

APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

APPLICATION TO DRILL  DEEPEN  PLUG BACK

NAME OF COMPANY OR OPERATOR Emery Energy, Inc. DATE 1-29-82

Box 519 Osawatomie, Kansas 66064  
Address City State

DESCRIPTION OF WELL AND LEASE			
Name of lease <b>Jack Beary</b>	Well number <b>53-FW</b>	Elevation (ground) <b>1068</b>	
WELL LOCATION (give footage from section lines) <b>1077</b> ft. from (N) <del>XX</del> sec. line, <b>1760</b> ft. from (E) <del>XX</del> sec. line			
WELL LOCATION Section <b>4</b> Township <b>46N</b> Range <b>33W</b>			County <b>Cass</b>
Nearest distance from proposed location to property or lease line: <b>17</b> feet		Distance from proposed location to nearest drilling, completed or applied - for well on the same lease: <b>279</b> feet	
Proposed depth: <b>1000'</b>	Rotary or Cable tools <b>Rotary</b>	Approx. date work will start <b>1-81</b>	
Number of acres in lease: <b>24 1/2</b>	Number of wells on lease, including this well, completed in or drilling to this reservoir: <b>20</b> Number of abandoned wells on lease: <b>0</b>		
If lease, purchased with one or more wells drilled, from whom purchased:	Name <b>General Energy, Inc.</b> Address <b>Mound City, Ks.</b>	No. of Wells: producing <b>15</b> inactive <b>0</b> abandoned <b>0</b>	
Status of Bond Single Well <input type="checkbox"/> Amt. _____ Blanket Bond <input checked="" type="checkbox"/> Amt. <b>30,000</b>		<b>Water Flood- 4</b> <input checked="" type="checkbox"/> ON FILE <input type="checkbox"/> ATTACHED	
Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone) use back of form if needed.  <b>This 53-FW is a Salt Water Injection Well - into Mississippian (BWW)</b>			
Proposed casing program:		Approved casing - To be filled in by State Geologist	
amt. <b>20.2'</b>	size <b>7 1/4"</b>	wt./ft. <b>22</b>	cem. <b>yes</b>
amt. <b>960'</b>	size <b>4"</b>	wt./ft. <b>10.4</b>	cem. <b>yes</b>
I, the undersigned, state that I am the <b>Vice-President</b> of the <b>Emery Energy, Inc.</b> (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 <b>Alvan M. Hunt</b>			

Permit Number: 20493 20269 INJECTION WELL  SAMPLES REQUIRED  
 SAMPLES NOT REQUIRED  
 Approval Date: 2/23/82 Injected Water  
 Approved By: Wallace B. Hunt Not to Exceed  
 Note: This Permit not transferable to any other person or to any other location. 13,609 mg/l  
 WATER SAMPLES REQUIRED @:  
TDS

Remit two copies to: Missouri Oil and Gas Council  
 P.O. Box 250 Rolla, Mo. 65401  
 One will be returned for driller's signature

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.

**Notes:** Permit approval for drilling only, not injection. Approval or denial for injection determined after Mechanical Integrity Test results reviewed and official notification given.

Missouri Oil and Gas Council

Form OGC-3T

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 Tow Oil Co. DATE 12/6/85  
Route 4 Padu KS 66071  
 Address City State

DESCRIPTION OF WELL AND LEASE			
Name of lease <u>Jack Beany</u>	Well number <u>53-FW</u>	Elevation (ground) <u>1068</u>	
WELL LOCATION (give footage from section lines) <u>677</u> ft. from (N) sec line <u>1760</u> ft. from (E) sec line			
WELL LOCATION Section <u>4</u> Township <u>46N</u> Range <u>33W</u>		COUNTY <u>CASS</u>	
Nearest distance from proposed location to property or lease line <u>17</u> feet Distance from proposed location to nearest drilling, completed or applied - for well on the same lease <u>277</u> feet			
Proposed depth <u>1000</u>	Rotary or Cable tools <input checked="" type="checkbox"/>	Drilling Contractor, name and address	Approx. date work will start <u>see note</u>
Number of acres in lease <u>2.65</u>	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: _____ Address: _____		No of Wells: producing _____ injection _____ inactive _____ abandoned _____	
Status of Bond Single Well <input type="checkbox"/> Amt: _____ Blanket Bond <input checked="" type="checkbox"/> Amt: <u>20,000</u>		<input checked="" type="checkbox"/> ON FILE <input type="checkbox"/> ATTACHED	
Outline Proposed Stimulation Program  <u>this well is a salt water injection well into the Mississippian -</u>			
Proposed casing program		Approved casing - To be filled in by State Geologist	
amt. <u>20.2'</u>	size <u>7 7/8"</u>	wt/ft <u>22</u>	cem. <u>yes</u>
<u>960'</u>	<u>4"</u>	<u>10.4</u>	<u>yes</u>
_____	_____	_____	_____
_____	_____	_____	_____
I, the undersigned, state that I am the <u>Partner</u> of the <u>Tow Oil</u> (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 _____			

Permit Number 20269  
 Approved Date 12/6/85  
 Approved by Wallace B. [Signature]  
 BW

SAMPLES REQUIRED  SAMPLES NOT REQUIRED  
 WATER SAMPLES REQUIRED

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

Remit two copies to: Missouri Oil and Gas Council  
 P.O. Box 250, Rolla, MO 65401  
 One will be returned for driller's signature

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.

MISSOURI OIL AND GAS COUNCIL

Form OGC-5

Injection Well WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

New Well  Work-Over  Deepen  Plug Back  Same Reservoir  Different Reservoir  Oil  Gas  Dry

Owner: Emery Energy, Inc. Address: Box 519, Osawatomie, Kansas 66064

Lease Name: Jack Beary Well Number: 53- FW

Location: 1077 ft. ENL, 1760 Ft. FEL Sec. 4 Twp. 46N Range 33W

County: Cass Permit number (OGC3 number): 70269

Date spudded: 1-8-81 Date total depth reached: 1-9-81 Date completed, ready to produce: 3-1-81 Elevation (DF, RKB, RT or Gr.): 1068 feet Elevation of casing hd. flange: Same as sur. ele.

Total depth: 960 ft. P. B. T. D.: 958.0

Producing interval(s) for this completion: Rotary tools used (interval) From 0 to T.D. Drilling Fluid used: water, air Cable tools used (interval) From None to None

Was this well directionally drilled? no Was directional survey made? no Was copy of directional survey filed? no Date filed: 5/25/1981

Type of electrical or other logs run (list logs filed with the State Geologist): Gamma Ray, Neutron, CCL Date filed: 5/25/1981

CASING RECORD

Purpose	Size hole drilled	Size casing set	Weight (lb ft.)	Depth set	Sacks cement	Amt pulled
surface	9 in.	7 in.	35	20'	none	none
producing	6.25 in.	4 in.	10.6	958.55	150 sacks	none

TUBING RECORD

LINER RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
2.375 in.	ft.	none ft.	N/A in.	N/A ft.	N/A ft.	N/A	N/A

PERFORATION RECORD

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Number per ft.	Size & type	Depth Interval	Am't. & kind of material used	Depth Interval
1	1-11/16	915-950	water gel - 2 sand 20-40 - 10 sand 12-20 - 20	Clay Stab. - 10 Acidizing - 5 gal. AT2 1gal. Inhib.

INITIAL PRODUCTION

Date of first production	Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:)					
	<del>Flowing</del>					
Date of test	Hrs. tested	Choke size	Oil prod. during test bbls.	Gas prod. during test MCF	Water prod. during test bbls.	Oil gravity API (Corr.)
Tubing pressure	Casing pressure	Cal'd rate of Production per 24 hr.	Oil bbls.	Gas MCF	Water bbls.	Gas-oil ratio

Disposition of gas (state whether vented, used for fuel or sold):

Method of disposal of mud pit contents:

CERTIFICATE: I, the undersigned, state that I am the Vice-President of the Emery Energy, Inc. (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: Devon M. Hurst  
Devon Hurst

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
<b>PENNSYLVANIAN SYSTEM</b>			
<b>KANSAS CITY</b>			
Iola Ls.	0	38	White to light gray limestone
Chanute Sh.	38	107	<b>Gray to green shales with gray limestone beds</b>
Cement City Sh.	64	75	Blue, gray limestone
Belton Ss.	104	107	Sandstone
Cherryvale Sh.	107	159	Gray, blue shales
Dennis Ls.	159	188	Gray, blue coarse limestone Black, fissile shale
Winterset Sh.	159	188	
Stark Sh.	188	193	
Swope Ls.			Gray, fine to coarse limestone Black, fissile shale
Bethany Falls Ls.	193	215	
Hush puckney Sh.	215	219	
Hertha Ls.	219	232	Gray to blue limestone
<b>PLEASANTON</b>			
Knobtown Ss.	232	412	Gray, green shales sand
Dawson Coal Hor.	331	345	Black, fissile, slaty shale
	362	366	
<b>HENRIETTA</b>			
Alamont	412	434	Gray brown, fine grained limestone with gray shale
Pawnee	434	478	Fine grained, light gray limestone
Peru Ss.	440	450	Sand
Myrick Sta. Ls.	460	468	Gray to brown limestone
Anna Sh.	468	473	Coal to black fissile shale
Fort Scott	473	492	Gray to green shales and limestone
Englevale Ss.	473	492	Fine to medium grained channel sandstone
<b>CHEROKEE</b>			
Upper Cherokee	492		Gray to dark shales
Upper Squirrel	522	527	Fine to medium grained sandstones
Lower Squirrel	530	626	Fine to medium grained sandstones
Bevier Coal Hor.	626	632	Black coal
Lower Cherokee	632	900	Sandstone, irregular
Burbank Ss.	720	748	Shale, sandy shale, thin sandstone
Bartlesville Ss.	769	810	
Burgess Ss	850	900	Sandstone & sandy shale
Core # 1	900	960 TD	Tight limestone with thin shale breaks
Core # 2			
Core # 3	no cores		Ardmore Ls. 632-706, Ls dark blue threebeds

\*Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

**INSTRUCTIONS:**

Attach drillers log or other acceptable log of well if available.

MISSOURI GEOLOGICAL SURVEY AND WATER RESOURCES

Box 250

Rolla, Missouri 65401

County: Cass

Owner: Emergy Energy Inc

Location: Beary Lease Sec 4, T. 46 N., R. 33 W.

Analysis No.: 8691

Collector: Emergy Energy

Date Collected: 2/11/82  
rec'd 2/24/82

Analyst: Gregory Lovell

Date Analyzed: 3/82

CONSTITUENTS	IN PARTS PER MILLION
Turbidity . . . . .	-
Odor . . . . .	-
pH . . . . .	-
Alkalinity (CaCO <sub>3</sub> ) . . . . .	549.1
Phenolphthalein . . . . .	0
Methyl Orange . . . . .	549.1
Carbonate (CO <sub>3</sub> ) . . . . .	0
Bicarbonate (HCO <sub>3</sub> ) . . . . .	669.6
Silica (SiO <sub>2</sub> ) . . . . .	-
Aluminum (Al) . . . . .	-
Calcium (Ca) . . . . .	150
Magnesium (Mg) . . . . .	104
Sodium (Na) . . . . .	4400
Potassium (K) . . . . .	63
Total Manganese (Mn) . . . . .	0.10
Total Iron (Fe) . . . . .	0.50
Sulfate (SO <sub>4</sub> ) . . . . .	23
Chloride (Cl) . . . . .	8900
Nitrate (NO <sub>3</sub> ) . . . . .	not detected, 45
Fluoride (F) . . . . .	-
Total Dissolved Solids . . . . .	14741
Total Hardness . . . . .	803.7
Carbonate Hardness . . . . .	549.1
Non-carbonate Hardness . . . . .	254.6

Remarks:

THE ANALYSIS IS OF THE PRODUCED <sup>mixed</sup> SQUIRREL WATER  
ON THE BEARY LEASE.

Copies To:

MISSOURI GEOLOGICAL SURVEY AND WATER RESOURCES

Box 250

Rolla, Missouri 65401

County: CASS

Owner: EMERY ENERGY, INC. - BEARY LEASE - Injection well # 53-FW

Location: SEC 4-T46N-R33W Produced water from squirrel Fm.

Analysis No.: 8688

Analyst: Greg Linn

Collector: \_\_\_\_\_

Date Collected: 1/29/82

Date Analyzed: 2/82

rec'd 2/8/82

CONSTITUENTS	IN PARTS PER MILLION
Turbidity . . . . .	-
Odor . . . . .	-
pH . . . . .	-
Alkalinity (CaCO <sub>3</sub> ) . . . . .	685.4
Phenolphthalein . . . . .	0
Methyl Orange . . . . .	685.4
Carbonate (CO <sub>3</sub> ) . . . . .	0
Bicarbonate (HCO <sub>3</sub> ) . . . . .	835.8
Silica (SiO <sub>2</sub> ) . . . . .	-
Aluminum (Al) . . . . .	-
Calcium (Ca) . . . . .	178
Magnesium (Mg) . . . . .	144
Sodium (Na) . . . . .	6900
Potassium (K) . . . . .	60
Total Manganese (Mn) . . . . .	0.09
Total Iron (Fe) . . . . .	5.9
Sulfate (SO <sub>4</sub> ) . . . . .	2
Chloride (Cl) . . . . .	11,700
Nitrate (NO <sub>3</sub> ) . . . . .	-
Fluoride (F) . . . . .	-
Total Dissolved Solids . . . . .	19,736
Total Hardness . . . . .	1047.9
Carbonate Hardness . . . . .	685.4
Non-carbonate Hardness . . . . .	362.5

Remarks:

Copies To:

PIPE TALLY *71-A* ROSS MARTIN CO. TULSA 1, OKLAHOMA

1-7-81

PIPE RECEIVED FROM <i>Energy Energy Inc</i>		SIZE OF PIPE	
CHARGE TO OR SENT TO <i>Berry</i>		WEIGHT PER FT	RANGE
CAR INITIAL & NO. -OR-TRUCK NO. <i>H + H Drilling</i>		WELL NO. <i>53FW</i>	GRADE
MAKE OR KIND OF PIPE <i>958 55 - 4"</i>		THREAD	CONDITION

PCS.	FEET	FEET	FEET	FEET	FEET
1	33	-	33	10	
2	32	95	33	10	
3	33	-	33	10	
4	33	05	33	05	
5	33	-	33	20	
6	33	05	33	-	
7	33	-	198	55	
8	33	-	660	70	
9	32	95	859	25	
10	33	10	33	10	
11	33	-	33	10	
12	33	10	925	45	
13	33	10	33	10	
14	33	10	958	55	
15	33	05			
16	33	10			
17	33	05			
18	33	-			
19	33	10			
20	33	-			
TOT.	660	70			

TOTALS	PCS.	FT.	IN.	TRANSFER NO.	ORDER NO.
COLUMN 1					
COLUMN 2				REMARKS	
COLUMN 3					
COLUMN 4					
COLUMN 5				The above joints received in good order except as noted.	
TOTAL THIS PAGE				By	<i>Shun Heng</i>