

United States Department of the Interior

GEOLOGICAL SURVEY P. O. Drawer U Artesia, New Mexico 88210

JAN 1 9 1979

Flag-Redfern Oil Company P. O. Box 23 Midland, Texas 79702 FLAG-REDFERN OIL COMPANY Hahn Federal No. 6 660 FSL 660 FEL Sec. 27, T7S, R31E Chaves County Lease No. NM-15677 Above Data Required on Well Sign

Gentlemen:

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 4,100 feet to test the San Andres formation is hereby approved subject to compliance with the OIL AND GAS OPERATING REGULATIONS (30 CFR 221) and the following conditions:

- 1. Drilling operations authorized are subject to compliance with the GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL LEASES, dated July 1, 1978.
- 2. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the SURFACE USE PLAN and this approval including the GENERAL RE-OUIREMENTS.
- 3. Submit a Daily Report of Operations from spud date until the Well Completion Report (form 9-330) is filed. The progress report should be not less than 8" x 5" in size and each page should identify the well.
- 4. All permanent above-ground structures and equipment shall be painted in accordance with the attached Painting Requirements. The color used should simulate sandstone brown (Federal Standard Color #595A, color 20318 or 30318).

Sincerely yours,

(Orig. Sgd.) ALBERT R. STALL

Albert R. Stall Acting District Engineer

·	I	CC COPY	,	~	,		
Lorni 9- 541 C May 1935		TED STATES	SUBMIT IN 1 (Other instr reverse	uctions on	Budget Bureau	4. - No 42 (R1425) 	
	DEPARTMEN	T OF THE INT	ERIOR		5. LEASE DESIGNATION	AND SERIAL NO.	
	<u>USA NM 1567</u>	7					
APPLICATIO	N FOR PERMIT	TO DRILL, DE	EPEN, OR PLUG	BACK	6. IF INDIAN, ALLOTTEE	OB TRIBE NAME	
		DEEPEN	PLUG BA	CK	7. UNIT AGREEMENT NA	ме	
	AS OTHER		SINGLE X MULT ZONE ZONE		S. FARM OR LEASE NAM	E	
2. NAME OF OPERATOR		Hahn-Federal					
Flag-Redfern 3. Address of Operator	Oil Company				9. WELL NO.		
3. ADDRESS OF OPERATOR					6		
P. O. Box 23 4. LOCATION OF WELL (F		10. FIELD AND POOL, OB WILDCAT TOM-TOM San Andres					
At surface 660' FSL & 6		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA					
At proposed prod. zo:	ne						
Same	Sec. 27, T-7-	<u>S, R-31-E</u>					
					c.		
17 miles Eas	t of Elkins, No	ew Mexico	NO. OF ACRES IN LEASE	17 NO. 0	Chaves	New Mexico	
LOCATION TO NEARES PROPERTY OR LEASE	r				HIS WELL		
(Also to nearest drl	g. unit line, if any)	560' <u></u>	1440		40		
18. DISTANCE FROM PRO TO NEAREST WELL, I		TARY OR CABLE TOOLS					
OR APPLIED FOR, UN TH	Rot	22. APPROX. DATE WO	BE WILL CONTR				
21. ELEVATIONS (Show wh	ether DF, RT, GR, etc.)						
4365' G L.					January 15,	1979	
23.		PROPOSED CASING .	AND CEMENTING PROG	RAM			
SIZE OF HOLE	SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH			QUANTITY OF CEMENT			
11"	8-5/8"	24# J-55	1630'		750 sk		
7-7/8"	4-1/2"	9.50# K-55	4100'		250 sk		

Drill 11" hole to 1630' or into the top of the Rustler Anhydrite formation. Run 8-5/8" casing and circulate cement with 750 sk. Wait on cement 8 hours and test casing to 600 PSIG. Drill 7-7/8" hole to approximately 4100'. Run open hole log. Run 4½" casing to T.D. and cement with 250 sk. Wait on cement a minimum of 8 hrs. Test 4½" casing to 1500 PSIG. Run correlation log and perforate the San Andres formation. Treat with acid. Swab to test. Potential test well.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

The hole
SIGNED

(This space for Federal or State office use)

TITLE <u>Petroleum Engineer</u> DATE

eer_____Date_December 29, 1978

DATE ____

PERMIT NO.

APPBOVAL DATE _____

*See Instructions On Reverse Side

TITLE

NEW ME. JOIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

		All distances m	ust be from the c	uter boundaries of	the Section.		
Operator			Lease				Well No.
	- <u>77</u> D.7'7.3N (OIL CO.		HAHN - FED	$\overline{z}RAL$		6
Unit Letter	Section	Township		nge	County		
P	27	7-5		31 - E	-	CHAVES	
Actual Footage Loc	ation of Well:						
660	7	ZAS Z hi	ne and 00	0		South	
				fee	et from the		line
Ground Level flev.	Producing Fo	ormation	Pool				edicated Acreage:
4365	San And	res	Tom-	rom		L.	40 Acres
2. If more th	-	ated to the subj s dedicated to th		-			reof (both as to working
dated by c	communitization,	unitization, force answer is "yes,"	-pooling.etc: type of conso	lidation		nterests of a	ll owners been consoli-
this form i No allowat	f necessary.) ole will be assign	ned to the well un	til all interes	sts have been	consolidate	ed (by commu s, has been a	ed. (Use reverse side of anitization, unitization, pproved by the Commis-
	1						CERTIFICATION
	1			ļ			
	1			1			tify that the information con-
				F	1	tained herei	n is true and complete to the
	1			1		best of my k	nowledge and belief.
	 +			 _		Name	n. Cooler
	ł			1		Steve W. Position	Rossler
	\$						m Engineer
	l i	,				Company Flag-Red	fern Oil Company
	1			1		Date	
- -	I Section 27	7. TWP. 7-	S, RNG.			December	29, 1978
						shown on thi notes of act under my su	ertify that the well location is plat was plotted from field tual surveys made by me or pervision, and that the same correct to the best of my nd belief.
t and a to the				6 0, 0,9,9	360 1	Registered Pro and/or Land St	
						Certifice No.	754
330 660	90 1320 1650 19	80 2310 2640	2000 150	0 1000 5	00 / 0	•	/ U E



Flag-Redfern Oil Company

1200 WALL TOWERS WEST • MIDLAND, TEXAS 79701 • PHONE (915) 683-5184

Mailing address: P.O. Box 23 Midland, Texas 79702

File:

December 29, 1978

U. S. Department of Interior Geological Survey P. O. Drawer U Artesia, New Mexico 88210

Dear Sir,

Flag-Redfern Oil Company is making application to drill the Hahn-Federal Well #6 in Section 27, T-7-S, R-31-E, Chaves County, New Mexico. This is a federal lease with private surface ownership. An agreement with the surface owner has been reached for drilling the well. Restoration will include closing and levelling of the pits after they are no longer necessary. Upon abandonment the road and location will be left intact.

Yours very truly,

m. hearly

Steven W. Rossler

SWR/dlp

CORPORATION ACKNOWLEDGMENT

STATE OF NEW MEXICO

COUNTY OF Chaves

The foregoing instrument was acknowledged before me this $2 \pi d_{-}$ day of January, 19 79, by Steven W. Rossler, Petroleum Engineer for Flag-Redfern Oil Company a ______ <u>Delaware</u> corporation on behalf of said corporation. Anna D. Shull My Commission Expires: 7-10-80

APPLICATION TO DRILL HAHN-FEDERAL WELL #6

In response to questions asked under Section II B of Bulletin NTL-6, the following answers are provided for your consideration:

- 1. Location: 660' FEL & 660' FSL of Section 27, T-7-S, R-31-E, Chaves County, New Mexico.
- 2. Elevation Above Sea Level: 4365' G. L.
- 3. Geologic Name of Surface Formation: Mississippian
- 4. <u>Drilling Tools and Associated Equipment</u>: Conventional Rotary drilling rig using mud for the circulation medium.
- 5. Proposed Drilling Depth: 4100'
- 6. Estimated Geological Marker Tops: Rustler Anhydrite 1609', Top of Salt -1703', Base of Salt - 2026', Yates - 2027', San Andres - 3169', PI Zone - 3717', San Andres Porosity - 3945'.
- 7. <u>Mineral Bearing Formations</u>: Water Bearing none, Gas Bearing none, Oil Bearing - San Andres Porosity @ 3945'.
- 8. <u>Casing Program</u>: (a) Surface casing 8-5/8" 24#/ft. J-55 new casing,
 (b) Production casing 4-1/2" 9.50#/ft. K-55 new casing.
- 9. Setting Depth of Casing and Cement for Same: (a) 8-5/8" casing set at 1630'. Cement will be circulated to the surface using 550 sx of Halliburton Light Weight w/½ lb/sx of Flocele and 8# salt per sx. followed by 200 sx. Class C w/2% CaCl. (b) 4-1/2" casing set at 4100' and will be cemented with 250 sxs. of 50-50 Pozmix "A" - Class "H" with 2% gel, 0.75% CFR-2, and 8# salt per sx.
- 10. <u>Pressure Control Equipment</u>: Blowout preventers will be installed on the surface casing. They will be 10" API Series 900 dual preventers adapted for the drilling contractor's 4-1/2" and 5-1/2" drill pipe. They will be capable of closing off on all open areas. The blowout preventers will be hydraulically actuated by an 80 gal Payne accumulator. The blowout preventers will be tested to 2000 psig after they are installed on the surface casing, prior to drilling out, and each time they are removed or rearranged on the wellhead.

Application to Drill Hahn-Federal Well #6 Page 2

- 11. <u>Proposed Circulating Medium</u>: Mud will be used for the circulating medium for all depths in this well. The following mud properties will be maintained: 0-1630' Fresh water based native mud, mud weight 8.6 to 10.0 1b/gal, viscosity 32 to 34 seconds. 1630' - 3800' Fresh water based native mud with oil, mud weight 10.0 1b/gal. Viscosity 32 to 33 seconds. 3800' - 4100' (TD) Fresh water based mud with starch and oil. Mud weight 10.0 1b/gal, viscosity 38 to 42 seconds, fluid loss 10-15 milliliters.
- 12. <u>Testing Logging, and Coring Programs</u>: (a) Testing All Testing will be commenced after the well is drilled and casing has been set and cemented. (b) Logging At total depth the following log will be run: 0-4100' Sidewall neutron porosity with gamma ray and caliper. (c) Coring - none anticipated.
- 13. <u>Potential Hazards</u>: No abnormal pressure or temperature zones are anticipated. Hydrogen sulfide gas is not expected to be a problem; however, the drilling rig will be so situated as to allow all gas vapors to be expelled away from all personnel gathering sites and engine exhausts.
- 14. <u>Anticipated Starting Date and Duration of Operations</u>: January 15, 1979 Road and location to be constructed, February 1, 1979 Drilling rig to spud well, February 15, 1979 Pulling Unit to complete well. March 1, 1979 Well to be potentialled.
- 15. Other Facets of Operation: After running 4-1/2" casing, cased hole gamma ray collar correlation logs will be run from 4050' to 2550'. The San Andres Porosity zone will be perforated and acidized. The well will then be swabbed tested and a pumping unit will be installed to potential and produce the well.

Surface Use and Operation Plan

Flag-Redfern Oil Company Hahn Federal Well #6 Section 27, T-7-S, R-31-E Chaves County, New Mexico

Jan Lan and

1. Existing Roads

. •

- A. Attached is a portion of a U.S.G.S. Topographic map showing existing roads in the vicinity of the proposed location.
- B. Attached is a plat showing existing roads in the area of the proposed location.
- C. There are no plans for improving the existing roads.

2. Access Roads

- A. Planned access roads are shown on the attached plat.
- B. The road will be constructed of caliche and will be 12' wide.

3. Location of Existing Wells.

- A. Existing wells are shown on the attached plat.
- 4. Location of Tank Batteries, etc.
 - A. A tank battery and production facility consisting of three 210 bb1. stock tanks and a heater treater is located on this same lease 2640' West of the proposed well.
 - B. In the event the proposed well is productive, a 2" flowline will be laid, alongside the access road, to the above mentioned production facility.
 - C. The reserve pits will be back filled and leveled and the surface returned to its original contours.

5. Location and Type of Water Supply

- A. There is no known surface water in the area.
- B. A windmill is located approximately 5000' northeast of the proposed location.
- C. All water used in drilling operations will be trucked to the drillsite from commercial sources.

Surface Use and Operation Plan Page 2

6. Source of Construction Materials

A. Construction material will be caliche, which will be purchased by the dirt contractor.

7. Methods for Handling Waste Disposal

- A. Well cuttings will be disposed in the reserve pit. All waste and trash will be either burned or buried in a separate pit.
- **B.** After completion any produced water will be collected in tanks and trucked to an approved disposal system.
- C. During testing operations, all produced fluids will be collected in tanks and trucked from the well site.

8. Auxiliary Facilities

- A. None anticipated.
- 9. Well Site Layout
 - A. Attached is a plat of the well site and rig layout.
- 10. Plans for Restoration of the Surface
 - A. As soon as practical upon completion of the well, the pits will be back filled and leveled and the surface returned to its original contours.

11. Other Information

- A. See attached topographic map for terrain of the general area which consists of an undulating plain covered by sandy soils of alluvian and aeolian origin.
- B. Characteristic soils belong to the typic haplargids paleargids associations.
- C. Vegetation consists of yucca glavca, rhus trilobata, gutierra sarothrae, eurotia, lanata, and lycurus phleoides.
- D. Fauna consists of crotalus and sistrurus, canis latrans, lepus alleni, mephitis mephitis and antalopus.
- E. The surface of this land is being utilized to a limited extent as grazing land for cattle.

Surface Use and Operation Plan Page 3

- F. The surface is private owned.
- No cultural resources or archeological sites are present. G.
- Н. There are no steep hillsides, no deep gullies, no streams and no occupied dwellings on this lease.

12. Operator's Representative

Steven W. Rossler P. O. Box 23 Midland, Texas 79702

Office Phone: 915-683-5184 915-697-3808

13. Certification

,

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist, that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Flag-Redfern Oil Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

.....

Date 1-2-22 The Rossler, Engineer



۰.



-....

R-31-E 13 14 15 24 22 23 Flog-21 Redfern T 7 S Amoco Fed. 26 25 27 Flog-Redfern 28 Southard Flag-Redfern Flag-Redfern Amoco Fed. Hohn Fed. PROPOSE WELL 35 36 34 33 Flag-Redfern Oil Company 15 79702 83-51 64 AREA PLAT SOUTHARD AREA Well No.6, HAHN Fed Lse. 660 FSL 8 660 FEL Sec. 27, T-7-S, R-31-E Chaves County, New Mexico 12-29 78 Scole 1= 2000

it is a set

CE COTTERVATION COMM. CE COTTERVATION COMM. CEDES, N. K.



RELIERED

CIL MALLA RVATION COMM. BUURS N. M. DIRECTIONS TO :

Hahn-Federal Well #6 Tom Tom San Andres Field Chaves County, New Mexico

From Downtown KENNA, New Mexico

- Go south on caliche road (only south road out of Kenna) for 10 miles to Amoco and Flag-Redfern Oil Company lease signs.
- 2. Turn left at sign and go 1 mile east to "Y" in road, take the left side of the fork and continue for $2\frac{1}{2}$ miles.
- Cross 3 cattleguards, cross the 3rd cattleguard and turn left. (You are now on Flag-Redfern Oil Company's Hahn Federal lease Section 27).
- 4. Go $1\frac{1}{2}$ miles on main travelled road to the Hahn-Federal Well #6.

RECEITO -nil 2 3 1979 V^es OIL CONSERVATION COMM. HOBBS, N. M.

Å,