STATE OF MISSOURI
Mel Carnahan, Governor • David A. Shorr, Director
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGY AND LAND SURVEY
P.O. Box 250 111 Fairgrounds Rd. Rolla, MO 65401-0250
FAX (314)368-2111

NOTICE TO CANCEL PERMIT APPLICATION

TO THE MISSOURI OIL AND GAS COUNCIL:

WALTON 20-W (lease name and well number) has not been drilled and requires no remedial or plugging actions as required by Missouri Oil and Gas Council Rules and Regulations.

Permit No. 20550

County CASS

CERTIFICATE: I, the undersigned, state that I am the (your title) _____ of the Town (company) and that I am authorized to make this report; and that this report was prepared under my supervision and direction and the facts stated herein are true, correct, and complete to the best of my knowledge.

Signature: [illegible] Date: 7/13/93

DNR Letter from Leslie Town

OGC Misc. Form 2

RECYCLED PAPER

Missouri Oil and Gas Council

Form OGC-3I

INJECTION WELL PERMIT APPLICATION: to drill, deepen, plug back, or convert an existing well

APPLICATION TO DRILL ☒ **DEEPEN** ☐ **PLUG BACK** ☐ **CONVERSION** ☐

NAME OF COMPANY OR OPERATOR Town Oil Co. DATE 9-22-92

Rt. 4 (Address) Paola (City) Kansas 66071 (State)

DESCRIPTION OF WELL AND LEASE

Name of lease	Well number	Elevation (ground)
Walton	20-W	approx 1050'

WELL LOCATION (give footage from section lines)
847 ft. from (N) ~~(S)~~ XX sec line 2044 ft. from (E) ~~(W)~~ XX sec line

WELL LOCATION Section 4 Township 46 Range 33 COUNTY Cass

Nearest distance from proposed location to property or lease line _____ feet
Distance from proposed location to nearest drilling, completed or applied — for well on the same lease _____ feet

Proposed depth	Rotary or Cable tools	Drilling Contractor, name and address	Approx. date work will start
600	Rotary	Company Tools	When approved

Number of acres in lease: approx 80

Number of wells on lease, including this well, completed in or drilling to this reservoir: _____
Number of abandoned wells on lease: _____

If lease purchased with one or more wells drilled, from whom purchased?
Name Harry Knoche
Address Belton, MO.

No of Wells: producing _____ injection _____ inactive _____ abandoned _____

Status of Bond
Single Well ☐ Amt. _____ Blanket Bond ☒ Amt. 20,000 ☒ ON FILE ☐ ATTACHED

Outline Proposed Stimulation Program

Water injection and secondary recovery

Proposed casing program

amt.	size	wt/ft	cem.
600	2"	3.75	to surface

Approved casing — To be filled in by State Geologist

amt.	size	wt/ft	cem.
600	2"	3.75	To surface

I, the undersigned, state that I am the Partner of the Town Oil Co. (company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature Lester Town

Permit Number #20550

Approved Date 10/9/92

Approved by James Holly Williams

Note: This Permit not transferable to any other person or to any other location

☐ SAMPLES REQUIRED ☑ SAMPLES NOT REQUIRED

WATER SAMPLES REQUIRED @ _____

Remit two copies to: Missouri Oil and Gas Council
P.O. Box 250, Rolla, MO 65401

One will be returned for driller's signature

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MO Oil & Gas Council

Approval of this permit by the Oil and Gas Council does not constitute endorsement of the geologic merits of the proposed well nor endorsement of the qualifications of the permittee.

3/12/83

I Lester Town of the Town Oil Co.

Company confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized Council representative.

Driller's signature Lester Town

Date 9-21-92

Proposed Operations Data

Proposed average daily injection, pressure 400 psig, rate 25 bpd/gpm, volume 300 bbl/gal

Approved average daily injection, (to be filled in by State Geologist). pressure 400 psig, rate 25 bpd/gpm, volume 300 bbl/gal

Proposed maximum daily injection, pressure 600 psig, rate 50 bpd/gpm, volume 1000 bbl/gal

Approved maximum daily injection, (to be filled in by State Geologist). pressure 600 psig, rate 50 bpd/gpm, volume 1000 bbl/gal

Estimated fracture pressure/gradient of injection zone Breakdown 800 psi/foot

Describe the source of the injection fluid produced and fresh water

Submit an appropriate analysis of the injection fluid. (Submit on separate sheet).
See enclosed water analysis report

Describe the compatibility of the proposed injected fluid with that of the receiving formations, including total dissolved solids comparisons.

Same

Give an accurate description of the injection zone including lithologic descriptions, geologic name, thickness, depth, porosity, and permeabllity.

Cattleman sand, approx. 25' thick, 542 to 579
Porosity 21.8; permeability 47

Give an accurate description of the confining zones including lithologic description, geologic name, thickness, depth, porosity, and permeability.

Sandy shale and sandy lime imp

Submit all available logging and testing data on the well.

Give a detailed description of any well needing corrective action which penetrates the injection zone in the area of review (½ mile radius around well). Include the reason for and proposed corrective action.

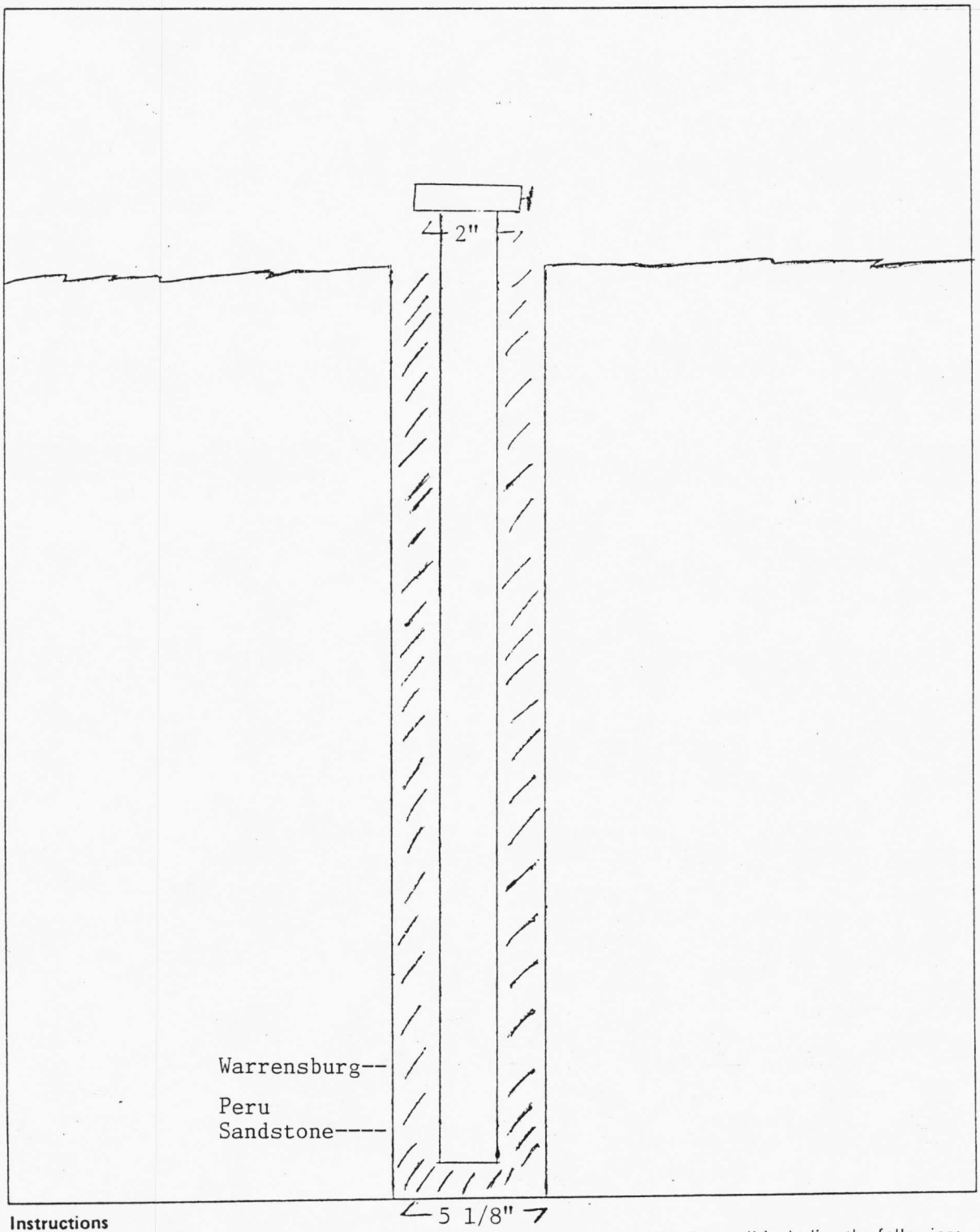
None

County Cass Permit # _____ Operator Town Oil Well # 20-W

Missouri Oil and Gas Council

Form OGC-11

INJECTION WELL SCHEMATIC



Instructions

On the above space draw a neat accurate schematic diagram of the applicant injection well including the following: configuration of well head, total depth or plug back total depth, depth of all injection or disposal intervals, and their formation names, lithology of all formations penetrated, depths of the tops and bottoms of all casing and tubing, size and grade of all casing and tubing, and the type and depth of packer, depth, location, and type of all cement, depth of all perforations and squeeze jobs, and geologic name and depth to bottom of all underground sources of drinking water which may be affected by the injection. Use back if additional space is needed, or attach sheet.

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3/12/82

This core was sampled and the samples sealed in plastic bags by a representative of the client. The core was taken using fresh water mud as the circulating fluid.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
540.0 - 542.7	Brown and gray laminated slightly calcareous sandstone and shale.
542.7 - 562.1	Brown slightly calcareous sandstone.
562.1 - 562.8	Light brown slightly calcareous shaly sandstone.
562.8 - 570.6	Brown slightly calcareous sandstone.
570.6 - 575.8	Hard gray conglomeratic calcareous limestone.
575.8 - 576.5	Light brown slightly calcareous sandstone.
576.5 - 577.0	Gray conglomeratic calcareous sandstone.
577.0 - 579.4	Brown slightly calcareous sandstone.
579.4 - 580.7	Hard gray conglomeratic calcareous limestone.

LABORATORY FLOODING TESTS

The sand in this core responded to laboratory flooding tests, as a total recovery of 2,319 barrels of oil per acre was obtained from 23.9 feet of sand. The weighted average percent oil saturation was reduced from 47.0 to 41.3, or represents an average recovery of 5.7 percent. The weighted average effective permeability of the samples is 1.58 millidarcys.

AFFIDAVIT OF PUBLICATION

STATE OF MISSOURI
COUNTY OF CASS, ss.

PUBLIC NOTICE

Town Oil Company, Rt. 4, Paola, Kansas has applied for injection wells to be drilled to an approximate depth of 600 feet at the following locations:

Number	Distance from North Line of Section	Distance from East Line of Section
4-W	1000	2283
41-W	1359	2434
20-W	847	2044

Section 4, Township 46, Range 33, in Cass County, Missouri.

Written comments or request for addtional information regarding such wells should be directed within fifteen (15) days of this notice to:
State Geologist, Missouri Oil and Gas Council, P.O. Box 250, Rolla, Missouri 65401.

October 1, 1992

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5th insertion, Vol. _____ No. _____ dated _____ 19____

6th insertion, Vol. _____ No. _____ dated _____ 19____

Fee: $ 48.00

Mark E. Cox
Publisher

Subscribed and sworn to before me this

1st day of October 1992

Witness my hand and official seal.

Dora E. Nation

DORA E. NATION
Notary Public - State of Missouri
Commissioned in Cass County
My Commission Expires May 5, 1993

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JACAM Chemical Partners, Ltd.

205 S. Broadway • (316) 278-3355 • FAX (316) 278-2112
STERLING, KANSAS 67579
U.S.A.

WATER ANALYSIS REPORT

						SHEET NUMBER
COMPANY Town Oil						DATE 7/21/92
FIELD				COUNTY OR PARISH		STATE KS
LEASE OR UNIT Walton		WELL(S) NAME OR NO.		WATER SOURCE (FORMATION)		
DEPTH FT.	BHT.F	SAMPLE SOURCE bleeder	TEMP. F	WATER BBL-DAY	OIL, BBL-DAY	GAS, MMCF-DAY
DATE SAMPLED		TYPE OF WATER ☒ PRODUCED	☐ SUPPLY	☐ WATERFLOOD		☐ SALT WATER DISPOSAL

	1.	2.	3.	
Specific Gravity	1.014			
Chlorides	14,000			Milligrams per liter
Calcium	480			Milligrams per liter
Magnesium	488			Milligrams per liter
Sulfates	325			Milligrams per liter
Bicarbonates	860			Milligrams per liter
Iron	15			Milligrams per liter
Hydrogen Sulfide	0			Milligrams per liter
Barium	0			Milligrams per liter
Total Dissolved Solids	24,241			Milligrams per liter
pH	6.6			
Sulfate Reducing Bacteria				
Sodium	8,073			
Sulfide	0			

REMARKS AND RECOMMENDATIONS

Mildly corrosive
Minimal deposits of Iron Sulfide and Calcium Carbonate are expected.

SF-6004
JC-3300

Mike will contact you regarding dosage.

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KS Oil & Gas Council

ENGINEER	OFFICE PHONE	HOME PHONE	ANALYZED	DATE
Gene Zaid	800-248-0357	316-278-2451	Sheila Nuckolls	

Area of Review Wells (½ mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Date Spudded	Date Completed	Construction
Walton	5W	1201' from (N)(~~S~~) sec. line 2200 from (E)(~~W~~) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	600	O	2/82	2/82	Surface: 9" hole 6¼" casing 20.9' Production: 5 1/8" hole 2" casing 592'
Walton	6W	1555' from (N)(~~S~~) sec. line 2330 from (E)(~~W~~) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	593	O	9/77	9/77	Surface: 6¼" casing 20' Production: 2" casing 573'
Walton	8W	1580' from (N)(~~S~~) sec. line 1595 from (E)(~~W~~) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	614	O	9/77	9/77	Surface: 6¼" casing 18' Production: 2" casing 612'
Walton	20	2229' from (N)(~~S~~) sec. line 2383' from (E)(~~W~~) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	550	O	2/76	2/76	Surface: 8" hole 8" casing 20' Intermediate 8" hole 6¼" casing 456' Producing: 6¼" hole 4½" casing 535'
Walton	22	1413' from (N)(~~S~~) sec. line 1775' from (E)(~~W~~) sec. line Sec 4 T. 46N N. R 33W	Town Oil	594	O	8/76	8/76	Surface 8" hole 8" casing 23' Production: 6½" hole 4¼" casing 570'
Walton	24	164' from (N)(S) sec. line 2505' from (~~E~~)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	620	O	1/81	1/81	Surface: 8 5/8" hole 6¼" casing 21' Production: 5¼" hole 2" casing 620'
Walton	25	165' from (N)(~~S~~) sec. line 2835' from (~~E~~)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	620	O	11/80	11/80	Surface 8 5/8" hole 6¼" casing 21' Production: 5¼" 2" casing 610'
Walton	26	165' from (N)(~~S~~) sec. line 2140' from (E)(~~W~~) sec. line Sec. 4 T. 46 N. R 33W	Town Oil	620	O	10/80	10/80	Surface: 8 5/8" hole 6¼" casing 22' Production: 5¼" hole 2" casing 600'

Attach additional sheets if necessary

Instructions

In the above grid place the descriptions of area of review wells (½ mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other = specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion information, detailing the cement, casing, and subsurface casing information.

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Area of Review Wells (½ mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Date Spudded	Date Completed	Construction
Asjes	E-4	812' from (N)(X)(S) sec. line 882' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33N	Town Oil	629	O	11/81	11/81	Surface: 9" hole 6¼" casing 20' Production: 5¼" hole 2" casing 640'
Asjes	G-2	1306.5' from (N)(X)(S) sec. line 1187.5' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33W	Town Oil Co.	669.4	O	11/81	11/81	Surface: 9" hole 6¼" casing 20' Production: 5¼" hole 2" casing 670'
Asjes	G-4	1303' from (N)(X)(S) sec. line 972' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33W	Town Oil	666.0	O	11/81	11/81	Surface: 9" hole 6¼" casing 17.6' Production: 5¼" hole 2" casing 670'
Beary	A-52	165' from (N)(X)(S) sec. line 1872' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33W	Town Oil	642	O	1/81	1/81	Surface: 9" hole 7" casing 21' Production 6¼" hole 4" casing 628.4'
Beary	52C	546.46' from (N)(X)(S) sec. line 1872.25' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33W	Town Oil	640	O	1/81	1/81	Surface: 9" hole 7" casing 35' Production: 6¼" hole 4" casing 627.80'
Beary	E-52	927.92' from (N)(X)(S) sec. line 1872.25' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33W	Town Oil	641	O	1/81	1/81	Surface: 9" hole 7" casing 21.853' Production: 6¼" hole 4" casing 628.35'
Beary	53B	355.73' from (N)(X)(S) sec. line 1762.25' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33W	Town Oil	640	O	1/81	1/81	Surface: 9" hole 7" casing 21.583" Production: 6¼" hole 4" casing 630.85'
Beary		738.19' from (N)(X)(S) sec. line 1762.25' from (E)(X)(W) sec. line Sec. 4 T. 46 N.R. 33W	Town Oil	640	O	1/81	1/81	Surface: 9" hole 7" casing 20.9' Production: 6¼" hole 4" casing 627.5'

Attach additional sheets if necessary

Instructions:
In the above grid place the descriptions of area of review wells (½ mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil - O, Gas - G, Water - W, Injection - I, Strat Test - S, Unknown - U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion information, detailing the cement, casing, and subsurface casing information.

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Area of Review Wells (½ mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Date Spudded	Date Completed	Construction
Walton	29	495' from (N)(S) sec. line 2140' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	608	O	9/77	10/77	Surface: 7" casing 74' Production: 4" casing 596'
Walton	31	1261' from (N)(S) sec. line 1517' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	590	O	1/81	2/81	Surface: 8 5/8" hole 6¼" casing 21' Production: 5¼" hole 2" casing 502'
Walton	32	1258' from (N)(S) sec. line 1847' from (E)(W) sec line Sec. 4 T. 46 N. R. 33W	Town Oil	600	O	2/82	2/82	Surface: 9" hole 6¼" casing 20' Production: 5 1/8" hole 2" casing 588.05'
Walton	37	2221 from (N)(S) sec. line 1518 from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	595	O	3/82	3/82	Surface: 9" hole 6¼" casing 20.5' Production: 5 1/8" hole 6¼" casing 595.20
Asjes	C-4	547' from (N)(S) sec. line 882' from (E)(W) sec. line Sec 4 T. 46 N. R 33W	Town Oil	639	O	11/81	11/81	Surface: 9" hole 6¼" casing 20' Production: 5¼" hole 2" casing 640'
Asjes	C-6	547' from (N)(S) sec. line 559' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil Co.	634	O	7/81	7/81	Surface: 9" hole 6¼" casing 20' Production: 5¼" hole 2" casing 636.5'
Asjes	C-8	547' from (N)(S) sec. line 18' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	670	O	7/81	7/81	Surface: 9" hole 6¼" casing 22' Production: 5¼" hole 2" casing 660'
Asjes	C-10	54' from (N)(S) sec. line 159' from (E)(W) sec. line Sec. 4 T. 46 N. R 33W	Town Oil	636	O	9/81	9/81	Surface: 9" hole 6¼" casing 20' Production: 5¼" hole 2" casing 636.5'

Attach additional sheets if necessary

Instructions

In the above grid place the descriptions of area of review wells (½ mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other = specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion information, detailing the cement, casing, and subsurface casing information.

MO Oil & Gas Council
SEP 25 1992

Area of Review Wells (½ mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Date Spudded	Date Completed	Construction
Beary	54A	165' from (N)(S) sec. line 1652.25' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	640	O	1/81	1/81	Surface 9" hole 7" casing 20.583' Production 6¼" hole 4" casing 629.80'
Beary	54C	546.4 from (N)(S) sec. line 1652.2 from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	640	O	12/80	12/80	Surface 9" hole 7" casing 21.583' Production 6¼' hole 4" casing 630.6'
Beary	54C1	546.6 from (N)(S) sec. line 1652.2' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	520	O	1/81	1/81	Surface: 9" hole 7" casing 21.67' Production 6¼" hole 4" casing 462.50'
Beary	54E	930.2' from (N)(S) sec. line 1652.2' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	640	O	1/81	1/81	Surface 9" hole 7" casing 20.75' Production: 6¼" hole 4" casing 628.35'
Beary	B-55	355 from (N)(S) sec. line 1542 from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town Oil	640	O	1/81	1/81	Surface 9" hole 7" casing 21.42' Production 6¼" hole 4" casing 628.70'
		____ from (N)(S) sec. line ____ from (E)(W) sec. line Sec. ____ T. ____ N. R. ____						
		____ from (N)(S) sec. line ____ from (E)(W) sec. line Sec. ____ T. ____ N. R. ____						
		____ from (N)(S) sec. line ____ from (E)(W) sec. line Sec. ____ T. ____ N. R. ____						

Attach additional sheets if necessary

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