



State of Colorado
Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY
RECEIVED
FEB 16 2010
COGCC

EARTHEN PIT REPORT/PERMIT

This form is to be used for both reporting and permitting pits. Rule 903 describes when a Permit with prior approval, or a Report within 30 days, is required for pits. Submit required attachments and forms.

Complete the
Attachment Checklist

FORM SUBMITTED FOR:
 Pit Report Pit Permit

	Oper	OGCC
Detailed Site Plan	✓	
Topo Map w/ Pit Location	✓	
Water Analysis (Form 25)	✓	
Source Wells (Form 26)	✓	
Pit Design/Plan & Cross Sect	✓	
Design Calculations	✓	
Sensitive Area Determ.	✓	
Mud Program		
Form 2A	✓	

OGCC Operator Number: 24461
Name of Operator: Diversified Operating Corporation
Address: 15000 W 6th Ave., Suite 102
City: Golden State: CO Zip: 80401

Contact Name and Telephone:
Bill Warburton
No: 303 384-9611
Fax: 303 384-9612

API Number (of associated well): 05-123-30654-00 OGCC Facility ID (of other associated facility): 413306
Pit Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSW Sec 31 T8N R59W 6th PM
Latitude: 40.61329 Longitude: -104.028465 County: Weld
Pit Use: Production Drilling (Attach mud program) Special Purpose (Describe Use): _____
Pit Type: Lined Unlined Surface Discharge Permit: Yes No
Offsite disposal of pit contents: Injection Commercial Pit/Facility Name: Chalk Pit/Facility No: 31-13
Attach Form 26 to identify Source Wells and Form 25 to provide Produced Water Analysis results.

Existing Site Conditions

Is the location in a "Sensitive Area?" Yes No **Attach data used for determination.**
Distance (in feet) to nearest surface water: N/A ground water: 250' water wells: 1475'
LAND USE (or attach copy of Form 2A if previously submitted for associated well) Select one which best describes land use:
Crop Land: Irrigated Dry Land Improved Pasture Hay Meadow CRP
Non-Crop Land: Rangeland Timber Recreational Other (describe): _____
Subdivided: Industrial Commercial Residential
SOILS (or attach copy of Form 2A if previously submitted for associated well)
Soil map units from USNRCS survey: Sheet No: _____ Soil Complex/Series No: 44
Soils Series Name: Onley Fine Sandy Loam Horizon thickness (in inches): A: 10 ; B: 15 ; C: 60
Soils Series Name: _____ Horizon thickness (in inches): A: _____ ; B: _____ ; C: _____
Attach detailed site plan and topo map with pit location.

Pit Design and Construction

Size of pit (feet): Length: 15' Width: 12' Depth: 10'
Calculated pit volume (bbls): 320 Daily inflow rate (bbls/day): 1
Daily disposal rates (attach calculations): Evaporation: 0.4 bbls/day Percolation: 192 bbls/day
Type of liner material: _____ Thickness: _____
Attach description of proposed design and construction (include sketches and calculations).
Method of treatment of produced water prior to discharge into pit (separator, heater treater, other): _____
Is pit fenced? Yes No Is pit netted? Yes No

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Bill Warburton Signed: Bill Warburton
Title: Petroleum Engineer Date: 02/15/10

OGCC Approved: [Signature] Title: EPS Date: 4/29/10

CONDITIONS OF APPROVAL, IF ANY:

FACILITY NUMBER: 416929

JAK

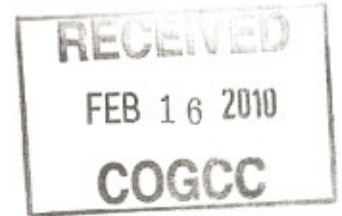
Diversified Operating Corporation

15000 West 6th Avenue, Suite 102

Golden, Colorado 80401

Phone : 303 384-9611

Fax : 303 384-9612



February 15, 2010

Oil and Gas Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

RE: Chalk 31-13
SWSW Sec 31 T8N R59W
API 05-123-30654-00

Dear Sirs:

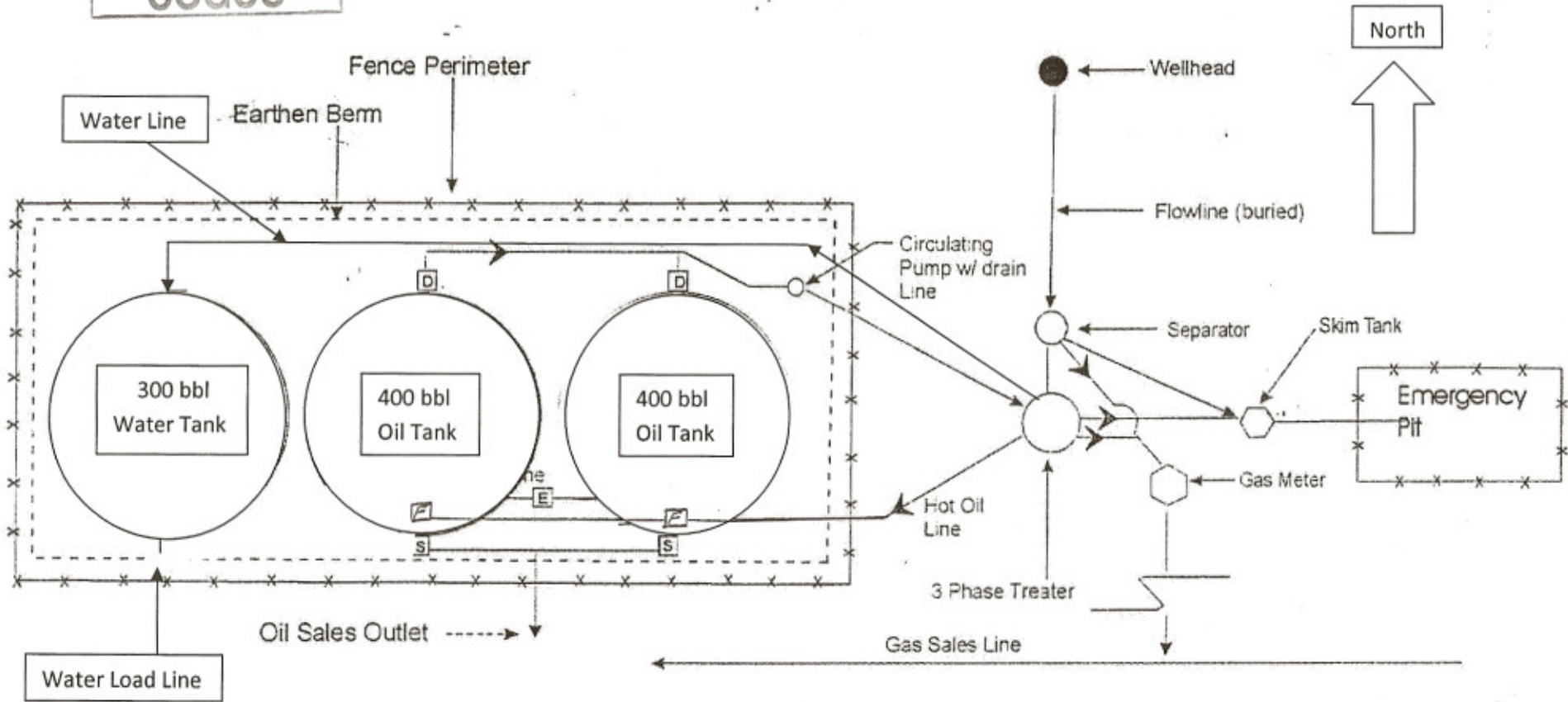
The enclosed application does not include a Form 25. I was unable to find this form on the website and assumed it might not be needed anymore. I have included the water analysis from the lab in its original format. Please advise if you need the water analysis information on Form 25 and where I might find one.

Sincerely,

A handwritten signature in blue ink that reads "Bill Warburton". The signature is fluid and cursive, with a long horizontal stroke at the end.

Bill Warburton

RECEIVED
 FEB 16 2010
 COGCC



SITE FACILITY DIAGRAM
 (Not to scale)

WELL NUMBER & NAME: Chalk 31-13
 LEASE NUMBER:
 LEGAL LOCATION: SWSW Sec 31 T8N R59W
 COUNTY: Weld
 STATE: Colorado

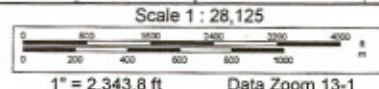
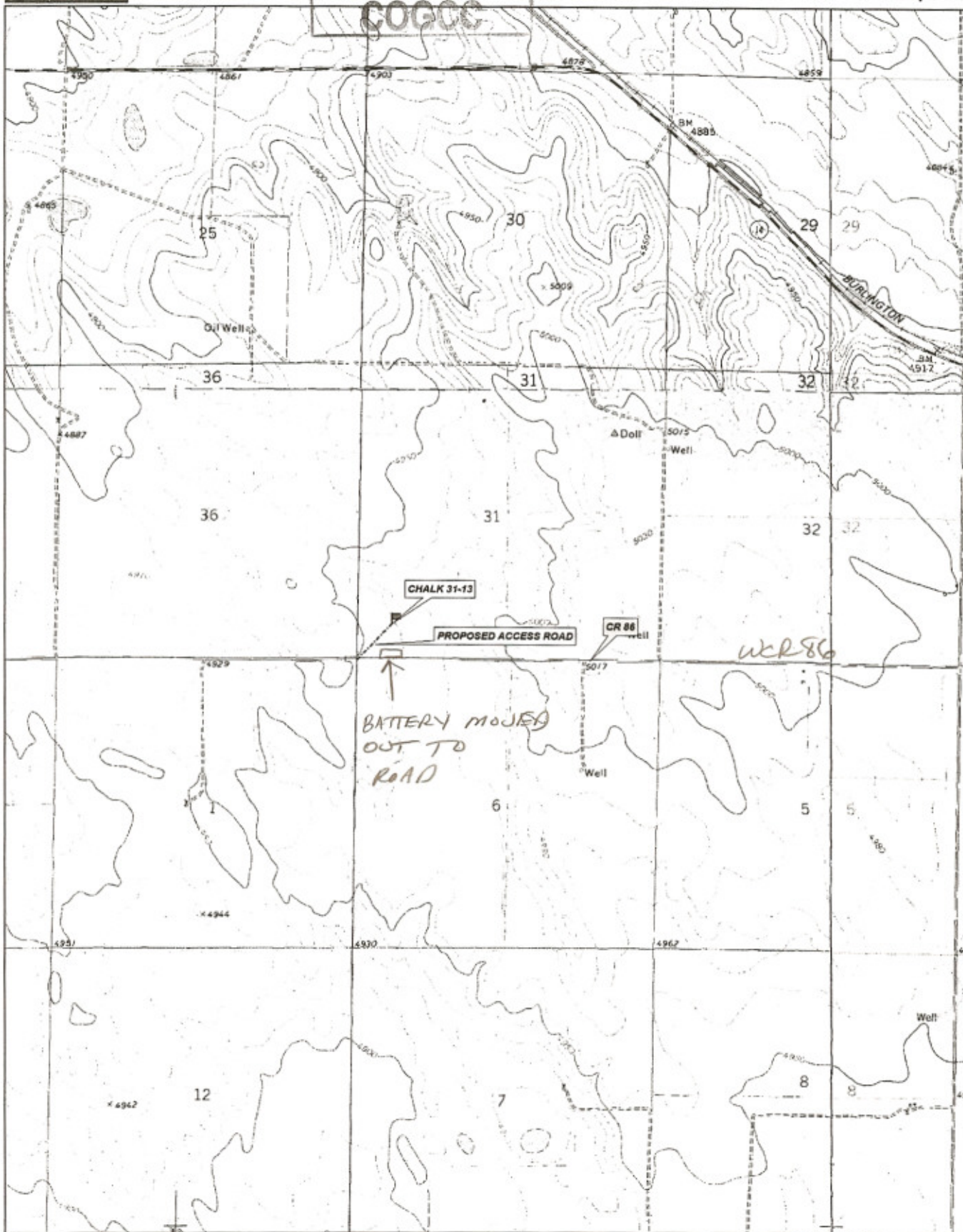
Sealable Valves and Phases:	Production	Sales
"S" Sales	Sealed closed	Open
"F" Hot oil flowline	Open	Sealed Closed
"E" Equalizer Line	Open	Sealed Closed
"D" Drain/recirculating Line	Sealed closed	Sealed Closed

RECEIVED

FEB 16 2010

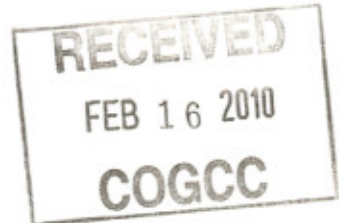
DeLORME

XMap® 4.0



Endura Products Corporation

P.O. Box 3394, Midland, Texas 79702
Phone (432) 684-4233 Fax (432) 684-4277



WATER ANALYSIS

Date **1/26/2010** Endura Rep **Dave Pickering** Code **10116873**
Sampling Point/Date **Heater 1/19/2010** State **Colorado**
Company **Diversified Operating** County **Weld**
Formation Lease **Chalk** Well **#31-13**

DISSOLVED SOLIDS

CATIONS

	mg/l	me/l
Sodium, Na+ (Calc.)	3,772	164
Total Hardness as Ca++	435	0
Calcium Ca++	354	18
Magnesium, Mg+	49	4
Barium, Ba++	0	0
Iron (Total) Fe+++*	3	0

ANIONS

Chlorides, Cl-	6,542	184
Sulfate, SO4-	110	2
Carbonate, CO3-	0	0
Bicarbonates, HCO3-	24	0
Sulfide, S-*	0	0
Total Dissolved Solid	10,854	

OTHER PROPERTIES

pH*	6.370
Specific Gravity, 60/60 F.	1.009
Turbidity	522

SCALING INDICIES

<u>TEMP, F</u>	<u>CA CO3</u>	<u>CASO4*2H2O</u>	<u>CA SO4</u>	<u>BA SO4</u>
80	-1.9238	-1.6832	-1.8301	-28.4296
120	-1.6538	-1.7013	-1.6678	-28.6533
160	-1.3028	-1.6703	-1.4641	-28.8107

PERFORATIONS



State of Colorado
Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY
RECEIVED
FEB 16 2010
COGCC

SOURCE OF PRODUCED WATER FOR DISPOSAL

This form must be completed for any new disposal site and for any change in sources of produced water for an existing disposal site.

Complete the
Attachment Checklist

OGCC Operator Number: <u>24461</u>	Contact Name and Telephone:
Name of Operator: <u>Diversified Operating Corporation</u>	<u>Bill Warburton</u>
Address: <u>15000 W 6th Ave., Suite 102</u>	No: <u>303 384-9611</u>
City: <u>Golden</u> State: <u>CO</u> Zip: <u>80401</u>	Fax: <u>303 384-9612</u>
OGCC Disposal Facility Number: _____	
Operator's Disposal Facility Name: <u>Chalk 31-13</u>	Operator's Disposal Facility Number: _____
Location (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWSW Sec 31 T8N R59W 6th PM</u>	
Address: <u>2 miles east of the intersection of WCR 105 and WCR 86.</u>	
City: _____	State: _____ Zip: _____ County: <u>Weld</u>

	Oper	OGCC
Chemical Analysis of fluid	X	

If more space is required,
attach additional sheet.

Add Source: OGCC Lease No: _____ API No: 05-123-30654-00 Well Name & No: Chalk 31-13
 Operator Name: Diversified Operating Corporation Operator No: 24461

Delete Source: Location: QtrQtr: SWSW Section: 31 Township: 8N Range: 59W Producing Formation: D Sand
 Analysis Attached? Yes No Transported to disposal site via: Pipeline Truck TDS: _____

Add Source: OGCC Lease No: _____ API No: _____ Well Name & No: _____
 Operator Name: _____ Operator No: _____

Delete Source: Location: QtrQtr: _____ Section: _____ Township: _____ Range: _____ Producing Formation: _____
 Analysis Attached? Yes No Transported to disposal site via: Pipeline Truck TDS: _____

Add Source: OGCC Lease No: _____ API No: _____ Well Name & No: _____
 Operator Name: _____ Operator No: _____

Delete Source: Location: QtrQtr: _____ Section: _____ Township: _____ Range: _____ Producing Formation: _____
 Analysis Attached? Yes No Transported to disposal site via: Pipeline Truck TDS: _____

Add Source: OGCC Lease No: _____ API No: _____ Well Name & No: _____
 Operator Name: _____ Operator No: _____

Delete Source: Location: QtrQtr: _____ Section: _____ Township: _____ Range: _____ Producing Formation: _____
 Analysis Attached? Yes No Transported to disposal site via: Pipeline Truck TDS: _____

Add Source: OGCC Lease No: _____ API No: _____ Well Name & No: _____
 Operator Name: _____ Operator No: _____

Delete Source: Location: QtrQtr: _____ Section: _____ Township: _____ Range: _____ Producing Formation: _____
 Analysis Attached? Yes No Transported to disposal site via: Pipeline Truck TDS: _____

Add Source: OGCC Lease No: _____ API No: _____ Well Name & No: _____
 Operator Name: _____ Operator No: _____

Delete Source: Location: QtrQtr: _____ Section: _____ Township: _____ Range: _____ Producing Formation: _____
 Analysis Attached? Yes No Transported to disposal site via: Pipeline Truck TDS: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.
 Print Name: Bill Warburton Signed: Bill Warburton
 Title: Petroleum Engineer Date: 02/15/10

OGCC Approved: _____ Title: _____ Date: _____

CONDITIONS OF APPROVAL, IF ANY:

JAK



RECEIVED

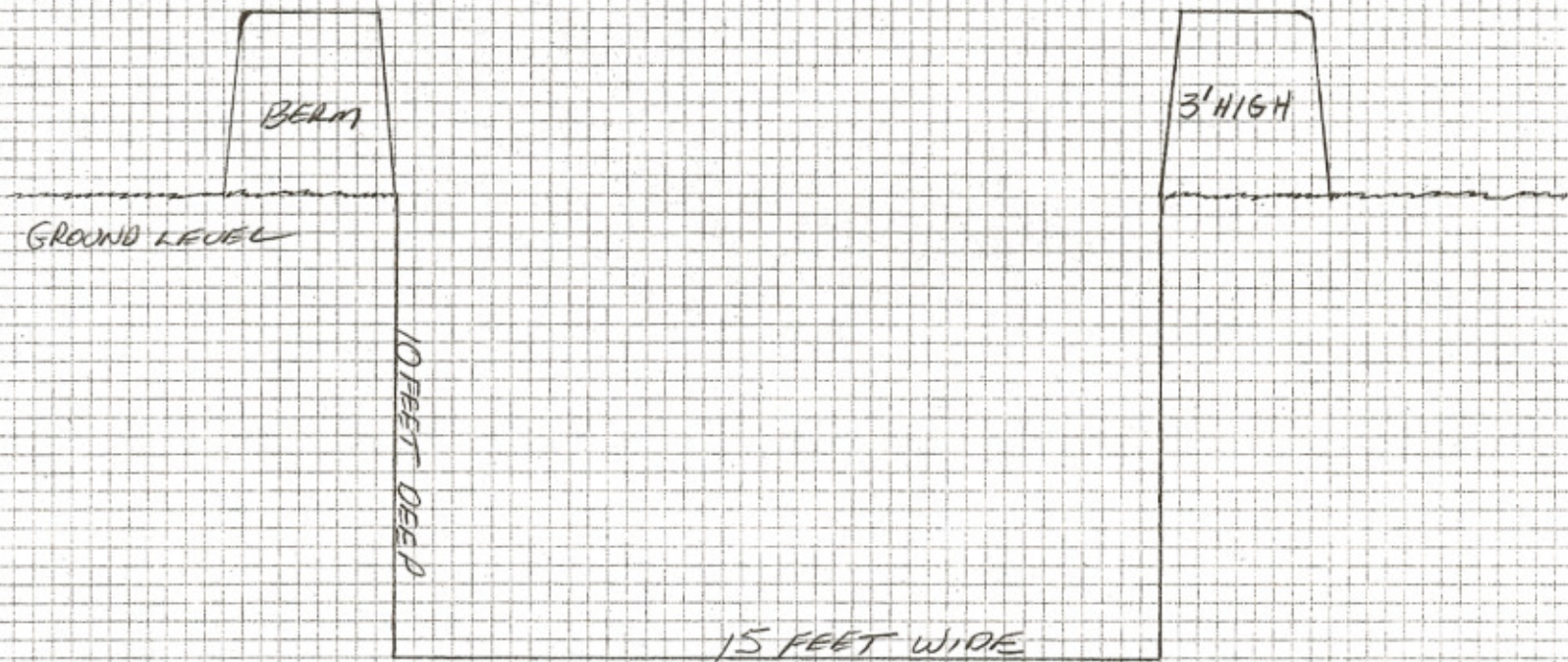
FEB 16 2010

COGCC

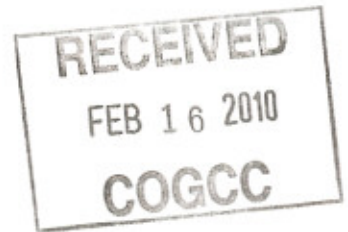
CHALK 31-13

EMERGENCY PIT X SECTION

SWSW SEC 31 T8N R59W WELD COUNTY



UNLINED EARTHEN PIT CALCULATION PER COGCC



Facility Chalk 31-13 Sec 31 T8N R59W

Evaporation Calculation

Evap Rate 55 in/year
Pit size: width 15 ft
 length 12 ft
 depth 10 ft
Pit capacity 320 bbl
Surface area 180 sq ft
Pit evap rate 147 bbl/yr (in/yr/12 in/ft X surf area/5.615cf/bbl)
0.4 bbl/day

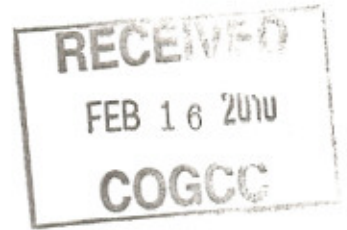
Percolation Calculation

Soil type Olney Fine Sandy Loam
Perm (>60") 6 in/hr avg
Perc rate 385 bbl/day (in/hr avg / 12 in/ft X 400sqft/5.615 bbl/cf X 24 hr/day)

Assume 50% efficiency due to silt clogging and clay swelling

Perc rate 192 bbl/day

Diversified Operating Corporation
15000 W. 6th Ave., #102
Golden, Colorado 80401
wlv@doccolo.com



February 9, 2010

TO: COGCC
FROM: Bill Warburton, DOC Representative
RE: Sensitive Area Determination
Chalk 31-13
SWSW Sec31 T8N R59W Weld County

Box	Decision	Comments
1	Yes	Is discharge water of lesser quality than allowable, per Table 910-1
2	Yes	Is pit underlain by unconfined aquifer
3	Yes	Is hydraulic conductivity of underlying soils <10 ⁻⁶ cm/sec
4	No	Is pit within an local watershed/wellhead protection area
5	No	Is pit located within 1/8 mi from domestic supply well or 1/4 mi from public water supply well
6	No	Is depth to the average high ground water table < 20' from pit bottom

The above COGC "Sensitive Area Determination Decision Tree" was used to determine that the location was not in a sensitive area.