PERMIT APPLICATION APPENDICES

APPENDIX A

DENR LETTER

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

received
3/1/2010

February 23, 2010

Mr. Richard E. Blubaugh
Vice President EH&S Resources
Powertech (USA) Inc.
5575 DTC Parkway, Suite 140
Greenwood Village, CO 80111

Re: Dewey-Burdock Project, Class V Well Rules

Dear Mr. Blubaugh:

This letter is in response to your January 4, 2010 letter concerning South Dakota's ARSD 74:55:02 Underground Injection Control Class V Rules regarding waste disposal well installation and operation.

- The Class V rules do not require state approval of a Class V well and do not require a surety arrangement.
- The Class V rules allow injection subject to SDCL 34A-2 governing the prevention of pollution of the waters of the state. This being the case, Powertech will need to ensure any Class V injection will not pollute the waters of the state. Powertech could show this through an EPA approved Class V permit.
- The Class V rules state Powertech will need to notify the department of the well within 30 days of well completion.
- Pursuant to South Dakota's In situ Leach Mining Rules, ARSD 74:29:11:03 (6), as part of its mine permit application, Powertech will need to provide information regarding the composition of all known and anticipated wastes and procedures for their disposal. This includes Class V injection.

DENR is coordinating with EPA and NRC where possible to streamline the permitting process, reduce duplication, and reach the same technical and scientific conclusions.

Sincerely,

Bill Markley

Bill Markley, Ground Water Quality Program Administrator

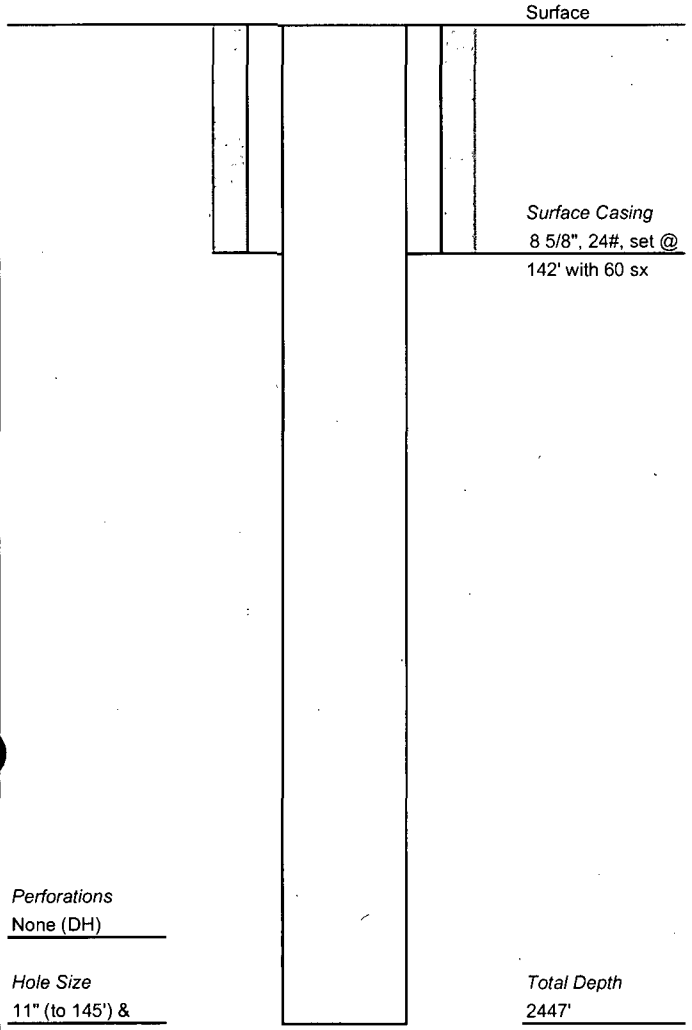
cc: Valois Shea, US Environmental Protection Agency Region VIII
Ronald Burrows, US Nuclear Regulator Commission

APPENDIX B

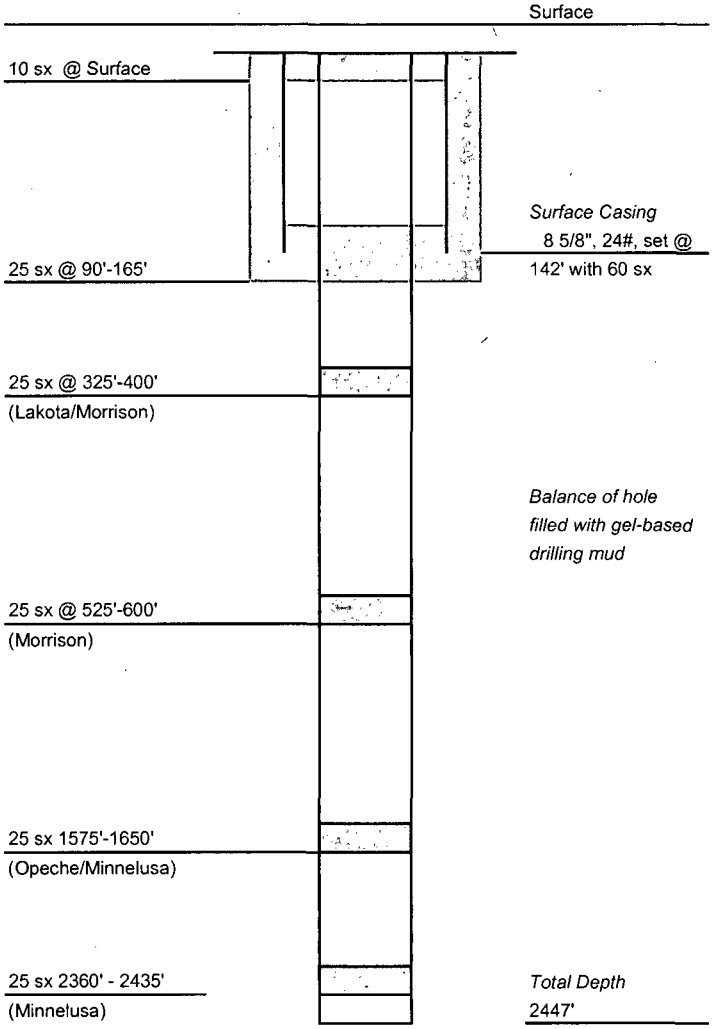
OIL AND GAS WELLS PLUGGING RECORDS

ORIGINAL WELL CONSTRUCTION DURING OPERATION

API No. 4004705095
2-7S-1E



PLUGGING AND ABANDONMENT CONSTRUCTION



Feet of cement from Plugging Report
Mud wt. Unknown

PLUGGING RECORD

Operator	Address
George Dolezal, Jr.	1121 Tower Building, Denver, Colorado

Name of Lease	Well No.	Field & Reservoir
Karl Darrow	1	Wildcat

Location of Well	Sec-Twp-Rge or Block & Survey	County
C - SE SE	Section 2- T7S-R1E	Fall River

Application to drill this well was filed in name of	Has this well ever produced oil or gas	Character of well at completion (initial production): Oil (bbls/day)	Gas (MCF/day)	Dry?
George Dolezal, Jr.	No			Y

Date plugged:	Total depth	Amount well producing when plugged: Oil (bbls/day)	Gas (MCF/day)	Water (bbls./day)
August 19, 1964	2,447'	None	None	None

Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used indicate zones squeeze cemented, giving amount cement.

CASING RECORD

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, ripped etc)	Packers and shoes
8-5/8"	142'	None	142'		

Was well filled with mud-laden fluid, according to regulations? Yes

Indicate deepest formation containing fresh water.

In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.

USE REVERSE SIDE FOR ADDITIONAL DETAIL

Executed this the 27th day of August, 1964

State of Colorado

County of Denver

George Dolezal

Signature of Affiant

George Dolezal, Jr.

Before me, the undersigned authority, on this day personally appeared _____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states, that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Subscribed and sworn to before me this _____ day of _____, 1964

SEAL

My commission expires My Commission expires May 26, 1968

Notary Public in and for Denver

County, State of Colorado

DO NOT WRITE BELOW THIS LINE

Mr. 11 17 1964

OIL AND GAS BOARD OF THE STATE OF SOUTH DAKOTA

INSTRUCTIONS

File 3 copies of this form with Secretary, Oil and Gas Board, Pierre.

Cement Plugs Set As Follows:

25	sacks	@	2435' to 2260'
25	sacks	@	1650' to 1575'
25	sacks	@	500' to 525'
25	sacks	@	400' to 325'
25	sacks	@	165' to 90'

Dry Hole Marker and 10 sacks at surface.
Balance of hole filled with gel-base drilling mud.

Operator:	George Dolezal Jr., Sun Oil Co., etal.
Lease:	No. 1 Earl Darrow
Location:	C SE SE Section 2, T. 7S. R. 1E. 660' FSL 660' FEL Fall River County, South Dakota.
Elevation:	Ground 3792' K. B. 3797'
Contractor:	Baker Drilling Company Rig No. 3 - Sullivan draw works Tool Pusher: Jim Baker Drillers: Don Garhart Ed Buchannan
Spud Date:	July 24, 1964
Completion Date:	August 19, 1964
Casing:	140' 8-5/8" used 24# @ 142' ground with 60 sacks of regular cement.
Hole Size:	11" cable tool hole to 145' 7-7/8" from 145' to total depth.
Mud:	Mo-Mar Mud Company Casper, Wyoming J. M. Bunce Engineer Gel base
Logging:	Drilling time: From surface casing to total depth (Geolograph) Schlumberger: Dual Induction-Laterlog 147' to 2442' Schlumberger: Sonic Log-Gamma Ray 147' to 2441'
Samples:	10-foot samples 140 - 2100 feet 5-foot samples 2100 - 2250 feet 10-foot samples 2250 - 2450 feet Samples on file at AmStrat in Denver.
Geology:	Well site geology by S. D. Ayres
Lost Circulation:	Lost minor amounts of mud from 1630' to total depth.

2446' - Schlumberger

Status: Plugged and Abandoned

Plugs:
2435' to 2360' - 25 sacks
1650' to 1575' - 25 sacks
600' to 525' - 25 sacks
400' to 325' - 25 sacks
165' to 90' - 25 sacks
Dry-hole marker and 10 sacks at surface.

Drill Stem Tests: Schlumberger Formation Tester
1688' to 1690.5' Converse sand.
Tool open 30 minutes
Tool shut in 23 minutes
Recovered 600 cc mud
Pressures 0

Cores: Core #1-2155' to 2206'.
First Leo zone (see sample desc.)

ELECTRIC LOG FORMATION TOPS

Formation	Depth	Datum
Fuson	300	+3497
Lakota	350	+3447
Morrison	425	+3372
Sundance	640	+3157
Spearfish	918	+2879
Goose Egg	1240	+2557
Minnekahta	1479	+2318
Opeche	1520	+2277
Minnelusa	1616	+2181
Red Shale Marker	2032	+1765

GEOLOGICAL SUMMARY

The subject well was drilled to a total depth of 2450 feet within a sand that would possibly coorelate with the Third Leo sandstone of the Pennsylvanian stratigraphic section in the Lance Creek field.

The Dakota sandstone between the base of the surface casing and 300 feet gave no indications of oil staining

ORIGINAL WELL CONSTRUCTION DURING OPERATION

API No. 4004720071
11-7S-1E

Surface

Surface Casing
8 5/8", 24#, set @
163' w/ 135 sx
to surface

Perforations
None (DH)

Hole Size
7 7/8" below surf
csg to TD

Total Depth
2250'

PLUGGING AND ABANDONMENT CONSTRUCTION

Surface

10 sx @ Surface

30 sx @ 105'-190'

Surface Casing
8 5/8", 24#, set @
163' w/ 135 sx
to surface

Mud from 384'-TD

50 sx 750'-900
(Sundance)

35 sx 1900'-2000'
(Minnelusa-Leo)

Total Depth
2250'

Feet of cement from Plugging Report
Mud wt. 9.3 #/gal

REPORT ON WELLS

Peterson

WELL NO.

34-11

☐ OIL WELL ☐ GAS WELL ☐ ---- ☒ DRY

FIELD AND POOL, OR WILDCAT

Wildcat

OPERATOR

AQUARIUS RESOURCES CORPORATION

NO. ACRES IN LEASE

1080.00

ADDRESS

307 Conroy Building, Casper, Wyoming 82601

LOCATION (In feet from nearest lines of section or legal subdivision, where possible)

660' FSL, 2217' FEL Section 11-7S-1E

¼ ¼ SEC. TWP. RGE.

SW SE 11-7S-1E

ELEVATIONS (D.F., R.K.B., R.T., GRD., etc.; how determined)

3679' Gr., 3689' K.B.

COUNTY

Fall River

INDICATE BELOW BY CHECK MARK NATURE OF REPORT, NOTICE OR OTHER DATA

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF		SHOOT OR ACIDIZE		WATER SHUT-OFF		SHOOTING OR ACIDIZING	
FRACTURE TREAT		REPAIR WELL		FRACTURE TREATMENT		REPAIRING WELL	
MULTIPLE COMPLETE		PULL OR ALTER CASING				ALTERING CASING	
ABANDON	X						

(Note: Report results of multiple completion on Well Completion or Recompletion and Log Form—Form 4)

DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinant dates, including estimated date of starting any proposed work)

Water was encountered in all porous zones drilled. The Leo sand had excellent porosity but yielded sulphur water when tested. Proposed plugging as approved by telephone is as follows:

35 sx	1900-2000	Minnelusa-Leo
50 sx	750- 900	Sundance
30 sx	105- 190	base of surface casing
10 sx	Surface plug & erect dry hole marker	

I hereby certify that the foregoing as to any work or operation performed is a true and correct report of such work or operation.

SIGNED John F. Hall TITLE President DATE December 23, 1976

DO NOT WRITE BELOW THIS LINE

Approved Jan. 4, 1977
Date

OIL AND GAS BOARD OF THE STATE OF SOUTH DAKOTA

CONDITIONS, IF ANY:

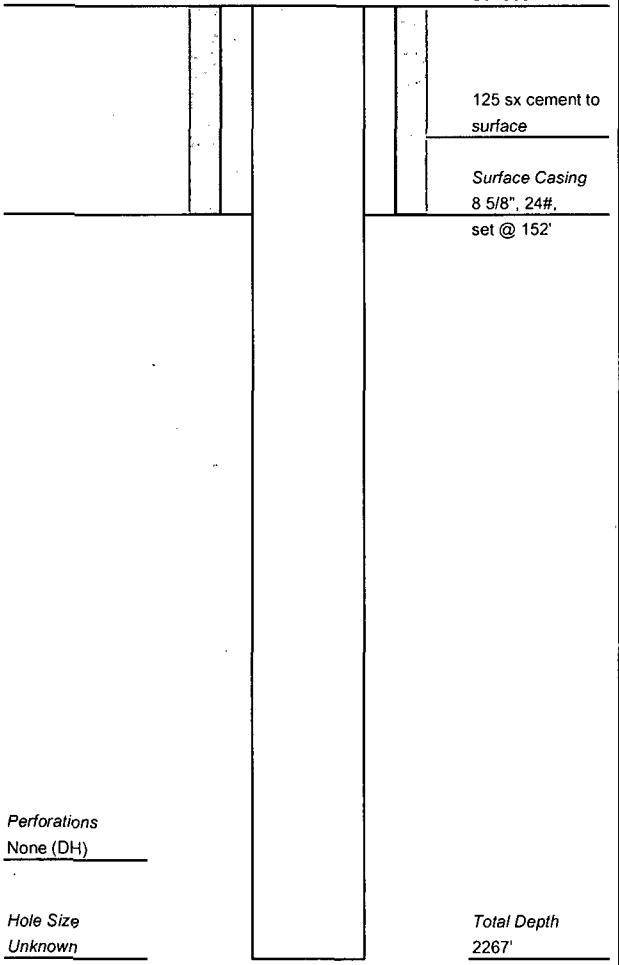
Fred Steece
Secretary

See Instructions On Reverse Side Supervisor

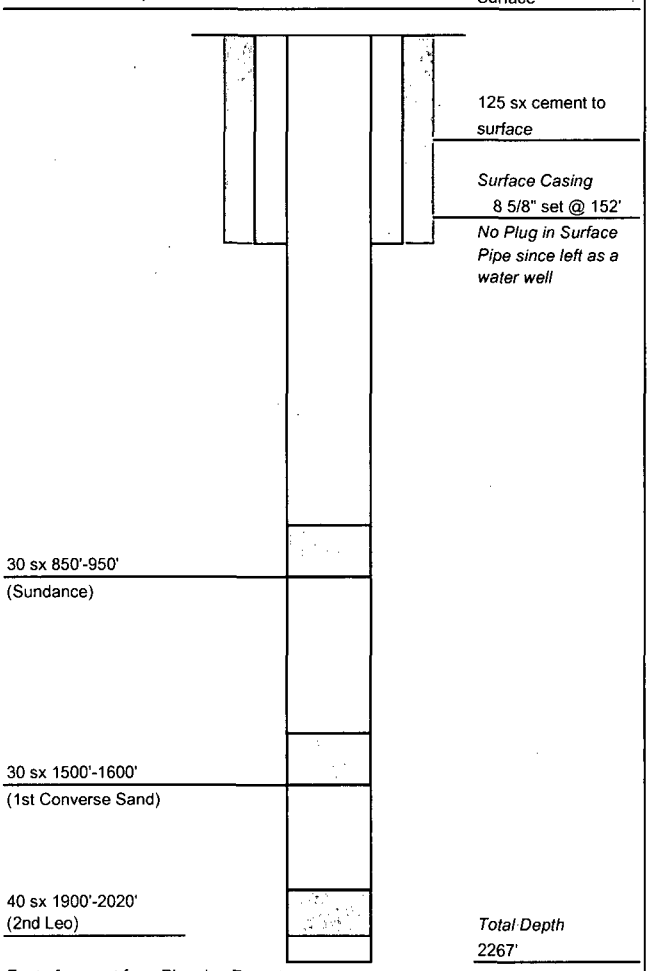
Well:	#34-11 Peterson
Location:	C/SW SE; 660' FSL, 2217' FEL Section 11, T. 7S., R. 1E. Fall River County, South Dakota
Area:	Wildcat (Driftwood Canyon Prospect)
Elevation:	3679' Ground, 3689' K.B.
Spudded:	December 9, 1976 (7:30 A.M.)
Ceased Drilling:	December 22, 1976 (3:30 A.M.)
Completed:	December 23, 1976 (12:30 A.M.)
Status:	P & A
Total Depth:	2250' driller, 2248' log
Casing:	8-5/8" surface casing set @ 163'
Hole Size:	7-7/8" below surface to TD
Contractor:	A. O. Bullock Drilling Co. - Rig #1 Tool Pusher - Ray Cottrell Drillers - Larry Halligan, D. F. Ellsworth, Chuck Sides
Drilling Mud:	Wyoming Mud Co., Casper, Wyo. Gel-Chemical from 384' to TD Engineer - Bruce Johnson
Lost Circulation:	Lost Circulation for 5½ hours @ 384'.
Coring:	No cores cut.
Drill Stem Tests:	Halliburton Services DST #1; 2nd Leo, 2060'-2082' (adjusted to log from 2068'-2090') Rec. 125' muddy water, 1838' black sulfur water. Engineer - D. R. Rook, Gillette, Wyoming
Logs:	Schlumberger Well Surveying Corp. Ran Dual Induction-Laterdog from 2248' to base of surface casing. Ran Borehold Compensated Sonic Log w/caliper from 2248' to base of surface casing. Ran Gamma Ray log from base of surface casing to surface. Engineer - Craig Rang, Gillette, Wyo.
Samples:	All samples were delivered to American Stratigraphic Co., Casper, Wyo., for shipment to their Billings, Montana office where a cut will be made for the South Dakota State Geologist.

ORIGINAL WELL CONSTRUCTION DURING OPERATION

API No. 4004720065
14-7S-1E



PLUGGING AND ABANDONMENT CONSTRUCTION



Feet of cement from Plugging Report
Mud wt. 10.3 #/gal

Operator	Address
POWER RESOURCES CORPORATION	1660 So. Albion, Suite 827, Denver, CO 80222

Name of Lease	Well No.	Field & Reservoir
Lenore Peterson	21-14	Wildcat

Location of Well	Sec-Twp-Rge or Block & Survey	County
NENW Sec. 14 - T. 7 S.- R. 1 E.		Fall River

Application to drill this well was filed in name of	Has this well ever produced oil or gas	Character of well at completion (initial production): Oil (bbls/day)	Gas (MCF/day)	Dry?
Power Resources Corporation	No			Yes

Date plugged:	Total depth	Amount well producing when plugged: Oil (bbls/day)	Gas (MCF/day)	Water (bbls./day)
December 2, 1975	2266	None	None	None

Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used indicate zones squeeze cemented, giving amount cement.
Morrison		339	
Basal Sundance Sand		862	950-850 30 Sacks
First Converse Sand		1571	1650-1500 30 Sacks
Base 2nd Converse Sand		1722	1900-2020 40 Sacks
2nd Leo Sand		2099-2113	Traces Yellow Fluorescence

CASING RECORD

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, ripped etc)	Packers and shoes
8-5/8	152	-0-	152		

Was well filled with mud-laden fluid, according to regulations?

Indicate deepest formation containing fresh water.

In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.

Well plugged back to 850. Land owner, Lenore Peterson, Star Route, Edgemont, So. Dakota, has furnished letter to So. Dakota Geological Survey at Rapid City requesting use of well as a fresh water well. Mr. G. Allen Nelson has presented a detailed Geologic Well Report by letter dated 2 January 1976.

USE REVERSE SIDE FOR ADDITIONAL DETAIL

Executed this the 12th day of January, 19

State of Colorado

County of Denver

C.A. Bassham V.P.
Signature of Affiant

Before me, the undersigned authority, on this day personally appeared _____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states, that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Subscribed and sworn to before me this 12th day of January, 19 76

Nancy M. Stamper

My commission expires My Commission expires Sept. 29, 1979

Notary Public in and for Denver

County, Denver, Colo

DO NOT WRITE BELOW THIS LINE

Approved Jan. 23, 1976
Date

OIL AND GAS BOARD OF THE STATE OF SOUTH DAKOTA

Ted R. Steece

Elevation: 3629 ground.
3647 K.B.

Type Well: Wildcat.

Spud Date: 10:00 P.M., December 11, 1975.

Completion Date: 9:00 P.M., December 26, 1975.

Casing Record: Ran 8 5/8" surface casing. Set at 152 ground. Cemented with 125 sacks of regular cement with 3% Calcium chloride. Pipe set at 152 ground. 24# casing.

Total Depth: 2269 Driller.
2267 Schlumberger.

Deepest Formtion Penetrated: Lower Leo Section.

Depth Datum: 3647 K.B.

Well Status: Plugged and abandoned(left as water well for landowner).

Mud Program: Drilled out from under surface with water. Continued drilling with native mud down to 1070 in Spearfish red beds. Converted to a red bed between between 1070 and 1283 in the Goose Egg formation after getting stuck at 1283. Added 1 sack of soda ash, 5 Rayvan, 4 caustic soda, 1 can suf-drill, and 25 sacks of gel. Above 1283 a water-flow was continually thinning mud, particularly when mud pump was shut down on trips for bit.
Between 1625 in the Converse Massive Anhydrite and 1729 in middle Converse tourly treatment was Gel, 1 sack caustic soda, 1 soda ash, 1 Rayvan, and mud weight was 9.4-9.6 and vis. was 36 to 37.
At 2045 to 2078 in upper Leo wt. was 9.7 and vis. was 46, with tourly treatments of 1 sack of soda ash, 1 Rayvan, 1 caustic soda, and 4 CMC to get water loss down to 5 cc. or less before Second Leo was reached at approximately 2100.
At 2105 in Second Leo Sand main objective wt. was 10.0, vis. 36, and water loss 6.0 . Water flow from up the hole continued to create problems in maintain-good quality mud.
Logs were run without any hole trouble. Wt. was 10.3, vis. 85, and water loss 7.2.
Mud furnished by Pro-Mud, Casper; Phil Hogan, engineer.

Drill-Stem Tests: (None).

Logs: Schlumberger Borehole Compensated Sonic Log was run from T.D. up to base of surface casing on a 5" scale 40-70-100, and on a 5" scale 40-90-140 from T.D. up to 1400 above Minnekahta. Gamma Ray Log and Caliper Log were also run with Sonic Log. Two repeats were run from T.D. up to 1980 first and then from T.D. up to 1400 on a 40-90-140 scale.
Dual Induction Laterolog was run second and did not work. 8 hours were spent waiting for a second tool to arrive. A 2" scale was run from T.D. to base of surfac pipe, and a 5" scale over same interval was also run, with a repeat from T.D. up to 1900.
Engineer: Don Marquez, Gillette.

Plugging Record: 40 sacks from 2020 to 1900 across the Red Marker.
30 sacks from 1600 to 1500 across top of the First Converse Sand.
30 sacks from 950 to 850 acorss Basal Sand of the Sundance.
Cementing by Halco, Gillette
(No plug in surface pipe since left as water well).

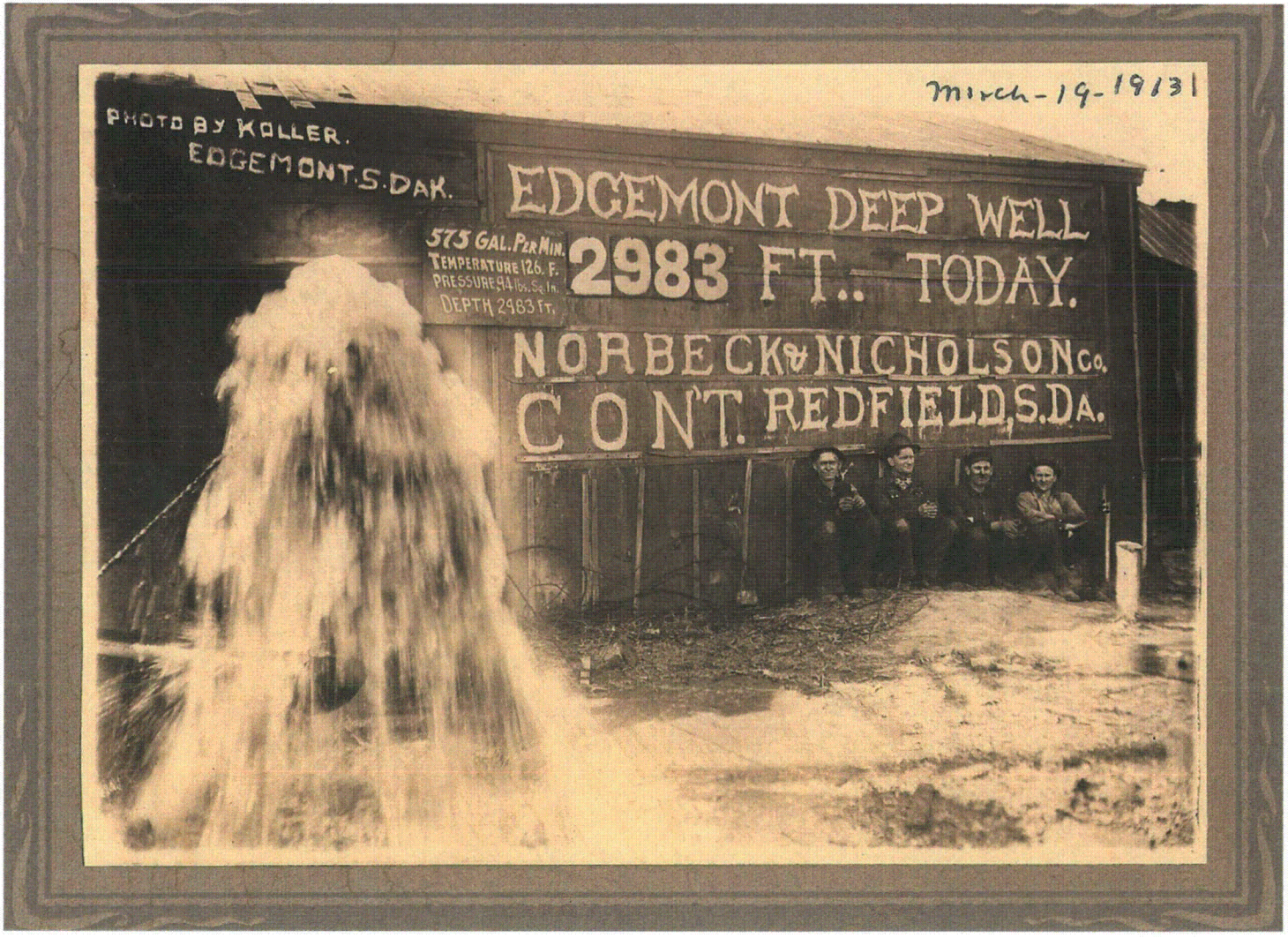
Contractor and Rig Equipment: Farnsworth & Kaiser, Newcastle, Wyoming.
U-34 rig.
3½" IF drill pipe.
5⅜" drill collars totaling 341'.
Mud pump GD FXQ with 6" liners and 16" stroke.
Radios on rig and at Newcastle base plus in pusher's pickup.
Mud pump trailer-mounted.
Rig trailer-mounted.
Buzz Farnsworth, pusher-owner.

Sample Storage: One cut of samples were sent to Americah Stratigraphic in Casper. sent
One cut of samples were to the South Dakota Geologic Survey in Vermillion.

Drilling Time Records: Original copy of Star Recording 1' drilling time charts is on file in Denver office of G.A. Nelson.

APPENDIX D

HISTORICAL PHOTO, CITY OF EDGEMONT WATER WELL


March-19-1913
PHOTO BY KOLLER.
EDGEMONT.S.DAK.
EDGEMONT DEEP WELL
575 GAL. PER MIN.
TEMPERATURE 126. F.
PRESSURE 94 lbs. Sq. In.
DEPTH 2983 FT.
2983 FT.. TODAY.
NORBECK & NICHOLSON Co.
CONT. REDFIELD, S. DA.