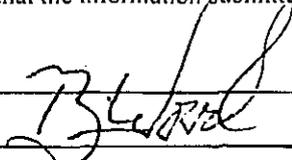


**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance XXX Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_ Yes \_\_\_\_\_ No
- II. OPERATOR: COBALT OPERATING, LLC  
ADDRESS: 3001 NORTH BIG SPRING, SUITE 207, MIDLAND, TX 79705  
CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes XXX No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
- 1. Proposed average and maximum daily rate and volume of fluids to be injected;
  - 2. Whether the system is open or closed;
  - 3. Proposed average and maximum injection pressure;
  - 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  - 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- WARREN 2  
30-025-26953  
SWD; DEVONIAN
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: BRIAN WOOD TITLE: CONSULTANT  
SIGNATURE:  DATE: OCT. 10, 2014  
E-MAIL ADDRESS: brian@permitswest.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

**NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.**

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NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



**INJECTION WELL DATA SHEET**

Tubing Size: 2-7/8" N-80 9.3# Lining Material: INTERNAL PLASTIC COATED

Type of Packer: ARROW AS-1X

Packer Setting Depth: 11,660' - 11,710'

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? (DISPOSAL) \_\_\_\_\_ Yes XXX No

If no, for what purpose was the well originally drilled? \_\_\_\_\_

ORIGINALLY DRILLED AS A MIDWAY; DEVONIAN OIL WELL, THEN A SHIPP; STRAWN OIL WELL, THEN BACK TO A DEVONIAN OIL WELL.

2. Name of the Injection Formation: SAN ANDRES

3. Name of Field or Pool (if applicable): SWD; DEVONIAN (POOL CODE = 96101)

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. YES

STRAWN PERFS 10682' - 10787' (all squeezed with 500 sx in 1998)  
DEVONIAN PERFS 11760' - 11794' & 11808' - 11850' (still open)

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: \_\_\_\_\_

OVER: ABO (8,585') & STRAWN (10,669')

UNDER: NONE IN AREA OF REVIEW

COBALT OPERATING, LLC  
WARREN 2  
2200' FNL & 880' FEL  
SEC. 8, T. 17 S., R. 37 E.  
LEA COUNTY, NEW MEXICO

PAGE 1

30-025-26953

I. Purpose is to convert and deepen an existing 11,875' deep Devonian oil well to a saltwater disposal well. Disposal will be in the Devonian (11,760' - 12,850'). This is the SWD; Devonian Pool (NMOCD pool code 96101).

II. Operator: Cobalt Operating, LLC (OGRID #286255)  
Operator phone number: (432) 682-8686  
Operator address: 3001 North Big Spring, Suite 207  
Midland, TX 79705  
Contact for Application: Brian Wood (Permits West, Inc.)  
Phone: (505) 466-8120

III. A. (1) Lease: Fee  
Lease Size: 80 acres (see Exhibit A for C-102 and map)  
Closest Lease Line: 440'  
Lease: S2NE4 Section 8, T. 17 S., R. 37 E.  
Surface Owner: Kenneth Ivan Goff Trust

A. (2) Surface casing (13-3/8", 48#, H-40, ST&C) was set in 1980 at 378' in a 17-1/2" hole. Casing was cemented to the surface with 250 sacks Halliburton light + 2% CaCl<sub>2</sub> (= weight of 12.7 pounds per gallon & yield of 1.84 cubic feet per sack). That was followed by 100 sacks Class C + 2% CaCl<sub>2</sub> (= weight of 14.8 pounds per gallon & yield of 1.32 cubic feet per sack). An unspecified quantity of cement circulated to the surface.

Intermediate casing (8-5/8", 24# & 32#, K-55) was set at 4,400' in a 12-1/4" hole. Casing was cemented to the surface with 1,400 sacks Halliburton light + 15 pounds of salt per sack + ¼ pound per sack cello flake (= weight of 12.7 pounds per gallon & yield of 1.25 cubic feet per sack). That was followed by 200 sacks Class C + 2% CaCl<sub>2</sub> (=

COBALT OPERATING, LLC  
WARREN 2  
2200' FNL & 880' FEL  
SEC. 8, T. 17 S., R. 37 E.  
LEA COUNTY, NEW MEXICO

PAGE 2

30-025-26953

weight of 14.8 pounds per gallon & yield of 1.32 cubic feet per sack). Forty-one sacks of cement circulated to the surface.

Production casing (5-1/2", 17# & 20#) was set at 11,875' (TD) in a 7-7/8" hole. A DV tool was set at 8,491' and a 2-stage cement job was run. TOC = 2,400'

First stage was cemented with 375 sacks Halliburton light mixed with Class H + 6 pounds per sack KCl + 0.6% Halad-22 + 0.4% CFR-2 + 1/4 pound per sack cello flake (= 12.7 pounds per gallon & 2.0 cubic feet per sack) and 375 sacks Class H with 3 pounds per sack KCl + 0.8% Halad-22 + 0.4% CFR-2 + 1/4 pound per sack cello flake (= 15.6 pounds per gallon & 1.22 cubic feet per sack). Circulated 50 sacks excess.

Second stage was cemented with 1,000 sacks Halliburton light mixed with Class C with 6 pounds per sack KCl + 0.6% Halad-22 + 0.4% CFR-2 + 1/2 pound per sack cello flake (= 12.7 pounds per gallon & 2.0 cubic feet per sack) and 100 sacks Class C neat (= 14.4 pounds per gallon & 1.4 cubic feet per sack).

Will use power swivel and 4" bit to deepen the well to 12,850'. This new segment of the well will be completed open hole.

- A. (3) Tubing will be 2-7/8", N-80, 9.3#, and internally plastic coated. Setting depth will be  $\approx$ 11,735'. (Disposal interval will be 11,760' - 12,850'.)
- A. (4) An Arrow AS-1X packer will be set between 11,660' and 11,710' (50' to 100' above the highest proposed perforation of 11,760').
- B. (1) Injection zone will be the Devonian limestone, which is in the SWD; Devonian Pool (NMOCD pool code number 96101). Estimated fracture gradient is  $\approx$ 0.63 psi per foot.

- B. (2) Injection interval will be 11,760' to 12,850'. The top 11,875' of the well bore is cased. The well will be deepened to 12,850' and the bottom 975' completed open hole.
- B. (3) August 16, 1980 was the spud date. The well was initially completed as a Midway; Devonian oil well. Perforations were from 11,760' to 11,850'. The Devonian was plugged back in 1983 and the well was converted to a Midway; Strawn oil well. Perforations were from 10,682' to 10,787'. The Strawn perforations were squeezed in 1998 and the well was completed for a second time in the Devonian. Devonian perforations were from 11,760' to 11,794' and from 11,808' to 11,850'.

Cumulative production from the Strawn was 301,601 barrels of oil and 680,124 Mcf of gas. The well averaged 3 bopd and 9 Mcf in 1997 (see Exhibit B), its last year of production from the Strawn.

Cumulative production 1998-2014 from the Devonian was 46,637 barrels of oil and 2,684 Mcf of gas (see Exhibit B). It produced a total of 9 barrels of oil in June and a total of 46 barrels in the first 8 months of 2014. It is no longer economical to produce the well. There was no production in July or August 2014.

- B. (4) The Devonian was perforated in 1980 with 304 0.56" shots from 11,760' to 11,850'. These perforations were isolated below a bridge plug set at 10,950' in 1983.

The Strawn was intermittently perforated in 1983 with 93 0.33" shots from 10,682' to 10,787'. The Strawn perforations were squeezed in 1998 with 400 sacks Class H.

The Devonian was perforated in 1997 with 136 0.56" shots from 11,760' to 11,794' and with 168 0.56" shots from 11,808' to 11,850'.

The cased portion of the Devonian will be perforated from 11,760' to 11,875' with 4 shots per foot. Shot diameter will be  $\leq 0.56$ ". The remaining 975' will be completed open hole.

B. (5) Potential oil or gas zones above or below the Devonian are:

Yates (none in Sections 4-9 or 16-18)  
Seven Rivers (none in Sections 4-9 or 16-18)  
Queen (2.08 miles northwest in E-6-17s-37e at 30-025-20895)  
Grayburg (1.53 miles in J-6-17s-37e at 30-025-05403)  
San Andres (1.55 miles north in D-5-17s-37e at 30-025-05399)  
Glorieta (none in Sections 4-9 or 16-18)  
Paddock (1.30 miles north in B-5-17s-37e at 30-025-05400)  
Blinebry (1.74 miles northwest in K-6-17s-37e at 30-025-35039)  
Tubb (none in Sections 4-9 or 16-18)  
Drinkard (1.68 miles northeast in A-4-17s-37e at 30-025-30282)  
Abo (0.54 mile south in O-8-17s-37e at 30-025-21167)  
Wolfcamp (1.15 miles east in A-9-17s-37e at 30-025-29367)  
Penn (none in Sections 4-9 or 16-18)  
Cisco (none in Sections 4-9 or 16-18)  
Canyon (none in Sections 4-9 or 16-18)  
Strawn (produced in this well)  
Atoka (none in Sections 4-9 or 16-18)  
Mississippian (none in Sections 4-9 or 16-18)  
*Devonian (produced in this well)*  
Silurian (none in Sections 4-9 or 16-18)

IV. This is not an expansion of an existing injection project. It is disposal only.

V. Exhibit C shows the 10 wells (1 producing oil + 9 plugged & abandoned) that are within a half-mile radius. Exhibit D shows 234 existing wells (47 producing