

APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

APPLICATION TO DRILL DEEPEN PLUG BACK

NAME OF COMPANY OR OPERATOR TOSCO Production Finance Corp. DATE 9/24/81
10100 Santa Monica Blvd. Los Angeles California 90067
 Address City State

DESCRIPTION OF WELL AND LEASE			
Name of lease <u>Willard Ison</u>	Well number <u>CH-2</u>	Elevation (ground) <u>982.5</u>	
WELL LOCATION (give footage from section lines) <u>1320</u> ft. from (S) sec. line <u>1420</u> ft. from (W) sec. line			
WELL LOCATION Section <u>11</u> Township <u>32N</u> Range <u>32W</u>			County <u>Barton</u>
Nearest distance from proposed location to property or lease line: <u>85</u> feet		Distance from proposed location to nearest drilling, completed or applied - for well on the same lease: <u>NA</u> feet	
Proposed depth: <u>350'</u>	Rotary or Cable tools <u>Rotary</u>	Approx. date work will start <u>10/01/81</u>	
Number of acres in lease <u>50</u>	Number of wells on lease, including this well, completed in or drilling to this reservoir: <u>1</u> Number of abandoned wells on lease: <u>0</u>		
If lease, purchased with one or more wells drilled, from whom purchased: Name _____ Address _____		No. of Wells: producing _____ 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			
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.			
Proposed casing program:		Approved casing - To be filled in by State Geologist	
amt.	size	wt./ft.	cem.
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
I, the undersigned, state that I am the <u>Geologist</u> of the <u>CARMEL ENERGY, INC.</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 <u>Jeffery F. Weber</u>			

DISTRIBUTION: 1 copy - Houston SAMPLES REQUIRED
 Permit Number 20038 1 copy - TOSCO SAMPLES NOT REQUIRED
 Approval Date 10/13/81 1 copy - Deerfield SAMPLES NOT REQUIRED
 Approved By D.R.S. Mallaci, B. Howe P.O. Box 89
 Deerfield, MO 64741 WATER SAMPLES REQUIRED

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 OCT 05 1981
 MO. OIL & GAS COUNCIL

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 Limited to
 Stratigraphic Test Only

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
PLUGGING RECORD

Form OGC-7

Owner **TOSCO Production Finance Corp.** Address **10100 Santa Monica Blvd. Los Angeles, California 90067**

Name of Lease **Willard Ison** Well No. **CH-2** **Sec. 11, T32N - R32W**

Location of Well **1320 FSL, 1420 FWL Elev. 982.5** Sec-Twp-Rge or Block & Survey **Barton** County **Barton**

Application to drill this well was filed in name of **TOSCO** Has this well ever produced oil or gas **NO** Character of well at completion (initial production) Oil (bbls/day) **---** Gas (MCF/day) **---** Dry? **NO**

Date Abandoned: **12/5/81** Total depth **125'** Amount well producing prior to abandonment. Oil (bbls/day) **---** Gas (MCF/day) **---** Water (bbls./day) **---**

Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of abandonment	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount cement.
Warner	Oil & Water	22'-23' + 51-116'	

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
NONE					

Was well filled with mud-laden fluid? **Yes** Indicate deepest formation containing fresh water. **NONE**

NAMES AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE

Name	Address	Direction from this well:
Willard Ison	Rt. 1 Iantha, Mo.	South East

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Method of disposal of mud pit contents: **NO Pit used. (Portable Pit)** MO. OIL & GAS COUNCIL

Use reverse side for additional detail **well was plugged from T.D. to surface with CLASS A**
File this form in duplicate with **Portland Cement.**

CERTIFICATE: I, the undersigned, state that I am the **Geologist** of the **Carnel 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.

DISTRIBUTION:

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- 1 COPY - DEERFIELD
- P.O. BOX 59
- DEERFIELD, MO 64741
- 1 copy TOSCO

CONFIDENTIAL

Raymond M. Tolladay
Signature
12/5/81
Burd

Oilfield Research Laboratories
GENERAL INFORMATION & SUMMARY

Company Tosco Production Finance Corp. Lease Willard Ison Well No. CH-2
 Location 1420' FWL & 1320' FSL
 Section 11 Twp. 32N Rge. 32W County Barton State Missouri

Elevation, Feet 982.5
 Name of Sand Warner
 Top of Core 22.5
 Bottom of Core 108.0
 Top of Sand (Tested) 60.4
 Bottom of Sand (Tested) 106.6
 Total Feet of Permeable Sand 27.1

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	6.4	6.4
15 - 30	6.8	13.2
30 - 75	4.3	17.5
75 - 116	6.0	23.5
180 - 210	3.6	27.1

Average Permeability Millidarcys 62.1
 Average Percent Porosity 21.8
 Average Percent Oil Saturation 30.1
 Average Percent Water Saturation 56.3
 Average Oil Content, Bbls./A. Ft. 500.
 Total Oil Content, Bbls./Acre 13,549.

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OILFIELD RESEARCH LABORATORIES

LOGName Tosco Production Finance Corp. Lease Willard Ison Well # CH-

<u>Depth Interval, Feet</u>	<u>Description</u>
22.5 - 23.5	Yellowish brown argillaceous sandstone.
23.5 - 36.5	Clay.
36.5 - 48.0	No core.
48.0 - 50.5	Light gray silty shale.
50.5 - 54.0	Brown and gray laminated sandstone and shale.
54.0 - 66.0	Grayish brown calcareous sandstone.
66.0 - 75.2	Grayish black slightly calcareous carbonaceous sand- stone.
75.2 - 88.0	Grayish black slightly calcareous friable carbon- aceous sandstone.
88.0 - 91.0	Black slightly calcareous carbonaceous friable sandstone.
91.0 - 98.4	Black slightly calcareous carbonaceous sandstone.
98.4 - 108.0	Grayish black slightly calcareous carbonaceous shaly sandstone.

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MAY 13 1983

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Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Tosco Production Finance Corporation Lease Willard Ison Well No. CH-2

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation		Oil Content Bbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water			Ft.	Cum. Ft.		
1	60.5	22.1	13	80	223	97.	1.7	1.7	379	164.90
2	63.6	21.2	16	81	263	181.	1.6	3.3	421	289.60
3	66.5	21.9	38	57	646	203.	1.0	4.3	646	203.00
4	69.5	20.6	35	62	559	79.	1.0	5.3	559	79.00
5	72.5	20.2	25	68	392	92.	1.0	6.3	392	92.00
6	75.5	30.4	14	51	330	208.	1.0	7.3	330	208.00
7	78.4	22.2	21	67	362	67.	1.0	8.3	362	67.00
8	81.5	27.4	16	63	340	115.	1.0	9.3	340	115.00
9	84.5	21.8	20	76	338	29.	1.0	10.3	338	29.00
10	88.5	26.8	37	50	769	72.	1.3	11.6	1000	93.60
11	90.5	25.3	32	48	628	90.	1.3	12.9	816	117.00
12	92.5	22.6	30	50	526	35.	2.0	14.9	1052	70.00
13	94.5	21.1	37	57	606	26.	2.1	17.0	1273	54.60
14	96.6	20.7	32	57	514	18.	1.9	18.9	977	34.20
15	98.5	20.6	32	52	511	28.	1.8	20.7	920	50.40
16	100.5	18.2	37	51	522	4.1	1.6	22.3	835	6.56
17	102.5	20.0	49	33	760	1.9	1.6	23.9	1216	3.04
18	104.5	17.7	35	47	481	2.0	1.6	25.5	770	3.20
19	106.4	20.1	37	36	577	2.6	1.6	27.1	923	4.16

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WFO

Permit #: 20038

Date Issued: 10.13.81

County: Barton

Date Cancelled: _____

CONFIDENTIAL UNTIL: _____

Date Plugged: 12.5.81

OGC FORMS	Date Received
1	
2	
3	<u>10-5-81</u>
3i	
4	
4i	
5	
6	
7	<u>12-5-81</u>
8	
11	
12	
Misc. Form 2	

COMMENTS:

strat test
Fm: Warner

	TYPE	ID #	Date Received
Logs			
Samples	chip		
	core		
Analyses	water		
	core		

Additional Submitted Data:

sat d perm