

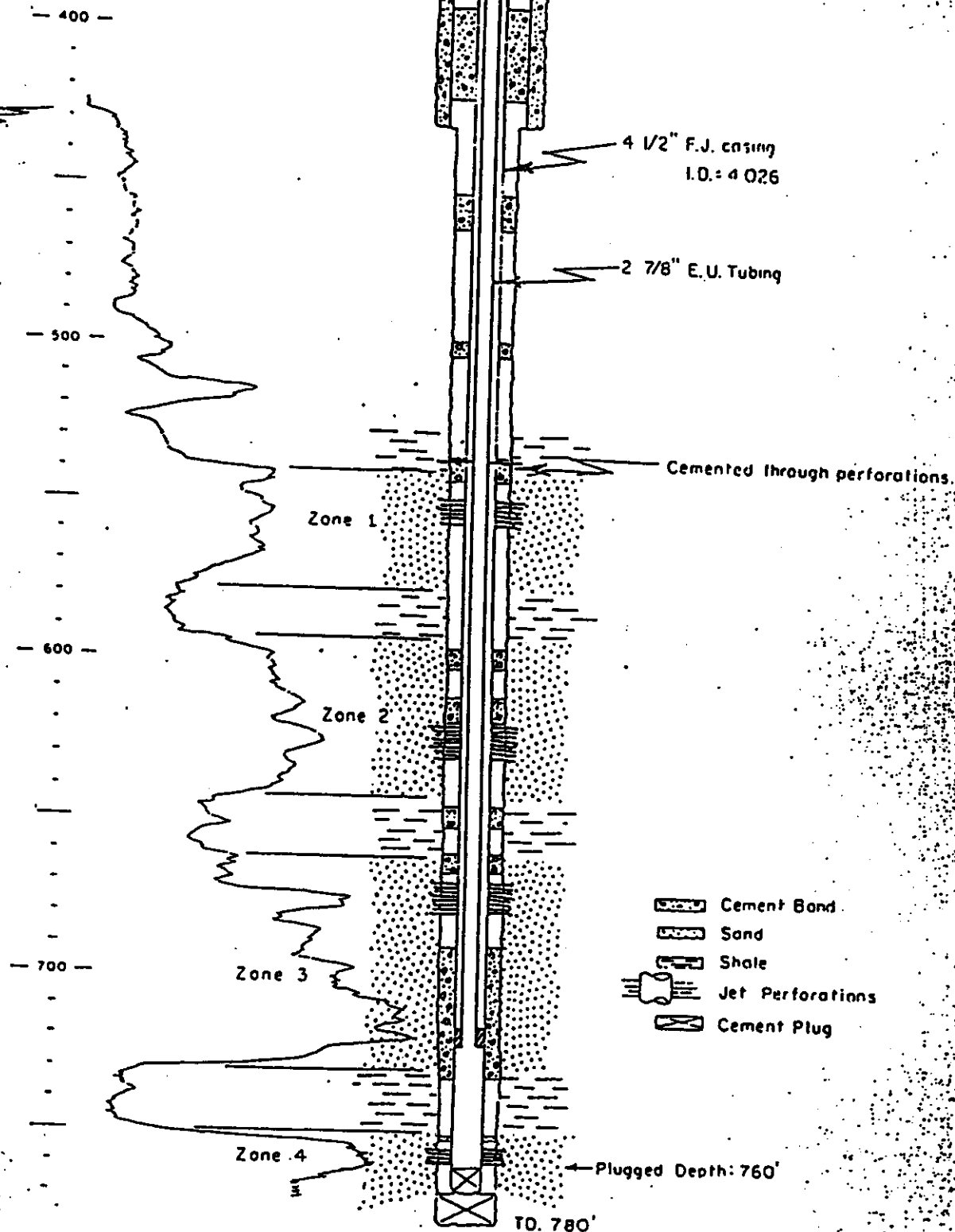
WASHINGTON WATER POWER COMPANY

WELL LOCATION

Hilliard Trough Storage Project
Spokane County, Washington

STATIC TEST ON ZONE No. 4
12-18-62

Elev. 2011.73 K.B.



WASHINGTON WATER POWER
Hillyard Trough No. 1
Spokane County, Washington

HAIR



250-11111

December 27, 1962

GEOLOGIC COR LOG OF THE HILIARD
TROUGH (GAS STORAGE) WELL NO. 1

*Magnesium
Site*

SAMPLE AND CORE DESCRIPTIONS

Samples to Casing Point

Samples begin at 345 ft. - @ 1/2 joint and circulated for 15 minutes.

Depth (ft.)

345	Sand - coarse, gray, stream worn, white quartz and quartzite. Sorting poor, 15-1
360	Sand, as above - sub-angular to sub-round. Sorting poor, 15-1
367	Sand, as above - medium grained. Sorting moderate, 5-1
375	Sand, as above - increase in clay. Fine to medium grain. Sorting poor, 30-1
382	Sand and silt - fine grained. First identity of "Latah" silts. and clays. Sorting good, 3-1 (later identified as Nespelem silt)
390	Sand - very fine grained with silt, light gray. About 10% coarser (medium grained sands).
397	Sand, as above. Fine grained. Largely white quartz. Sorting poor, 50-1
405	Sand, as above. fine grained. Sorting good, 3-1
412	Sand - 80% fine grained with some silt. 20% coarse grained. Sorting poor, 50-1
420	Sand, silt and clay. Equal percent of each. Caked with clay on silt. Sample hardens on drying. Zone probably a clay.
430	Sand - fine grained quartz with quartzite grains.

Followed by Cores #1 - #17

Core Description

<u>Core No.</u>	<u>Depth (ft.)</u>	<u>Recovered</u>
1	430-435	3'
	2' clay - Blue grey plastic 1' silt - Blue grey, uniform, micaceous Position of lost core unknown	
2	435-440	5'
	435 - 438 - Blue grey plastic, uniform grained clay. Less than 10% silt. Con- sistency of modeling clay 438.0 - 438.5 - As above, with diorite pebbles 1-2 cm 438.5 - 440 - Clay, as above	
3	440-445	4-1/2'
	440 - 442 - Blue clay, as above, traces of fine sand 442 - 443.5 - Silt, blue grey, slight micaceous 443.5 - 444.5 - Blue grey plastic clay, as above 444.5 - 445 - No sample	
4	445-450	2-1/2'
	445 - 445.5 - Silt, as above in 442-443.5 445.5 - 446 - Clay, as above 446 - 446.5 - Clay, tan plastic, conchoidal frac- ture in part 446.5 - 447.5 - Clay, blue plastic, as above 447.5 - 450 - No sample	
5	450-455	4.9'
	450 - 450.5 - Grey brown plastic clay, conchoidal fracture, as in 446 above 454 - Fine to medium grained sand, clay filled 455 - No sample	

<u>Core No.</u>	<u>Depth (ft.)</u>	<u>Recovered</u>
6	455-460	3.1'
	455 - 456.5 - Silt, grey uniform micaceous with small 1 cm. pebbles.	
	456.5 - 457 - Sand, very fine grained grey micaceous	
	457 - 458.1 - Clay, tan plastic, conchoidal fracture	
	458.1 - 460 - No sample	
	Mud - 68#/ft. ³ , 42 sec. viscosity	
7	460-465	4.6'
	460 - 460.5 - Clay, blue grey plastic	
	460.5 - 461.5 - Sand, very fine grained, dark grey, micaceous	
	461.5 - 463 - Clay, blue, as above	
	463 - 463.5 - Silt, blue grey, uniform, micaceous	
	463.5 - 464.6 - Clay, grey, buff plastic	
	464.6 - 465 - No sample	
8	465-470	4'
	465 - 466.3 - Clay, tan plastic, modeling clay con- sistency. Silt streaks	
	466.3 - 468 - Silt, grey uniform, well sorted	
	468 - 468.5 - Clay, grey as above	
	468.5 - 469 - Silt, grey, grading to sand, very fine grained	
	469 - 470 - No sample	
9	470-475	5'
	470 - 470.8 - Clay, blue grey plastic	
	470.8 - 475 - Silt, grey, uniform. Traces very fine grained sand.	
10	475-480	4'
	475 - 476 - Clay, tan plastic, conchoidal fracture	
	476 - 478.5 - Silt, grey, as above	
	478.5 - 479 - Clay, grey silty plastic	
	479 - 480 - No sample	

<u>Core No.</u>	<u>Depth (ft.)</u>	<u>Recovered</u>
11	480-485	5.25'
	480 - 483 - Clay, grey silty, as above	
	483 - 485 - Clay, grey plastic, conchoidal fracture	
12	485-490	5'
	485 - 487 - Silt, grey uniform	
	487 - 490 - Clay, grey plastic, as above	
13	490-494	1'
	490 - 490.5 - Clay, buff plastic with very fine grained sand laminae 1 mm. Occa- sional pebbles and coarse sand.	
	490.5 - 491 - Silt, grey micaceous, 20% clay, blue to grey	
	491 - 494 - No sample	
	Interval 494' - 505' drilled (rock, 492'-505')	
14	505-510	1'
	505 - 505.5 - Silt, grey	
	505.5 - 506 - Clay, grey, micaceous with 1/2 mm. silty laminae.	
N.B.	Cores Nos. 13 and 14 canned in same tube.	
15	510-515	4'
	510 - 510.2 - Clay, grey plastic	
	510.2 - 514 - Sand, very fine grained grey, well sorted with 10% clay matrix, micaceous in part	

<u>Core No.</u>	<u>Depth</u>	<u>Recovered</u>
16	515-520	3' (est.)
	515 - 518 - Sand, coarse, clean-poured from barrel	
	518 - 520 - No sample	
17	520-525	1.8'
	(3" OD NXHW diamond barrel)	
	520 - 521.8 - Clay, grey plastic	
	521.8 - 525 - No sample	

N.B. Cores Nos. 16 and 17 in same tube.

NOTE: All cores stored wet in black plastic tubes 5 feet long. Placed in old power plant building which is now a truck garage. Check with Larry Hall, draftsman, Engineering Department, Washington Water Power Company, for location details.

Sample Description (Below Cores #1 - #17)

Depth (ft.)

550-555	<p>Sand - Light gray, medium, fine grained, sub-angular to sub-round, moderate sorting, 3-1. Granitic mineral assemblage.</p> <p>Quartz grains - frosted and clear</p> <p>Muscovite and biotite common up to 1 mm.</p> <p>Slight effervescence - total sample</p> <p>Limestones - apricot, black, white</p> <p>Total sample - unconsolidated, free grained.</p> <p>Basalt grains common - round to sub-round.</p>
560	<p>Sand - Light gray, coarse - fine grained, sub-angular to sub-round, fair sorting, 6-1.</p> <p>Minerals as above with more yellows, greens, reds, and violets.</p>
565	<p>As above.</p>
570	<p>Sand - as above, lighter color, slightly finer and less pastels.</p>
575	<p>As above.</p>
580	<p>Sand - as above. Repeated washing does not clean the sample, abundance very fine mica flakes and very fine grained quartz. Probable clay matrix.</p>
585	<p>Sand as in 560 sample, but darker.</p>
590	<p>Sand pebbles to fine grained. Pebbles chert, very fine silt-stone, limestone, quartz, well rounded to sub-angular.</p> <p>Minerals as above.</p>
595	<p>As above.</p>
600	<p>As above.</p>
600-605	<p>Sand - as above. Pebbles smaller, angular and fractured to rounded. Basalt fragments common. Limestone, quartzite, gneiss occasional.</p>

Depth (ft.)

- 610 Sand - as above. Coarse to fine grained with occasional small pebbles. Sorting, 2-1.
- 615 Sand - as above. With quartz angular to sub-round. Sorting, 2-1.
- 620 Sand - as above. With 3-5 mm. pebbles, coarse sub-angular. Assemblage same. Traces of quartzite as above. Limestone, schists. Sorting poor, 20-1.
- 625 Sand - as above. Very coarse as above. Assemblage same as above. Sorting, 10-1.
- 630 Sand - as above. Coarse, slightly better sorted than above, slightly finer grain. Mineral and lithologic identical to above. Sorting, 3-1.
- 635 Sand - as above. Coarse- increase in sandstone grains, pink, buff, brown; sandstone very fine grained, nearly quartzite to quartzite in some. Fine grain quartz rounded. Sorting, 3-1.
- 640 Sand - as above- coarse to medium coarse. Sorting, 10-1. Assemblage as above.
- 645 Sand - as above. Medium grained. Sorting, 5-1. No change in assemblage or form.
- 650 Sand - as above. Coarse, Sorting, 20-1. Notable volume of round to sub-round, free, clear quartz grains. Prominence of frosted grains continue.
- 655 Sand - as above. Average sorting, 10-1. Medium grained. Assembly same.
- 660 Sand - as above. Fine plus (to medium). Sorting good, 2-1. Assembly as above.
- 665 Pea Gravel. Pebbles to 5 c.m. Pebble sorting good, 2-1. Sample sorting, very poor - 50-1. Pebbles sub-round. Basalts, quartzite, brown, pink and white. Traces of gneissic pebbles. Traces schist. Sands associated - mainly quartz.

Depth (ft.)

- 670 Sand - as above. Crushed boulder chips. Mainly dioritic to biotite granites in composition. Angular basalt and quartzite fragments from boulders.
- Sand - medium to fine grained as above. Total sample looks more coarse due to boulder chips.
- 675 Sand and pea gravel. Sand 70%, gravel 30%. Sorting very poor, 30-1. Assemblage same. Mostly rounded grains and sub-round pebbles. Less boulder chips.
- 680 Sand - as above in 675, less pea gravels. Only occasional pebbles, basaltic.
- 685 Sand - as above. Very coarse to sub-pea gravel. Sorting very poor, 75-1. Fine sand to very coarse sand. Suggests admixture of several cross-bedded zones of different sorting as in pit section at Crestline and Magnesium Road, i.e., high fluctuation in stream competence indicated. Well worn, round to sub-round grains in all sizes.
- 690 Sand - as above. Coarse. Poor sorting, 20-1.
- 695 Sand - as above. medium grained, sorting, 2-1. Uniformly medium grained, good sorting. Abundant clear quartz, much frosted grains.
- 700 Sand as in 695 above.
- 705 Sand - as above. Coarse. Sorting poor, 15-1. Notable amount of quartzite chips, grey vitreous, very fine grained. Probable boulder. Also increase in rusty-brown quartz, rounded 2-3 mm. grains.
- 710 Sand - as above. Medium grained. Sorting poor, 20-1.
- 715 Sand - as above. Fine grained, sorting good, 3-1. Principally quartz grain sand, sub-round and frosted mixed with clear - 50%.
- 718-720 Drilled heavy boulders. Rough.

Depth (ft.)

- 720 Sand - as above. Fine grained. Sorting good, 2-1. No change. Assembly of minerals holding identity throughout all of hole to this depth. Variations in grain size and sorting only. Drilled boulders.
- 725 Sand - as above. Fine grained. Sorting good, 2-1.
- 730 Sand - as above. Fine grained. Sorting good, 3-1. Mineralogy same as above.
- 734 Special - crushed boulder samples. Principally two types: (1) Quartzite - white, very fine grained to yellow, angular sharp. (2) Basalt - chips.
- 735 Crushed quartzite boulder chips.
Green = Wallace formation (Beltian series)
Pink = St. Regis formation (Beltian series)
Pink to white argillites-quartzite - St. Regis
White quartzite - lavender (pale) = Steptoe Butte type.
Some Basalt cuttings from boulder.
- 740 Crushed quartzite boulder chips.
Angular, sharp knife edges. All types as above plus more lavender quartzite. Five boulders evident in cuttings.
Basalt boulder cuttings prominent. Traces of rounded sands.
- 745 Quartzite boulder chips. Predominantly white, with traces of Wallace (green) and St. Regis (pink). Basalt common.
- 750 Quartzite boulder chips - sharp, angular. Predominantly green quartzite, Wallace formation as increasing amount.
White quartzite common. Basalt common in smaller cuttings.
Traces of transported quartz sand, et al.
(Mud, considerably thickened with L.C.M. such that light, fine grained fractions may be carried out).
NOTE: Last boulder to be cut = Wallace quartzite.
Assemblage of type quartzites of Beltian series.
- 755 Boulder cuttings - boulders averaging 10 inches diameter.
Quartzite - white, fine grained - 75%
Basalt - 15%
Sand, stream worn - 10%
Drilling rate since 11:15 a.m., 11/24 - 1 ft./hr.
10 hours drilling = 749' - 759' (11:15 a.m. - 9:15 p.m.)

Depth (ft.)

- 760 Boulder cuttings - as above.
Quartzite - white, green yellow - 70%
Basalt - 20%
Sand - 10%
Sample contains more fines, probably due to lower viscosity mud, hence faster settling. Better sample.
- 765 Boulder chips and sand.
Sand - fine grained, mostly clear quartz - 40%
Quartzite - as above - 40%
Basalt - 20%
Steel particles common!
- 770 Sand and boulder chips
Boulders 10" to a foot in diameter
Sand - fine - medium grained clear quartz
predominant - 50%
Quartzite - white and smoky gray, tan,
very fine grained - 40%
Basalt - 10%
- 775 Boulder chips - principally basalt and
white quartzite.
- 780 Total depth - samples as above. Stopped drilling in heavy
boulders and massive lost circulation zone. Attempting to
regain circulation or fill the hole for logging.

(This number to be filled in by the Supervisor and should always be used in correspondence relating to this well.)

State of Washington
Oil and Gas Conservation Committee

WELL RECORD OR HISTORY

Mail to State Oil and Gas Supervisor, Department of Natural Resources, P. O. Box 168, Olympia, Wash., 98501, not more than thirty (30) days after completion of well. Follow instructions in Rules and Regulations of the Committee. Indicate questionable data by following it with (?).

The Washington Water Power Company.....Hillyard Trough.....
Company or Operator Lease

Field or vicinity..Spokane..... Well No. ..1... in NE,SE..... of Sec. ..20.....
(north) (west) (west)
T. ..26N. R. 43E., ..Spokane.....County. Well is ..300...feet (south) of
(south) (west) (west)
the (north) line and ..350...feet (west) of the (east) line of ..SE. 1/4.....

The lessor is ...Spokane County....., Address ..Spokane.....

The lessee is ...Washington Water Power....., Address ..Spokane.....

Drilling commenced November 10,.....1962. Drilling was completed Nov. 27, 1962...

Name of drilling contractor Diamond Drill Co....., Address ..Spokane.....

Elevation above sea level at top of casing2013....feet. Total depth 787...feet

OIL AND GAS SANDS OR ZONES

No. 1, from ..None..... to No. 4, from to

No. 2, from to No. 5, fromto

No. 3, from to No. 6, fromto

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation water rose in hole.

No. 1 ..515' Approx... to ..520' Approx... feet All sand and gravel to TD.....

No. 2..... to feet Drilling with rotary tools.....

No. 3 to feet

No. 4 to feet

CASING, LINER, AND TUBING RECORD

String	Size	Wt./Ft.	Name & Type	Amount Ft. In.	Depth Set at	Perforated From To
Surface	6 5/8"	18.97#	Welded Csg.	430'	430'	None
Observation	4 1/2"	10.76#	Sch. 40	768'	768'	759-755
						678-668
						630-620
						558-548
						536-535 Squeezed
Tubing	2 7/8"	6.5#	EUE	725'	722'	None

CEMENT AND TESTING RECORD

Size of Hole	String	Where cement placed	No. Sacks of cement	Method Used	Pressure applied in testing	Hardness of cement used	Kind of cement
8 3/4"	6 5/8"	430-400 Approx	50	Circulate	Natural	Firm	Near
5 7/8"	4 1/2"	768'-250'	70	Circulate & Squeeze	Hydro	Firm	Near

PLUGS AND ADAPTERS

Plugged back from 787' to 768' with cement

Packer at 722' on 2 7/8" tubing string

RECORD OF SHOOTING OR CHEMICAL TREATMENT

Size	Shell Used	Explosive or Chemical used	Quantity	Date	Depth Shot or treated	Depth Cleaned out
Perforated with Schlumberger Jet Shot as shown in casing record above.						

RECORD OF DRILL-STEM AND SPECIAL TESTS

If drill-stem or other special tests or deviation or electrical surveys were made, submit report on separate sheet and attach hereto.

Schlumberger E-Log 767' GR/Neutron - 754'
 Micro Caliper 767' 2 CBL's - 759' & 761'
 Am- Density 767'
 Sp-Sonic 767'

WELL RECORD OR HISTORY (continued)

TOOLS USED

Rotary tools were used from.....feet to.....feet, and from.....feet to.....feet.
Cable tools were used from.....feet to.....feet, and from.....feet to.....feet.

PRODUCTION

Put to producing
No Production - Test hole 19 .. .

The production of the first 24 hours wasbarrels of fluid of which
.....% was oil;% emulsion;% water; and% sediment.

Gravity, °A.P.I.

If gas well, cu. ft. per 24 hours

Gallons gasoline per 1,000 cu. ft. of gas

Rock pressure, lbs. per sq. in.

EMPLOYEES

....., Driller , Driller
....., Driller , Driller

FORMATION RECORD ON OTHER SIDE

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

Subscribed and sworn to before
me this day of , 1973
.....
Notary Public

My commission expires 7-25-74

Spokane April 5, 1973
Place Date
Name Keith Anderson Keith Anderson
Position Gas Supply Engineer
Representing Washington Water Power Co.
Company or Operator
Address Spokane

FORMATION RECORD

From	To	Thickness in feet	Formation
538	578	40'	Zone 1 Sand & Gravel
593	643	50'	Zone 2 Sand & gravel
672	728	56'	Zone 3 Sand & gravel
750	TD	not penetrated	Zone 4 Sand & gravel

(This number will be filled in by the Supervisor and should always be used in correspondence relating to this well)

State of Washington
Oil and Gas Conservation Committee
REPORT ON RESULTS OF PLUGGING WELL

This report must be filed with the State Oil and Gas Supervisor within fifteen (15) days after plugging has been completed.

State Oil and Gas Supervisor
Department of Natural Resources
P. O. Box 168
Olympia, Wash. 98501

Spokane, WA April 5, 1973
Place Date

Sir:

You are hereby notified of the completion of the plugging of a well known as
..... The Washington Water Power Company - Hillyard Trough

Well No. 1.... in SE 1/4... of section 20, T. 26N, R. 43E, ... Spokane.... County,
permission to drill which was granted on December 6, ... 19 72, on Form 1, No. 175
Total depth of this well is 787.. feet.

Date of plugging: began, March 29,, 19 73; completed, same day...., 19 ...
Give detailed account of the manner in which work was performed including the
following: nature and quantities of materials used in plugging and the depths and
lengths of the various plugs; records of any tests or measurements made; amount,
size and depth of all casing left in the well; volume and gravity of mud-laden
fluid used, pressures retained in mudding: Cut off 6 5/8" surface, 4 1/2"

observation casing and 2 7/8' tubing at 6 ft below ground level.. A 50' plug of...
neat cement placed on top. A 1/2" steel plate welded on top.

Give here a complete record of any shooting done None

.....
Name of person in charge of plugging..... Keith Anderson
Address E. 1411 Mission Avenue, Spokane, WA 99201

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

Subscribed and sworn to before me
on this 6th day of April, 1973.

.....
Notary Public

My commission expires 6-28-74

Spokane, WA 4-5-73
Place Date

Name Keith Anderson Keith Anderson
Position Gas Supply Engineer

Representing Washington Water Power Co.
Company or Operator

Address E. 1411 Mission Avenue, Spokane



THE WASHINGTON WATER POWER COMPANY

Electric and Natural Gas Service

P.O. BOX 1445 • SPOKANE, WASHINGTON 99210 • (509) 489-0500

April 6, 1973

State Oil and Gas Supervisor
Department of Natural Resources
P. O. Box 168
Olympia, Washington 98504

Subject: Hillyard Trough Core Hole - Sec. 20, T26N, R43E

Dear Mr. Livingston,

Enclosed are completed copies of Form 2, Well Record or History; Form 3, Notice of Intention to Abandon and Plug Well; and Form 4, Report on Results of Plugging Well for the above referenced well which was drilled in November 1962. As you will note, the plugging was completed last week as per our telephone discussion of February 26, 1973.

Also enclosed are copies of the electrical surveys made in 1962. I hope this information will be of value to you. Again, thank you for your letter of December 18, 1972 which called our attention to the fact that this well had not been plugged and abandoned. Perhaps you can now release the bond (Fireman's Fund American Insurance Co. Bond No. LR-6082275) and close the file on this well.

Very truly yours,

Keith Anderson
Gas Supply Engineer

KEA:ds

(This number will be filled in by the Supervisor and should always be used in correspondence relating to this well)

State of Washington
Oil and Gas Conservation Committee

NOTICE OF INTENTION TO DRILL ~~OR DEEPEN~~ **CORE HOLE**
(Strike out inapplicable words)

Notice must be given the Oil and Gas Supervisor and approval obtained before drilling begins. Submit this notice in duplicate, accompanied by performance bond and \$100.00 permit fee which shall be in cash, certified check, or bank draft payable to the Treasurer, State of Washington. One copy of this notice will be returned following approval. No fee is required if permit is to deepen a well previously drilled under Committee permit, or if well is for subsurface information only, or if for seismic shot holes.

Each person who succeeds to the rights under this permit shall, within 10 days after the rights are acquired, notify the Supervisor in writing thereof.

NAME OF COMPANY OR OPERATOR

Name:The Washington Water Power Company.....

Address:E. 1411 Mission Avenue.....

City:Spokane, Washington.....

DESCRIPTION OF LEASE OR PROPERTY

Name and address of fee owner:Spokane County.....

Number of acres: ...40..... Well Name and No.: ...WWP.#1.....

Number of wells on lease:1..... Acres assigned to well: ...-.....

LOCATION OF WELL

Field or general vicinity: ...Spokane..... County: North of Spokane..

Well location: 300' S., 350' W. of E. 1/4 Cor. sec. 20, T. 26 N., R. 43 E.
(Give section, township, and range, and give footage from section lines)

Nearest distance from proposed well to property or lease line:300... feet.

Distance from proposed well to nearest completed or applied for well on same leaseNone..... feet.

Proposed depth to be drilled ..900'....feet. Elevation of surface 2013....feet.

NOTICE INTENTION TO DRILL OR ~~DEEPEN~~ (continued)

If different from the above named company or operator, give name to which correspondence regarding this well should be addressed:

..... Same

AFFIDAVIT

I, A. B. Martin, being first duly sworn on oath, state that to the best of my knowledge and belief the facts and matter contained on this form are true and correct.

Name *A. B. Martin*

Title ... Asst. Vice President

Subscribed and sworn to this .3rd day of December, 19 62 .

..... *Lois L. Loring*

Notary Public

My commission expires: .Oct..17..1966.. Spokane..... County

Address .E..611.Glass.Ave.,.Spokane.22, Washington

ACTION OF COMMITTEE

Approved: *Dec. 6, 1962*

~~Denied:~~

Washington Oil and Gas Conservation Committee

By *Marshall T. Huntington*

Oil and Gas Supervisor

Permit No. *175* To be filled in by Supervisor. This number should always be used in correspondence relating to this well.

This permit issued under bond dated *Dec. 4, 1962*

by *Washington Water Power Co.*, Principal

(This number will be filled in by the Supervisor and should always be used in correspondence relating to this well)

State of Washington
Oil and Gas Conservation Committee

NOTICE OF INTENTION TO ABANDON AND PLUG WELL

File in duplicate with the Oil and Gas Supervisor, Department of Natural Resources, P. O. Box 168, Olympia, Wash., 98501. One copy will be returned with approval or denial.

Field or vicinity: Spokane County Spokane

Operator: The Washington Water Power Co. Address: Spokane

Lease: Hillyard Trough Well No: 1 Drilling Permit No.

Location: 300' S & 350' W NE 1/4 Sec. 20, T26N, R43E

Kind of well: Test Total depth: 787
Oil, gas, or dry hole

Allowable (if assigned): None

Last production test: Oil: (bbls.) Water: (bbls.)

Gas: (M.C.F.)

Production horizon: None Producing from: to:

Full details of proposed plan of plugging (including length and depth of plugs, plans for mudding, cementing, testing, and removing casing):

..... Test well for possible gas storage. Tubing and packer hung in hole at 722'
Cement plug back from TD to 768'. Packer and casing isolate zones. Hole to be
abandoned with tubing and casing in place. Will cut off tubing and casing 8 ft.
below ground level and fill top with 50' cement plug. Will weld steel plate over
top and back fill hole with clean backfill.

Date of commencing proposed operations: .. March 29, 1973

Name of party plugging well: .. The Washington Water Power Company

Address: .. Spokane

Correspondence should be sent to: .. Same

Name: .. Keith Anderson

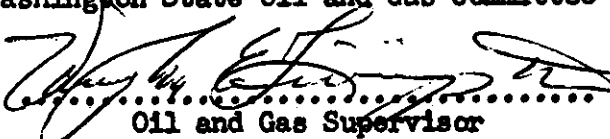
Title: .. Gas Supply Engineer

ACTION OF COMMITTEE

Approved: .. ~~February 1973~~ 26 Feb 1973

Denied:

Washington State Oil and Gas Committee

By: 

Oil and Gas Supervisor