

APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

APPLICATION TO DRILL DEEPEN PLUG BACK

NAME OF COMPANY OR OPERATOR DNR- GEOL SURVEY DATE 1 Aug 77
P.O. Box 250 Rolla MO.
Address City State

DESCRIPTION OF WELL AND LEASE			
Name of lease ERDA TS	Well number 27	Elevation (ground) 939	
WELL LOCATION (give footage from section lines) 17 ft. from <input checked="" type="radio"/> (N) sec. line 75 ft. from <input checked="" type="radio"/> (W) sec. line			
WELL LOCATION Section 17 Township 33N Range 30W			County BARTON
Nearest distance from proposed location to property or lease line: NA feet		Distance from proposed location to nearest drilling, completed or applied - for well on the same lease: NA feet	
Proposed depth: 200	Rotary or Cable tools Rotary	Approx. date work will start 3 Aug 77	
Number of acres in lease: NA	Number of wells on lease, including this well, completed in or drilling to this reservoir: NA Number of abandoned wells on lease: _____		
If lease, purchased with one or more wells drilled, from whom purchased: Name NA Address _____		No. of Wells: producing _____ inactive NA abandoned _____	
Status of Bond Single Well <input type="checkbox"/> Amt. _____ Blanket Bond <input type="checkbox"/> Amt. _____ NA <input 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. stud test (core)			
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 _____ of the _____ (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: 20021
Approval Date: 1 Aug 77
Approved By: Wallace B. Lane

SAMPLES REQUIRED
 SAMPLES NOT REQUIRED

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

WATER SAMPLES REQUIRED @:

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

One will be returned. 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.

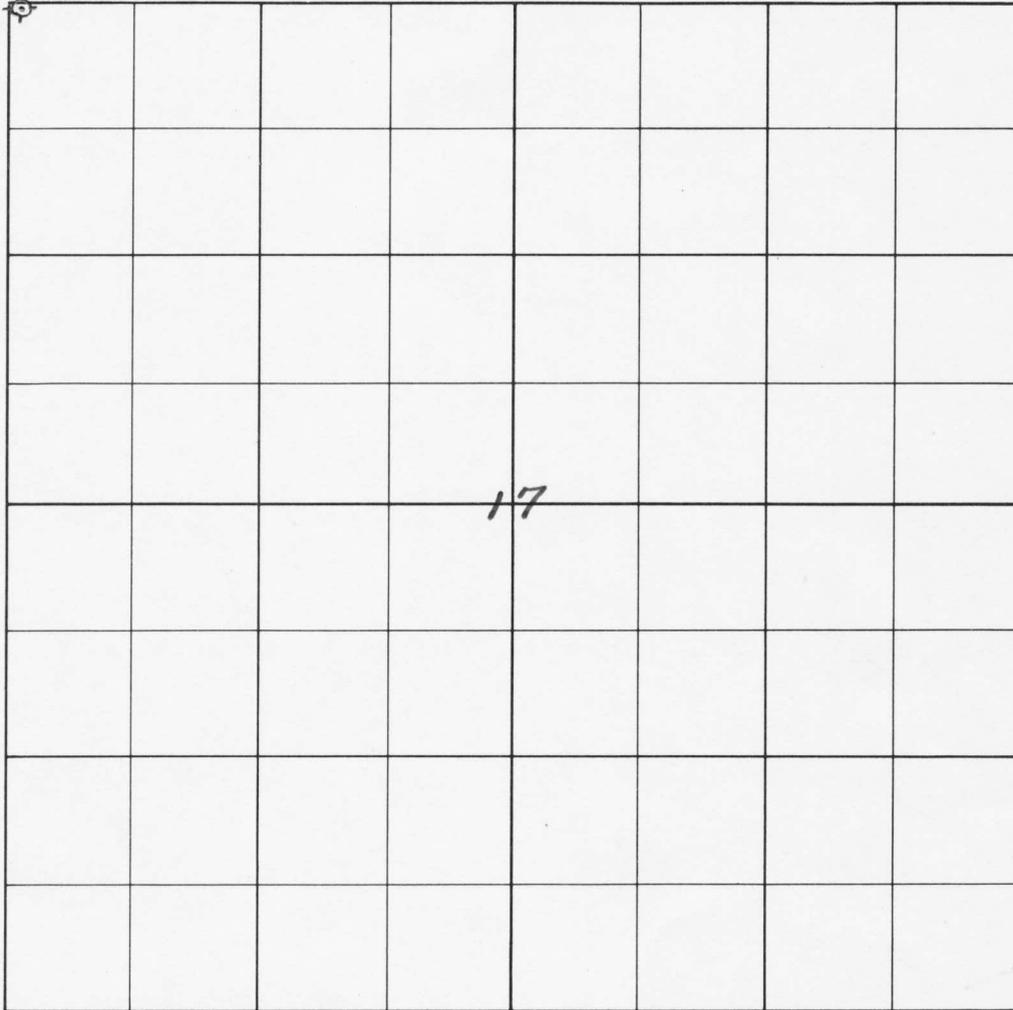
MISSOURI OIL AND GAS COUNCIL
WELL LOCATION PLAT

Form OGC - 4

Owner: DNR - GEOL SURVEY

Lease Name: ERDA - TS No. 27 County, BARTON

17 feet from (N) (S) line and 75 feet from (E) (W) line of Sec. 17 Twp. 33N Range 30W



SCALE
1" = 1000'

REMARKS: Irwin, Mo., 2 mi N & 1 1/2 mi E of,
on South side of E-W gravel rd., 17' S &
75' E of & of X rd.

INSTRUCTIONS

On the above plat, show distance of the proposed well from the two nearest lease and section lines, and from the nearest well on the same lease completed in or drilling to the same reservoir. If the location requested is not in conformance with the applicable well-spacing rules, show all off-setting wells to the proposed well. Do not confuse survey lines with lease lines. See rule 7 - 3 (b) for survey requirements.

(SEAL)

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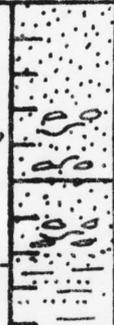
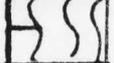
Registered Land Surveyor

QUADRANGLE: Lamar North

ERDA Tar Sands Core 27
 COUNTY: Barton

LOCATION: NW1/4 NW1/4 NW1/4			SEC. 17	T. 33N	R. 30W	DATE: August 1977
LOCATION DESCRIPTION: 17 FNL, 75 FWL; 7-1/2 miles north of Lamar						1
Elev. 939.0 T.M., T.D. 168.0						
DEPTH		BED NO.	LITHOLOGY			
FROM	TO					
0.0	10.0	1	no core, soil and clay			
10.0	28.7	2	ss., fine grained, med. gray, top 5 ft. very argillaceous; weathered zone 11.7-11.9 ft; lost core 21.0-21.4 ft; inclined dk. gray shale lenses comprise approx. 10% of unit <i>BELOW</i> 24.0 ft.	2		
28.7	29.0	3	ss., lt. gray (1/8 to 1/4 mm dia. grains), clasts of shale to .01 ft. dia; discont. wavy, paper thin laminae of coaly material	3 →		
29.0	29.2	4	lost core	4 →		
29.2	33.8	5	shale, med. gray, approx. 40% of unit is lt. gray ss. laminae, lenticular, cross-laminated	5		
33.8	35.3	6	ss., med. gray, fine-grained, laminated with dk. gray shale in bottom half	6		
35.3	35.7	7	shale, med. gray and cross-laminated lt. gray ss; intercalated	7 →		
35.7	36.2	8	ss., lt. gray, conglomeratic with pieces of coal and fusain especially along bedding planes; micaceous	8		
36.2	37.7	9	ss., lt. gray, cross bedded, inclined bedding and med. gray shale intercalated	9		
37.7	38.7	10	ss., lt. gray, conglomeratic with clasts of coal in discontinuous contorted lenses; <u>Calamites</u> impressions (probably represent twigs and branches carried into an area of sand deposition)	10		
38.7	41.2	11	shale, lt. gray, carbonized impressions of <u>Calamites</u> , <u>Cordaites</u>	11		
41.2	42.3	12	ss., lt. gray, cross laminated, intercalated with med. gray shale laminae	12		
				13		

42.2	50.1	13	ss., lt. gray; med. gray shale beds at 42.4-42.6, 42.8-43.2, 43.5-43.8, 44.8-44.9, 49.0-49.3 ft.; discontinuous paper-thin laminae of coal, mica and sand-sized tan woody grains 45.8-48.0 ft.	14
50.1	51.3	14	ss., lt. gray and dk. gray shale interbedded	15
51.3	52.0	15	ss., lt. gray, wavy paper-thin laminae of coal form 5% of unit	16
52.0	52.7	16	ss; lt gray and shale med. gray interlaminated; predomin. ss. from 52.5-52.7 ft.	17
52.7	53.3	17	congl., dk. gray shale clasts elongated to tabular, granule sized to .2 ft thick beds that show faulted "pull apart" structures (probably result of penecontemporaneous slumpage) lt. gray ss. matrix	18
53.3	63.0	18	ss., lt. gray; discontinuous paper thin coal laminae form 5% of unit and increase to 20% from 58.0-60.0 ft, evenly distributed, interlaminated lt. gray ss, and shale from 53.6-53.8 ft.	19
63.0	65.4	19	ss., lt. gray, fine grained, cross laminated, 5% of unit is wavy discontinuous paper thin coal laminae	20
65.4	66.0	20	same as above unit but coal laminae comprise 20% of unit	21
66.0	67.0	21	same as above unit but less than 5% coal laminae	22
67.0	68.4	22	same as above unit but 20% of unit is coal laminae increasing downsection to 40%	23
68.4	69.6	23	ss., lt gray, fine-grained, cross laminated; interlaminated with dk. gray shale	24
69.6	75.5	24	ss., lt. gray, approx 5% of unit is dk. gray micaceous shale and coal laminae, inclined, concentrated near top, middle and bottom; calc. cemented from 73.4-74.8 ft.	25
75.5	76.7	25	ss., lt. gray, fine grained ss. interlaminated with black shale laminae, horizontal attitude	26
76.7	86.0	26	ss., lt. gray, cross-bedded, non calc., approx. 5% of unit is inclined coal laminae 79.4-79.8 ft., 80.1-81.0, 81.7-82.0 ft.; only about 1% of unit is inclined coal laminae below 82.0 ft; calc. cemented 83.7-85.7 ft.	27
86.0	100.0	27	ss., lt. gray, non calc., fine grained, few wavy, horizontal, coal laminae; concentrated from 88.6-88.9 ft. into inclined bundles; pyritiferous	28

100.0	112.4	28	<p>ss., lt. gray, fine-grained, non calc.; congl. intervals from 100.6-101.2, 101.7-101.75, 102.0-103.2, 104.1-104.4, 104.9-105.1, 108.4-108.9, 109.8-109.9, 111.2-112.0, 112.2-112.4 consisting of clasts of coal in beds to .1 ft. thick, horizontal to distorted and inclined discont. laminae, also clasts of tan plant material to .1 ft. thick with thin coaly rinds; pyrite nodules to .1 ft dia. at 112.4 ft.</p>	28	
112.4	130.0	29	<p>ss., lt. gray, cross-laminated (ripples), intercalated with dk. gray (dry) to black (wet) shale in approx. equal amounts in beds .2 ft. to .01 ft. thick wavy, mostly horizontal</p> <p>test churn drilled below 130.0-168.0 (core barrel lost)</p>	29	
130.0	140.0	30	<p>shale, black, laminae of siltstone and very fine sandstone</p>	30	
140.0	147.0	31	<p>shale, black and ss. lt. gray, interlaminated</p>	31	
147.0	148.0	32	<p>coal, (1 to 2 ft thick possibly over 2 ft thick)</p>	32	
148.0	150.0	33	<p>underclay, soft, sticky</p>	33	
				34	

150.0

166.0

34

shale, black, some lt. gray ss. laminae

34



166.0

168.0

35

chert, bluish-white and white

35



TOP
MISS

T.D. 168.0

