49	1,972	- 27	1,945	49	1,923	" sand	" "	42	D, S	Sufficient for 30 head stock.
14	NE.	14	"	"	"	Drilled	100	1,975	- 40	1,935	100	1,875	" "	"alkaline Hard, clear,	41	D, S	Oversufficient for local needs; good supply.
15	SW.	16	"	"	"	Dug	14	1,985	- 9	1,976	12	1,973	" "	"alkaline Hard, clear	50	D, S	Insufficient for 15 head stock; several poor wells.
16	SW.	17	"	"	"	Bored	87	2,000					" clay				Insufficient for domestic needs; hauls water.
17	SE.	18	"	"	"	Dug	32	2,010	- 14	1,996	32	1,978	" gravel	Hard, clear	41	D, S	Sufficient for 100 head stock; also another good well.
18	NW.	19	"	"	"	Drilled	240	2,020	- 22	1,998	40	1,980	" sand	" " iron	44	D, S	Oversufficient for local needs, 40 foot dry hole.
19	NW.	20	"	"	"	"		1,995					"				Dry hole.
20	NW.	24	"	"	"	Bored	90	1,960	- 40	1,920	90	1,870	"	Hard, clear, "alkaline"	42	N	Not usable ; poor supply.
21	NE.	24	"	"	"	Drilled	92	1,955	- 40	1,915	92	1,863	" clay	Hard, red	41	D, S	Sufficient for 200 head stock.
22	SE.	24	"	"	"	"	98	1,960	- 30	1,930	98	1,862	" sand	" clear	42	D, S	" " 100 " " .
23	NW.	25	"	"	"	Bored	58	1,955	- 28	1,927	58	1,897	" "	" "		D, S	" " 100 " " .
24	NW.	27	"	"	"	"	56	1,980	- 25	1,955	56	1,924	" "	" "	42	D, S	" " 10 " " , 56 foot dry hole.
25	NE.	28	"	"	"	Drilled	125	1,985	- 55	1,930	125	1,860	"	" "	41	D, S	Sufficient for 100 head stock.
26	NW.	28	"	"	"	Bored	94	1,988	- 40	1,948	94	1,894	" sand	" " "alkaline"	41	D, S	" " 60 " " ; also shallow well.
27	SW.	29	"	"	"	"	110	1,995	- 30	1,965	110	1,885	"	Hard, clear	44	D, S	Oversufficient for local needs; large supply.
28	NW.	29	"	"	"	"	65	1,998	- 30	1,968			" clay	" "	41	D, S	Intermittent supply; hauls water.
29	NW.	32	"	"	"	Dug	10	1,990	- 3	1,987	3	1,987	" gravel	" "	48	D, S	Sufficient for 60 head stock.
30	NE.	32	"	"	"	"	12	1,990	- 8	1,982	3	1,987	" sand	" "	48	D, S	Sufficient for 12 head stock.
31	NE.	34	"	"	"	Bored	50	1,975	- 20	1,955	50	1,925	" "	" "	41	D, S	" " 200 " " .

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(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO.123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE: Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED: Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
32	NE.	34	15	2	2	Bored	52	1,975	- 18	1,957	52	1,923	Glacial	Hard, clear, iron	42	D, S	Very large supply.
33	NE.	35	"	"	"	"	48	1,955	- 22	1,933	48	1,907	"	Hard, clear	41	D, S	Sufficient for 150 head stock.
34	NW.	36	"	"	"	"	60	1,955	- 15	1,940	60	1,895	" sand	" "		D, S	Sufficient for local needs; cannot pump dry.
1	SE.	1	15	3	2	Drilled	189	2,005	- 90	1,915	189	1,816	Glacial gravel	Hard, clear		D, S	Abundant supply for local needs.
2	SE.	2	"	"	"	"	210	2,020	- 80	1,940	210	1,810	"	Hard, clear, iron		D, S	" " " " " ; also a shallow well with little water and many dry holes.
3	NW.	3	"	"	"	"	187	2,010	- 90	1,920	187	1,823	"	Hard, clear		D, S	Very large supply; stands pumping all day.
4	NW.	4	"	"	"	Dug	10	1,950	- 5	1,945	5	1,945	" gravel	Soft, clear		D, S	Sufficient for 80 to 90 head stock.
5	SW.	5	"	"	"	Drilled	290	2,000					"				Intermittent supply.
6	NW.	5	"	"	"	"	265	2,010	- 60	1,950	265	1,745	" gravel	Hard, clear		D, S	Oversufficient for local needs; can pump steady.
7	NW.	6	"	"	"	Dug	12	1,950	- 8	1,942	12	1,938	" sand	"		D, S	Sufficient for 50 head stock.
8	SE.	6	"	"	"	"	22	1,935	- 18	1,917	22	1,913	" "	" clear		D, S	" " 70 " " .
9	SE.	8	"	"	"	Drilled	215	2,015	- 95	1,920	215	1,800	" "	" "		D, S	" " local needs; cannot bail dry.
10	SE.	8	"	"	"	"	315	2,005	- 91	1,914	208	1,797	" "				
11	SE.	8	"	"	"	Bored	135	2,010					" "				Dry hole; well being bored.
12	SW.	9	"	"	"	Drilled	127	2,020	- 80	1,940	127	1,893	"	Hard, clear		D, S	Sufficient for 200 head stock.
13	SW.	10	"	"	"	"	185	2,025			185	1,840	"	" "		D, S	Sufficient for local needs.
14	NW.	10	"	"	"	"	140	2,025					"				Dry hole.
15	SW.	11	"	"	"	"	217	2,025	-100	1,925	217	1,808	" sand	Hard, clear		D, S	Sufficient for local needs; several dry holes.
16	NE.	12	"	"	"	"	175	2,010	- 72	1,938	175	1,835	" gravel	" "		S	" " " " ; pumps steady.
17	NW.	12	"	"	"	Bored	90	2,030					"	iron			Also 40 foot house well.
18	NE.	13	"	"	"	Drilled	118	2,025	- 85	1,940	115	1,910	" sand	Hard, clear		D, S	Dry hole. Sufficient for 35 head stock.
19	SE.	13	"	"	"	"	164	2,005	- 72	1,933	164	1,841	" gravel	" "		D, S	Sufficient for local needs, can pump steady.
20	SW.	16	"	"	"	Dug	16	2,025	- 10	2,015	15	2,010	Glacial	Hard, clear		D, S	Sufficient for 25 head stock.
21	NW.	17	"	"	"	Bored	40	2,025	- 36	1,989	40	1,985	"	" "		D, S	Intermittent supply; very poor supply.
22	NW.	18	"	"	"	Dug	18	2,030	- 6	2,024	18	1,912	"	" "		D, S	" " .
23	SW.	18	"	"	"	Drilled	190	2,030	- 52	1,978	190	1,840	"	" " iron		D, S	Sufficient for 500 head stock; 175 foot bored well.

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.

WELL RECORDS—RURAL MUNICIPALITY OF SILVERWOOD NO. 123, SASKATCHEWAN.

WELL No.	LOCATION ¼	Sec.	Tp.	Rge.	Mer.	TYPE OF WELL	DEPTH OF WELL	ALTITUDE WELL (above sea level)	HEIGHT TO WHICH WATER WILL RISE Above (+) Below (−) Surface	Elev.	PRINCIPAL WATER-BEARING BED Depth	Elev.	Geological Horizon	CHARACTER OF WATER	TEMP. OF WATER (in °F.)	USE TO WHICH WATER IS PUT	YIELD AND REMARKS
24	NW.	20	15	3	2	Bored	142	2,035	0	2,035	140	1,895	Glacial sand	Hard, clear		D, S	Sufficient for local needs; partly filled with sand.
25	SE.	20	"	"	"	"	60	2,030	- 25	2,005	60	1,970	" gravel	Hard, clear, salty		S	Intermittent supply.
26	SW.	22	"	"	"	Drilled	130	2,050	- 60	1,990	130	1,920	" sand	Hard, clear		D, S	Sufficient for 100 head stock.
27	NW.	23	"	"	"	"	90	2,050	- 85	1,965	90	1,960	"	" "		D, S	Intermittent supply.
28	NW.	23	"	"	"	Bored	60	2,050	- 58	1,992	60	1,990	" gravel			D, S	
29	SW.	24	"	"	"	Drilled	120	2,040	- 80	1,960	120	1,920	"	Hard, clear		D, S	Sufficient for 20 head stock.
30	SE.	24	"	"	"	"	111	2,010	- 80	1,930	110	1,900	" gravel	" "		D, S	" " 100 " " .
31	NW.	24	"	"	"	Bored	90	2,025	- 60	1,965	90	1,935	" "	" " "alkaline"		D, S	" " 10 " " .
32	NW.	25	"	"	"	"	80	2,023	- 62	1,961	80	1,943	"	Hard, clear, "alkaline"		D, S	" " 30 " " .
33	W.½	30	"	"	"	Drilled	230	2,000	- 30	1,970	230	1,770	" gravel	Hard, iron		D, S	Oversufficient for local needs; very good supply.
34	SE.	36	"	"	"	Dug	25	2,010	- 23	1,987	25	1,985	"	" "		D, S	Sufficient for 40 head stock.

NOTE.—All depths, altitudes, heights and elevations given above are in feet.

(D) Domestic; (S) Stock; (I) Irrigation; (M) Municipality; (N) Not used.
(#) Sample taken for analysis.