

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ConocoPhillips
Burbank
Mar Vista #7

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

Sant Juan

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
 [A] Location - Spacing Unit - Simultaneous Dedication
 NSL NSP SD

*1) DEFECT, Has it
 about ready to be
 2) This is for the SWD*

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
 DHC CTB PLC PC OLS OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR

[D] Other: Specify _____

- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply
- [A] Working, Royalty or Overriding Royalty Interest Owners
 - [B] Offset Operators, Leaseholders or Surface Owner
 - [C] Application is One Which Requires Published Legal Notice
 - [D] Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 - [E] For all of the above, Proof of Notification or Publication is Attached, and/or,
 - [F] Waivers are Attached

200 MAR 19 A 11:23
 RECEIVED OGD

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Patsy Clugston	<i>Patsy Clugston</i>	Sr. Regulatory Specialist	3/18/10
Print or Type Name	Signature	Title	Date
		Patricia.L.Clugston@conocophillips.com	
		e-mail Address	

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: Burlington Resources Oil & Gas, LP

ADDRESS: P.O. Box 4289, Farmington, NM 87499

CONTACT PARTY: Patsy Clugston PHONE: 505-326-9518

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. (See Attachment A)

IV. Is this an expansion of an existing project? Yes 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. (See Attachment B)

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. (See Attachment C)

VII. Attach data on the proposed operation, including: (See Attachment D)

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, (See Attachment D1)
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.) (See Attachment D2)

*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. (See Attachment E)

IX. Describe the proposed stimulation program, if any. (See wellbore diagram)

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). (See Attachment E)

*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. (See Attachment F)

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. (See Attachment G)

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. (See Attachment H)

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: Patsy Clugston TITLE: Sr. Regulatory Specialist

SIGNATURE: *Patsy Clugston* DATE: March 18, 2010

E-MAIL ADDRESS: Patricia.W.Clugston@conocophillips.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.

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

Side 1

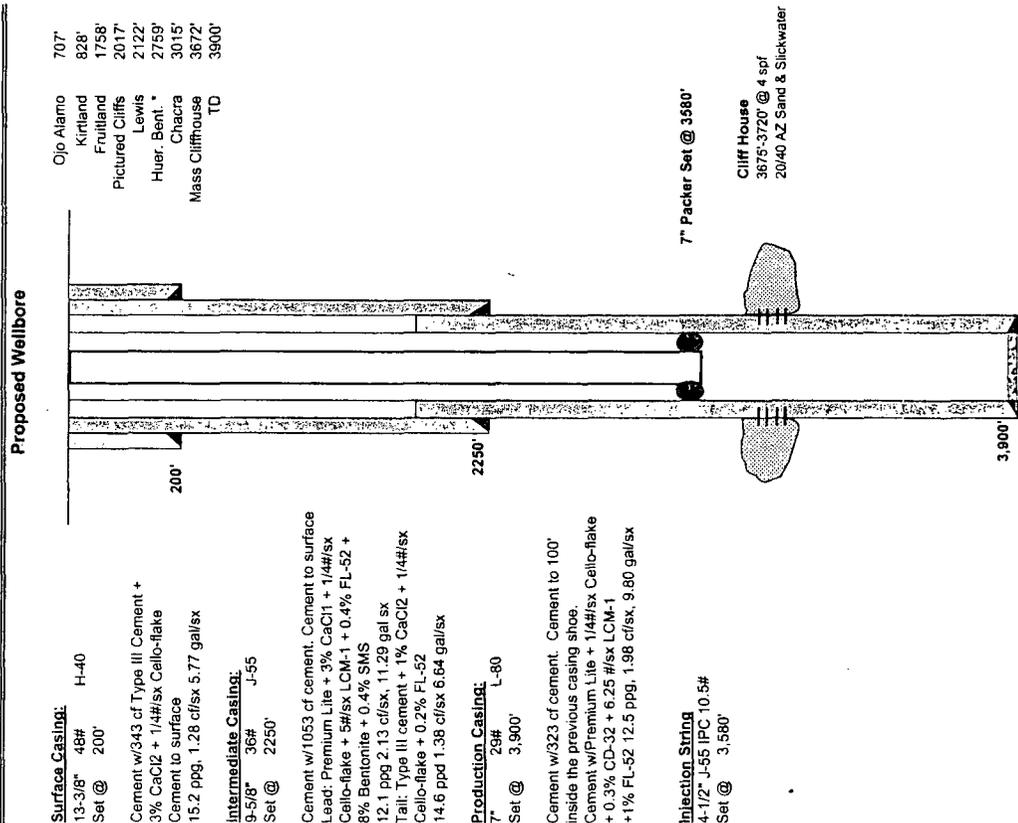
OPERATOR: Burlington Resources Oil & Gas, LP

WELL NAME & NUMBER: Mar Vista SWD #1

WELL LOCATION: 290' FSL & 2490' FWL, Unit N (SESW), T29N, R11W
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA
Surface Casing



Hole Size: 17-1/2"
 Cemented with: sx. Casing Size: 13-3/8", 48#/H-40
 Top of Cement: Surface Method Determined: Circulate
 Intermediate Casing

Hole Size: 12-1/4"
 Cemented with: sx. Casing Size: 9-5/8", 36#, J-55
 Top of Cement: Surface Method Determined: Circulate
 Production Casing

Hole Size: 8-3/4"
 Cemented with: sx. Casing Size: 7", 29# L-80
 Top of Cement: 100' into previous shoe Method Determined: CBL
 Total Depth: 3900'
 Injection Interval
3675' feet To 3717'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 4-1/2" 10.5#, J-55 IPC Lining Material: _____

Type of Packer: 7" Permanent Packer MOD 85 FA 47 with anchor tubing seal assembly

Packer Setting Depth: 3580'
Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? X Yes No
If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: Blanco Mesaverde - Cliffhouse Interval

3. Name of Field or Pool (if applicable): Blanco Mesaverde
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. N/A

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Fruitland - 1758' - 2017'; Pictured Cliffs - 2017' - 2122'; Lewis - 2122' - 2759'; Chacra - 3015' - 3672' Cliffhouse - 3672' - 3717'; Menefee - 3717' - 3861'

Mar Vista SWD #1 - Application for Authorization to Inject

- VII. Attach data on the proposed Operations, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected.
 - a. Maximum Daily Rate – 10,000 BPD; Average Daily Rate expected 6,000 BPD
 2. Whether the system is open or closed.
 - a. This will be a closed site with no open pits; this well will receive water that will be pumped from the existing Vasaly SWD site through a pipeline.
 3. Proposed average and maximum injection pressure
 - a. Maximum and average injection pressures have to be established after the completion and Step Rate Test; a number given now is speculation. Our speculation is 1600 psi maximum, 1300 psi average, but this is a function of rate (all depends on rate and well).
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water;
 - a. Attached are three copies of water analysis taken from the Vasaly Com #2 SWD holding tanks on 12/31/2009, 1/27/2010, and 2/9/2010. This water is characteristic of all the water that is in storage tanks at the Vasaly Com #2 SWD that will be pumped to the Mar Vista #2 SWD site through a pipeline. **Attachment D1**
 5. If injection is for disposal purposes into a zone not productive of oil and 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.)
 - a. Attached are analysis of water that was submitted to the NMOCD from Merrion Oil & Gas on the Pretty Lady 30-11-34 as part of the terms of Order SWD-1034-A for the Pretty Lady #1 SWD - API-30-045-30922 located in NWSE. This sample was pulled 11/14/06. The Pretty Lady #1 is also a Mesaverde SWD as will be the Mar Vista SWD #1. There are no other MV wells in Section 2, 3 & 11 of Section 29N, 11W and Section 35 & 34 of T30N, 11W. Plans are to drill the Mar Vista SWD #1 well and then pull a water sample of the MV interval, analyze the water and submit the results to the NMOCD. **Attachment D2**

Attachment C

Wells within the area of review - tabulation of data

Well Name & Number	Location	Formation	Date Drilled	Depth	Completion	1st zone Perfs	2nd zone perfs	Comments
Murphy A-Com	L, 1650' FSL & 990' FWL, Sec. 2, T29N, R11W	FC/PC	9/23/1953	2051'	7/11/1995	1991' - 2051'	1768' - 1984'	P&A'd 11/8/2004
Lloyd-A	D, 990' FNL & 990' FWL, Sec. 11, T29N, R11W	FC/PC	1/31/1953	1993'	2/23/1953	1934' - 1991'	1702 - 1915'	P&A'd 11/9/2006
Fogelson 2 Com	J, 1550' FSL & 1450' FEL, Sec. 2, T29N, R11W	DK	7/3/1961	6815'	9/12/1961	6522' - 6607'	n/a	
Federal E Com	E, 1850' FNL & 1190' FWL, Sec. 2, T29N, R11W	DK	6/1/1964	6657'	7/1/1964	6466' - 6626	n/a	
MIMS Com	P, 1180' FSL & 1030' FEL, Sec. 2, T29N, R11W	PC	5/18/1959	2216'	5/31/1959	2116' - 2144'	n/a	
Fogelson 11	E, 1650' FNL & 1120' FWL, Sec. 11, T29N, R11W	DK	11/8/1960	6669'	11/26/1960	6364' - 6528'	n/a	

1-USGS
1-D.N. Canfield
1-Int'l., 1-SHS
1-TCA, 1-LDH
1-F

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.3.

LEASE DESIGNATION AND SERIAL NO.

SF-080469

INDIAN ALLOTTEE OR TRIBE NAME

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESVR. Other _____

2. NAME OF OPERATOR
Beta Development Co.

3. ADDRESS OF OPERATOR
234 Petr. Club Plaza, Farmington, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface **1850/N 1190/W**
At top prod. interval reported below
At total depth

UNIT AGREEMENT NAME

FARM OR LEASE NAME

Federal "E"

WELL NO.

1

FIELD AND POOL, OR WILDCAT

Basin Dakota

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

2-29N-11W

NMPM

12. COUNTY OR PARISH
SAN JUAN

13. STATE
New Mexico

15. DATE SPUNDED **5/31/64** 16. DATE T.D. REACHED **6/13/64** 17. DATE COMPL. (Ready to prod.) **7/1/64** 18. ELEVATIONS (OF, RR, RT, GR, ETC.)* **5718.5 Gr.** 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY **0 - 6657** 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* **Dakota 6466 - 6626** 25. WAS DIRECTIONAL SURVEY MADE **Yes**

26. TYPE ELECTRIC AND OTHER LOGS RUN **Induction Electric** 27. WAS WELL CORED **No**

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	244	308'	12 1/4"	175 sx	OK ✓
4 1/2"	10.5#	6657'	7 7/8"	1st stage w/250 sx	
				2nd stage w/200 sx	
				3rd stage w/350 sx	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	30. TUBING RECORD
					SIZE: 2" EUE DEPTH SET (MD): 6616' PACKER SET (MD):

31. PERFORATION RECORD (Interval, size and number)

6576-80, 6596-6601, 6622-26, 6466-72, 6553-57 & 6524-40 w/2 JPF

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	6576-6626	500 gals acid, 20,000# sd, 34,000 gals total wtr.
	6466-6540	37,000# sd, 54,000 gals total

33.* PRODUCTION

DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) **Flowing** WELL STATUS (Producing or shut-in) **Shut-In**

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF	WATER—BBL.	OIL GRAVITY-API (CORR.)
7/10/64	3	3/4"	5,314	4,514	5,387 AOF	3	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) **Waiting on pipeline connection** TEST-WITNESSED BY **C. L. Hoffman**

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED **JOHN T. HAMPTON** TITLE **Manager** DATE **7/13/64**

*(See Instructions and Spaces for Additional Data on Reverse Side)

NO. OF COPIES RECEIVED	3
DISTRIBUTION	
SANTA FE	1
FILE	1
U.S.G.S.	
LAND OFFICE	
OPERATOR	1

NEW MEXICO OIL CONSERVATION COMMISSION



Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fed.

5. State Oil & Gas Lease No.
Various

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER	7. Unit Agreement Name
2. Name of Operator Beta Development Co.	8. Farm or Lease Name Fogelson 2 Com.
3. Address of Operator 125 Petr. Club Plaza, Farmington, New Mexico 87401	9. Well No. 1
4. Location of Well UNIT LETTER <u>J</u> <u>1550</u> FEET FROM THE <u>South</u> LINE AND <u>1450</u> FEET FROM THE <u>East</u> LINE, SECTION <u>2</u> TOWNSHIP <u>29 N</u> RANGE <u>11 W</u> N.M.P.M.	10. Field and Pool, or Wildcat Basin Dakota
15. Elevation (Show whether DF, RT, GR, etc.) 5759' G.L.	12. County San Juan

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input checked="" type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

3-24-69 Rigged up workover unit, removed well head, rigged up B.C.P. Worked stuck donut loose in head, pulled 204 jts 1-1/4" upset J-55 tbg. Rigged up & ran gauge ring to 6650'. Ran bridge plug on wire line - plug was down to 6139', still going in hole when pin came out of Dresser-Atlas derrick sheave, dropped sheave and cut line; dropped 6139' of 7/16" line with collar locator, setting tool & bridge plug in hole. WIH w/2-prong grab on 2-3/8" tbg. Found top of wire line 1140'.

3-25-69 Fished for line 5 hrs, recovered 6139'. Left collar locator, setting tool & bridge plug in hole. Picked up overshot & jars, WIH w/tbg, found top of fish 6752'. Jarred fish 6 times came loose and PCH. Layed down fish & fishing tools, set C.I. bridge plug 6350'. Perf. 4-1/2" csg 4646-50' & 3536-40' w/2 SPF. WIH w/drillable cement retainer on 2-3/8" tbg, set retainer 4358', pumped thru retainer 800, 6 BPM. Cemented w/50 sx 50-50 Pozmix Class C + 4% Gel. Displaced tbg, pressure up to 700. Picked tbg up out of retainer, spotted 150 sx same cement on top of retainer. Pulled 28 stands tbg. (bottom of tbg now 2610'). Circ. out tbg, circ. approx. 3 bbls good cement out. Spotted cement down tbg, closed rams, squeezed w/100 sx same cement, displaced tbg + 2 bbls. Pumped 9 bbls down back side of tbg, pressure up to 900. WCC.

3-26-69 WCC. Pressure down to 100 8 P.M. PCH. WIH w/3-7/8" bit on 2-3/8" tbg, found top of cement 3250'. WCC. until 8 P.M. Pressure tested csg 3250' to 1500' for 30 min, held OK. Urd cement & tested pipe to 1500' & 3500' for 30 min, held OK.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED D. E. Bayts TITLE Superintendent DATE 4-3-69

APPROVED BY [Signature] TITLE SUPERVISOR DIST. #3 DATE APR 4 1969

CONDITIONS OF APPROVAL, IF ANY:

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

<p>1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER</p> <p>2. NAME OF OPERATOR Beta Development Company</p> <p>3. ADDRESS OF OPERATOR 238 Petroleum Plaza, Farmington, NM 87401</p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1550 FSL & 1450' FEL</p> <p>14. PERMIT NO.</p>	<p>5. LEASE DESIGNATION AND SERIAL NO. SF-080469</p> <p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</p> <p>7. UNIT AGREEMENT NAME</p> <p>8. FARM OR LEASE NAME Fogelson</p> <p>9. WELL NO. 1-2</p> <p>10. FIELD AND POOL, OR WILDCAT Basin Dakota</p> <p>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 2 T-29N, R-11W</p> <p>12. COUNTY OR PARISH San Juan</p> <p>13. STATE New Mexico</p>
<p>RECEIVED SEP 20 1985 BUREAU OF LAND MANAGEMENT FARMINGTON RESOURCE AREA</p>	
<p>15. ELEVATIONS (Show whether on surface or subsurface) 5759 GL</p>	

18. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input checked="" type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well History:

8-5/8" casing set @ 246' cement did not circulate
 4 1/2" J-55 10.5# CF&I casing set @ 6815' DV tool @ 2256'
 Cemented 1st stage: 150 sx 6% Gel + 50 sx neat
 Cemented 2nd stage: 100 sx 8% Gel @ 2256'
 Well died 1969 due to hole in casing, found holes in Mesa Verde section
 3650-4800', squeezed with 300 sx 4% Gel, drilled out cement and retainer
 pressure test all casing held o.k.
 Well produced until February 1980 and died.
Test Dakota Formation:
 Rig up work over rig, pull 1 1/4" tubing with model "G" packer, replace bad
 tubing, rerun packer and test Dakota formation (30-60 days), if no damage
 has been done, pull tubing and re-squeeze holes in casing, if well is found
 non-productive due to water and mud migrating into Dakota formation, P & A
 well and re-drill.

RECEIVED
SEP 20 1985

18. I hereby certify that the foregoing is true and correct

SIGNED <u>D. E. Baylter</u>	TITLE <u>Superintendent</u>	DATE <u>September 19, 1985</u>
(This space for Federal or State office use)		
APPROVED BY _____	TITLE _____	DATE <u>SEP 26 1985</u>
CONDITIONS OF APPROVAL, IF ANY:		

*See Instructions on Reverse Side

4-2833
 2-Shally
 1-A.M. Lloyd

1-Hurphy
 1-Intera Oil
 1-File

Budget Bureau No. 42-2224-4
 Approval expires 12-31-60

U. S. LAND OFFICE Santa Fe
 SERIAL NUMBER 285486-1
 LEASE OR PERMIT TO PROSPECT

(UNITED STATES RECEIVED)
 DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY
 JAN 1 1961

U. S. GEOLOGICAL SURVEY
 FARMINGTON, NEW MEXICO

RECEIVED
 JAN 1 9 1961
 L. CON. COM.
 DIST. 3

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY
 Company International Oil Company Address 2010 Republic Bank Bldg., Dallas, Texas
 Lessor or Tract Fogelson Field Basin State New Mexico
 Well No. 1-11 Sec. 11 T. 29N R. 11W Meridian 243N County San Juan
 Location 1650 ft. S. of N. Line and 1120 ft. W. of W. Line of Sec 11 Elevation 5641
 (Denote bearings by N, S, E, W)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.
 Signed _____ Title Consulting Engineer

Date 1-11-61
 The summary on this page is for the condition of the well at above date.
 Commenced drilling 11-8-60 Finished drilling 11-24-60

OIL OR GAS SANDS OR ZONES
 (Denote gas by G)

No. 1, from 6364 to 6566 No. 4, from _____ to _____
 No. 2, from _____ to _____ No. 5, from _____ to _____
 No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from _____ to _____ No. 3, from _____ to _____
 No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Run casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Preferenced		Purpose
							From	To	
6-5/8	26.1	17.5	175						
5	64.0	300							

MUDDING AND CEMENTING RECORD

Run casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
6-5/8	26.1	175	pump plug		
5	64.0	300			

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____
 Adapters—Material _____ Size _____

SHOOTING RECORD

Shot	Shot used	Engine used	Quantity	Date	Depth shot	Depth cleaned out
6364-74	6126-60	4430-48	4910-24	6136-14		
115,688	and 124,400	gal water				

TOOLS USED

Rotary tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet
 Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

Put to producing 12-16-60
 The production for the first 24 hours was _____ barrels of fluid of which _____ % was oil; _____ % emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. _____

If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
 Rock pressure, lbs. per sq. in. 2976 psi @ 4106

EMPLOYEES

Driller _____
 Driller _____
 Engineer _____

FORMATION RECORD

FROM	TO	TOTAL FEET	FORMATION
			Pictured Cliffs 1926'
			Lords 2803'
			Hugo Verde 3586'
			Point Lockout 4324'
			Menaso 4544'
			Gallup 5490'
			Greenhorn 6244'
			Grasseros 6302'
			Dakota 6363'

*ORIGINAL
 Calc Top @ 3650 ft
 4/8/86. 4260 ft
 450 SX
 1/2 in 2 1/2 CMT
 80 ft U.
 4260-3857
 1-11-61
 (8 of each)
 2 of each
 OK*

Fogelson 11 #1

Current

Basin Dakota

1650' FNL & 1120' FWL, Section 11, T-29-N, R-11-W

San Juan County, NM / API #30-045-08568

Lat: N 36° 44' 34.188" / Long: W 107° 57' 56.16"

Today's Date: 1/19/06

Spud: 11/8/60

Comp: 11/24/60

Elevation: 5628' GL

Ojo Alamo @ 603'

Kirtland @ 748'

Fruitland @ 1625'

Pictured Cliffs @ 1925'

Chacra @ 2866'

Mesaverde @ 3497'

Gallup @ 5490'

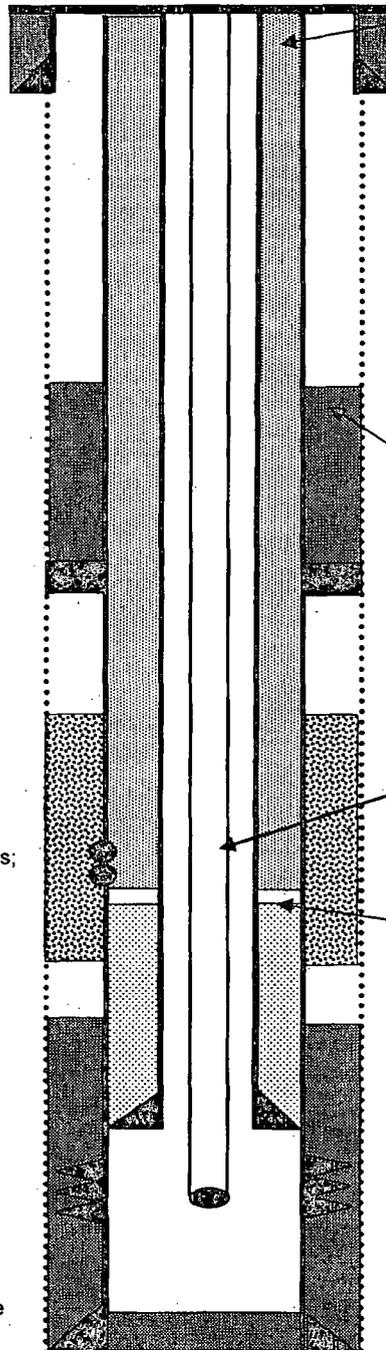
Dakota @ 6360'

12.25" Hole

Perforate @ 3400',
squeeze with 90 sxs;
circulate 4 bbls to
surface

Isolate casing holes
3857' to 4260'; sqz w/
450 sxs (1986)

7.875" Hole



Circulated cement to surface (2005)

8.625" 24#, J-55 Casing set @ 263'
175 sxs cement, Circulated to surface.

Well History

Apr '86: Isolate holes in casing 4260' to 3857'. Squeeze with 450 sxs Type H cement w/8%gel. Tag cement at 3683' and drill out to 4260'. PT casing; ok.

Nov '95: GIH with 4-3/4" bit and bailer; tag at 6496', clean out to 6506'. Land tubing at 6485'.

Dec '98: Change out packer.

Aug '99: Change out packer.

Jul '05: RIH with 4.5" casing liner to 6283' and cement with 100 bbls cement. Run CBL, TOC at 3550'. Perf at 3400' and pump 90 sxs cement to surface.

5.5" TOC @ 1261' (Calc, 75%)

DV Tool @ 2092'
Cemented with 100 sxs (192 cf)

2-3/8" Tubing set at 6502'
(207 joints)

4.5 TOC @ 3550' (CBL)

5.5" TOC @ 5169' (Calc, 75%)

4.5" Casing @ 6283'
Cemented with 20 sxs

Dakota Perforations:
6364' - 6374'
6426' - 6460', 6490' - 6498'
6510' - 6528'

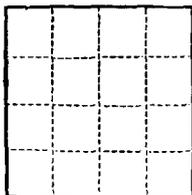
5.5" 15.5# J-55 Casing @ 6669'
Cemented with 200 sxs (347 cf)

TD 6669'

2-Skelly 1-International
1-Lloyd 1-File

FORM 9-331a
(Feb. 1961)

Budget Bureau No. 42-R368.4.
Approval expires 12-31-60.



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Santa Fe
Lease No. RM 03486-A
Unit _____

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....	<input checked="" type="checkbox"/>
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR.....	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....	
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....	
NOTICE OF INTENTION TO ABANDON WELL.....		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

December 8, 1960

Fogelson
Well No. 1-11 is located 1650 ft. from NS line and 120 ft. from WE line of sec. 11

SW/4 NW/4 Sec 11 29N 11W N41E
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Basin Dakota San Juan New Mexico
(Field) (County or Subdivision) (State and Territory)

The elevation of the derrick floor above sea level is 5628 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spud 12 1/2" hole 2:00 AM 11-8-60 Drilled 12 1/2" hole to 263' - ran 8 jts 8-5/8" OD 2 1/2" J-55 8R ST&C csg set at 263' cemented w/175 sx 2 1/2" Cacl. POB 12:15 PM 11-8-60 WOC - Nipped up - press tested csg - held ok.

11-25-60 TD 6670 Ran 204 jts 5 1/2" OD 15.5# J-55 8R ST&C Lone Star Csg TE 6672.21 set at 6669 NKB. Cemented first stage w/150 sx 8 1/2" gal 50 sx neat POB 9:00 AM 11-24-60 - good mud returns while cementing. Cemented second stage through Baker Stage Collar at 2092 w/100 sx 8 1/2" gal POB 11 AM 11-24-60 good mud returns while cementing.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company International Oil Corp.
Address Republic Bank Building
Dallas 1, Texas

Original signed by T. A. Dugan
By _____
Title Consulting Engineer

MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Company: **Champion**

Well Number: Vasaly #2 SWD
Lease: COPC Area 1
Location:
Date Run: 2/2/2010
Lab Ref #: 10-feb-w16682
Sr = 4.11 ppm

Sample Temp: 70
Date Sampled: 1/27/2010
Sampled by: Krystal Gates
Employee #:
Analyzed by: DOM

Dissolved Gases

		Mg/L	Eq. Wt.	MEq/L
Hydrogen Sulfide	(H ₂ S)	.27	16.00	.02
Carbon Dioxide	(CO ₂)	988.00	22.00	44.91
Dissolved Oxygen	(O ₂)	NOT ANALYZED		

Cations

Calcium	(Ca ⁺⁺)	83.21	20.10	4.14
Magnesium	(Mg ⁺⁺)	39.63	12.20	3.25
Sodium	(Na ⁺)	4,562.64	23.00	198.38
Barium	(Ba ⁺⁺)	4.99	68.70	.07
Manganese	(Mn ⁺)	.37	27.50	.01

Anions

Hydroxyl	(OH ⁻)	.00	17.00	.00
Carbonate	(CO ₃ ⁼)	.00	30.00	.00
BiCarbonate	(HCO ₃ ⁻)	458.25	61.10	7.50
Sulfate	(SO ₄ ⁼)	300.00	48.80	6.15
Chloride	(Cl ⁻)	5,243.76	35.50	147.71
Total Iron	(Fe)	7.78	18.60	.42
Total Dissolved Solids		11,688.91		
Total Hardness as CaCO ₃		370.51		
Conductivity MICROMHOS/CM		21,610		

pH 7.400 Specific Gravity 60/60 F. 1.008

CaSO₄ Solubility @ 80 F. 18.99MEq/L, CaSO₄ scale is unlikely

CaCO₃ Scale Index

70.0	-.196	100.0	.154	130.0	.664
80.0	-.066	110.0	.394	140.0	.664
90.0	.154	120.0	.394	150.0	.894

Champion



P.O. Box 4289
Farmington, NM 87499

Bureau of Land Management
Attn: Chip Harraden
1235 La Plata Hwy
Farmington, NM 87401

NMOCD Santa Fe
Attn: Will Jones ✓
1220 South St. Francis Drive
Santa Fe, NM 87505

NMOCD – District 3
Attn: Steve Hayden
1000 Rio Brazos Rd.
Aztec, NM 87410

Mar Vista SWD #1 – Mesaverde Water Quality

Dear Sirs

During our meeting with the COP geologists Chip Head and Bill Koerschner, and the BLM and OCD on April 12, 2010, the matter of Cliffhouse water being of almost fresh water quality, COP was asked to provide additional information. The information requested was copies of more water samples taken from the Mesaverde interval before the Basin #1 SWD was put into operations in 1987.

Attached are copies of 9 different wells water analyses taken from the Mesaverde dating back to as far as 1963. All TDS shown on these reports are over the 10,000 threshold mentioned in our meeting. Also attached is a map showing where these referenced wells are in relations to our proposed well site in Section 2, T29N, R11W.

Please advise if this information fulfills your requirements to supply proof that the Mesaverde in this area has a higher TDS than 10,000. Let us know if there is additional information needed to satisfy our request to drill this well and obtain a waiver from both the BLM and OCD so approval can be obtained by NMOCD in Santa Fe. Call me at 505-326-9518 if further questions arise.

Sincerely,

Patsy Clugston
Sr. Regulatory Specialist



P.O. Box 4289
Farmington, NM 87499

April 14, 2010

NMOCD Santa Fe
Attn: Will Jones
1220 South St. Francis Drive
Santa Fe, NM 87505

Mar Vista SWD #1 – More Information

Dear Will:

COPC met with the BLM and OCD's geologist, Chip Harraden and Steve Hayden to address the two questions both had concerning our Mar Vista SWD #1 permit. Since they had the same questions it seemed probable that you may have the same questions, thus the reason for this letter. One of their questions was how we determined that the Cliffhouse was non-productive in this area and another was the effect this well would have on the other two disposals already in the area, in other words is there enough capacity for all three of us to operate in the area.

During our discussion, models were shown that had been prepared in the planning stages of the well. Our geologists Chip Head and Bill Koerschner prepared a cross section from wells northeast of the proposed well site to the well nearest the location. You can see from the attached documents that the producing sands shown in the wells on the right hand side of the page have good productive sands and then they taper off until it is pinched off completely as you move to the left on the page. You can also see the disposal sand gradually increase as you move to the left.

Also attached is a plot map of the gross thickness of the Cliffhouse upper sand disposal zone. The wells used in the cross section have been highlighted in red on the map. Looking at this map you can see the vast storage capacity of the Upper Cliffhouse disposal sands. These two documents addressed the concerns that both Steve and Chip had and both have expressed that their concerns were adequately addressed.

Let us know if there is additional information needed to approve the Mar Vista SWD #1 Authorization to Inject. If you have questions on the two documents discussed in this letter, please call Bill Koerschner at 505-326-9770. If you need anything else please call me at 505-326-9518. Thanks so much for your help.

Sincerely,

Patsy Clugston
Sr. Regulatory Specialist

Patsy Clugston
Sr. Regulatory Specialist

2010 APR 20 P 1:17

ConocoPhillips Company
3401 East 30th Street
Farmington, NM 87402
(505) 326-9518 phone
(505) 599-4062 fax

If you do not have any objection to this application, please sign and return on executed copy of the attached waiver to the New Mexico Oil Conservation Division, Attn: Richard Ezeanyim, 1220 South St. Francis Drive, Santa Fe, NM 87505, and a copy of the same to the above address.

**WAIVER
MAR VISTA SWD #1**

Bureau of Land Management – hereby waives any objection to the Burlington Resources Oil & Gas, LP, Application for Authorization to Inject into the Mara Vista SWD #1, Unit N, 290 feet FSL & 290' FWL; Sec. 2, T29N, R11W, San Juan County, NM.

Bureau of Land Management

By: _____

Date: _____


Ami Lovato
4/19/10


Jones, William V., EMNRD

From: Clugston, Patricia L [Patsy.L.Clugston@conocophillips.com]
Sent: Wednesday, April 28, 2010 10:15 AM
To: Jones, William V., EMNRD
Subject: Mar Vista SWD #1 AOR information.
Attachments: Mar Vista SWD Lease Map.jpg

Here is the response that was sent to me on your request for us to confirm AOR 1/2 mile ownership. If you have questions, please let me know. Thanks for your help. Patsy

From: Corcoran, Richard
Sent: Wednesday, April 28, 2010 9:49 AM
To: Clugston, Patricia L
Subject: Notice 3.rtf

Patsy, This information is still correct. Attached is a plat which has the Government lease numbers on it. Please note Carol wrote Unit on March 17th. Do you need anything else?
Rich

From: Corcoran, Richard
Sent: Tuesday, March 09, 2010 5:39 PM
To: Clugston, Patricia L
Cc: Hines, Carol
Subject: RE: Notice

Patsy, Within a 1/2 mile radius of the proposed well site (all 40 acre tracts that are 50% or more within the circle), which includes the S/2 of Section 2, and the N/2 of Section 11, T29N-R11W, Burlington owns 100% of the operating rights in the Mesaverde formation except in the SW/4SE/4 of Section 2, which is owned by Unit Petroleum Company. Unit's address is P.O. Box 702500, Tulsa, OK 74170. For notice purposes we should also include the surface owners, who Joni will confirm.

From: Clugston, Patricia L
Sent: Friday, March 05, 2010 8:43 AM
To: Hines, Carol
Subject: RE: Notice

No, just would like to know so I can finalize everything. You will need a copy of the application also. Thanks.

From: Hines, Carol
Sent: Friday, March 05, 2010 8:42 AM
To: Clugston, Patricia L
Subject: RE: Notice

I don't believe we'll need to have any title work done, and Rich should be able to look up the names within a day. Do we have a timeline for when these letters need to go out?

Carol Hines
Associate Landman
505-326-9831

From: Clugston, Patricia L
Sent: Friday, March 05, 2010 8:39 AM
To: Hines, Carol
Subject: RE: Notice

Once that is determined, how long will it take to get the names for notice?

From: Hines, Carol
Sent: Friday, March 05, 2010 8:38 AM
To: Clugston, Patricia L
Subject: RE: Notice

That's great information. I think that should answer our question without having to contact the NMOCD, but I'll email it to Rich and see if he feels the same.

Thank you very much,

Carol Hines
Associate Landman
505-326-9831

From: Clugston, Patricia L
Sent: Thursday, March 04, 2010 4:42 PM
To: Hines, Carol
Subject: Notice

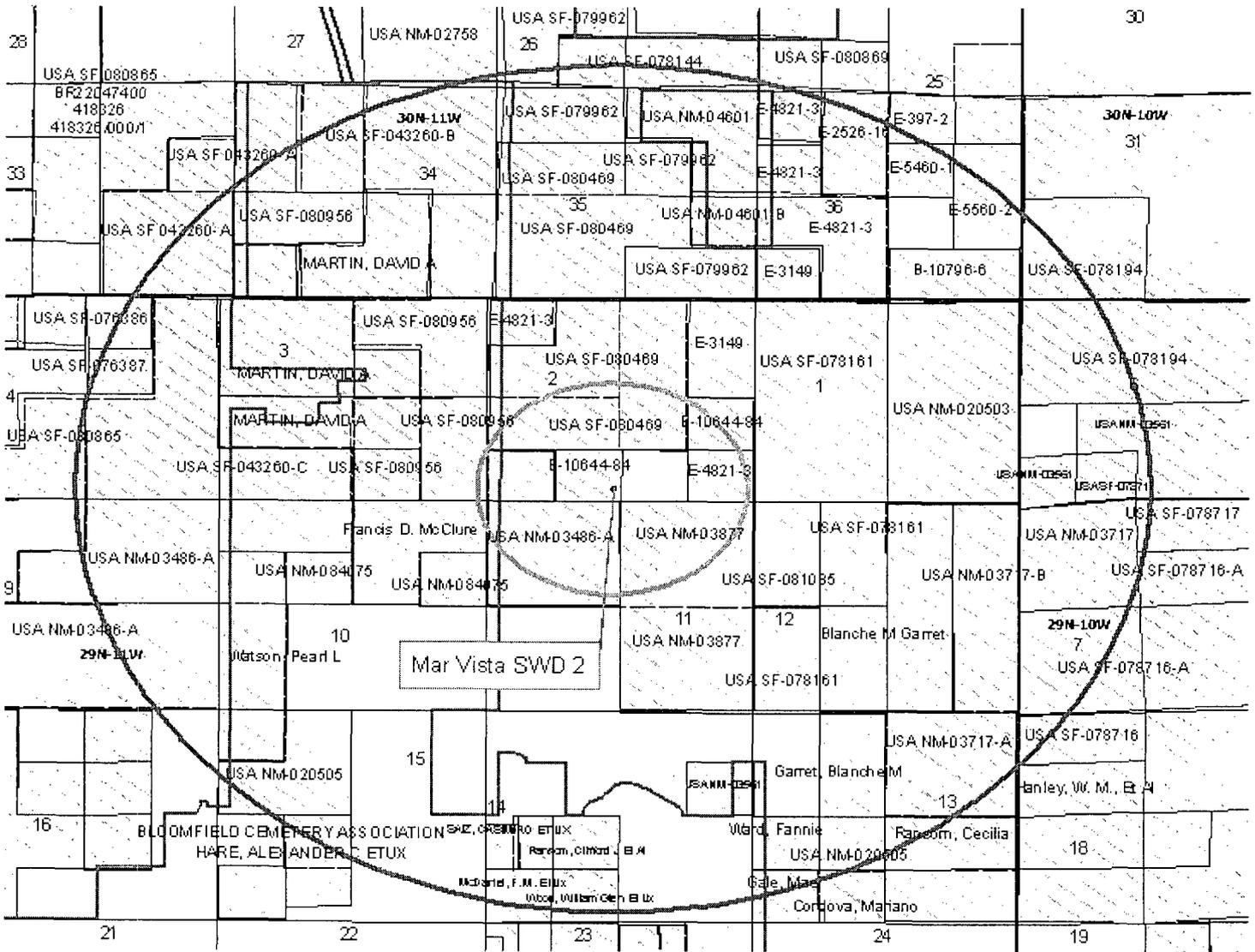
Here is the notice statement.

The applicant shall furnish, by certified or registered mail, a copy of the application to each owner of the land surface on which each injection or disposal well is to be located and to each leasehold operator or other **affected person** within any tract wholly or partially contained within one-half mile of the well.

I found this in the rules and it explains the meaning of affected person. So after you read this can you advise the parties that need notification?

Affected person” means the division designated operator; in the absence of an operator, a lessee whose interest is evidenced by a written conveyance document either of record or known to the applicant as of the date the applicant files the application; or in the absence of an operator or lessee, a mineral interest owner whose interest is evidenced by a written conveyance document either of record or known to the applicant as of the date the applicant filed the application for permit to inject.

Thanks. Patsy



Attachment B

Legend

- 2 Mile Radius.sip
- 1/2 Mile Radius.sip
- Mar Vista SWD 1.sip
- LEASE TRACTS
- CO P
- BR
- P2000_Well_Headers_Formations FORMATION1
- TERTIARY
- M'CI MIENTO
- OUJ ALA MO
- FA RMINGTO N
- KIRTLAND
- FRUITLAND
- FR Ithid Coal
- PICTURED CLIFFS
- CHACRA
- MESAWERDE
- MESAWERDE-DAKOTA
- DAKOTA

155A24 Feet

1" equals 4,453'

GCS Assumed Geographic 1

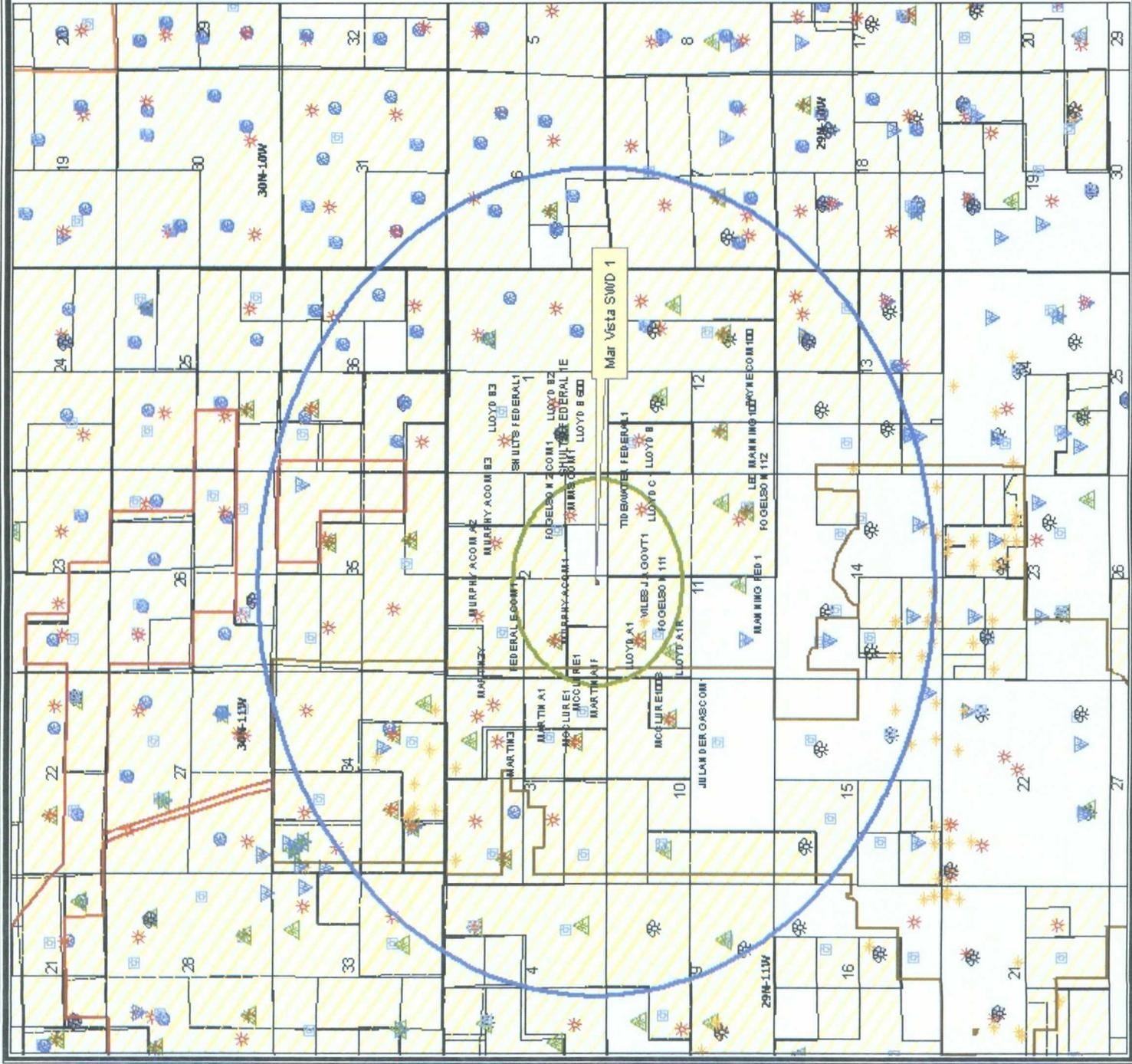


ConocoPhillips
 Up published 000k, Co 1000 Phillips

Mar Vista SWD 1 Well Map

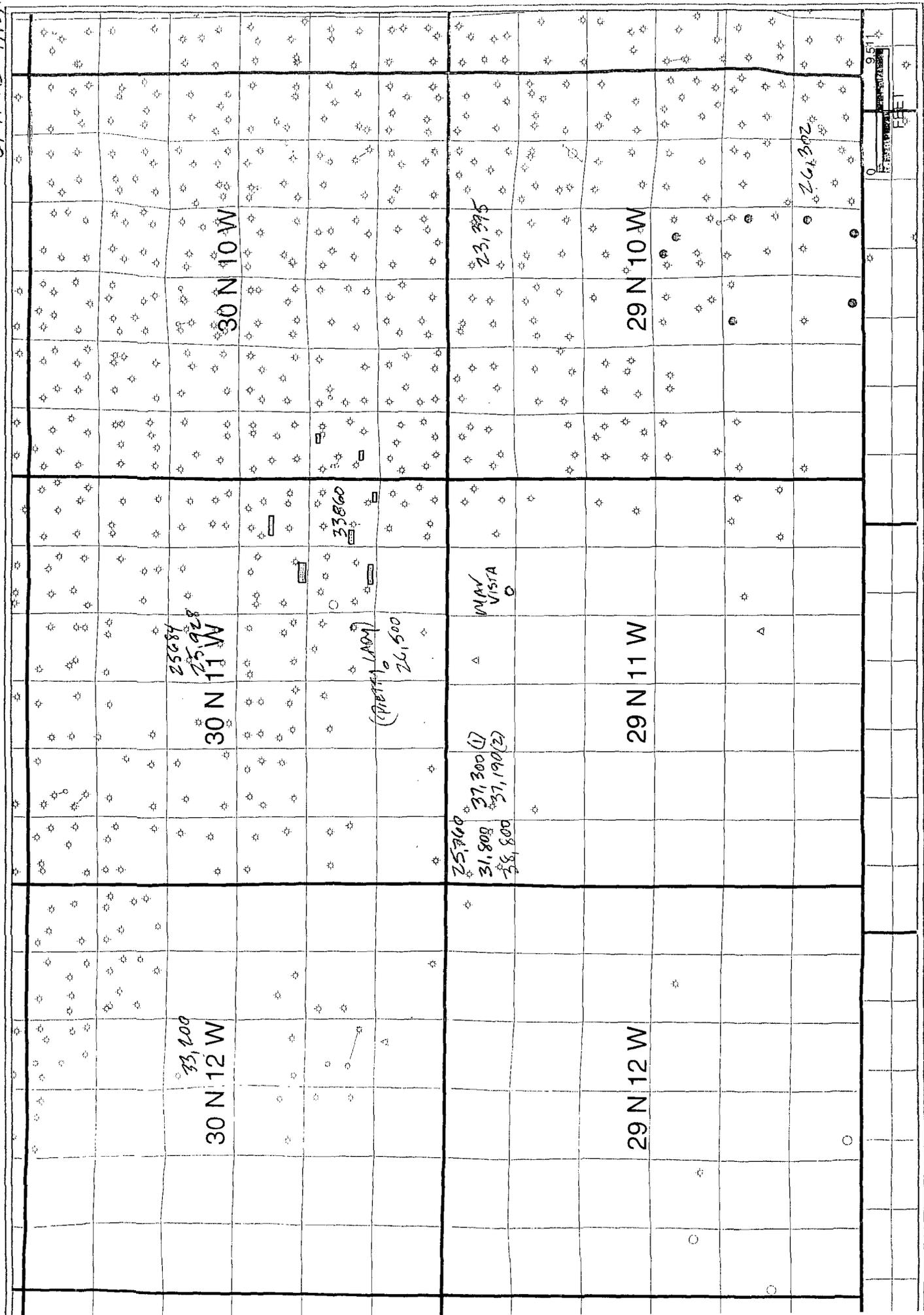
N, Sec. 2, T29N, R11W

Author:	Rich Bird Gault	Date:	2/17/2010
Committed by:	Project File Path: \\s:\data\land_header\land_header\mvp\mvp_1.mxd	Scale:	



PRE - 1989 MESARIDE WATER ANALYSES: TDS (TOTAL DISSOLVED SOLIDS) IN PPM

OF HEAD 4/13/16



EL PASO NATURAL GAS COMPANY
 SAN JUAN DIVISION
 FARMINGTON, NEW MEXICO
 PRODUCTION DEPARTMENT WATER ANALYSES

ANALYSIS NO.: 1-11902-7 DATE: MARCH 17, 1985
 OPERATOR: MERIDIAN OIL (SRO) WELL NAME: COOPER #3E
 LOCATION: I 6-29-11 COUNTY SJ STATE: NM
 FIELD: FORMATION: MV
 SAMPLED FROM: SECURED BY: NOEL ROGERS
 DATE SAMPLED: MARCH 17, 1985 CASING PRESSURE:
 TUBING PRESSURE:
 SURFACE CASING PRESSURE:

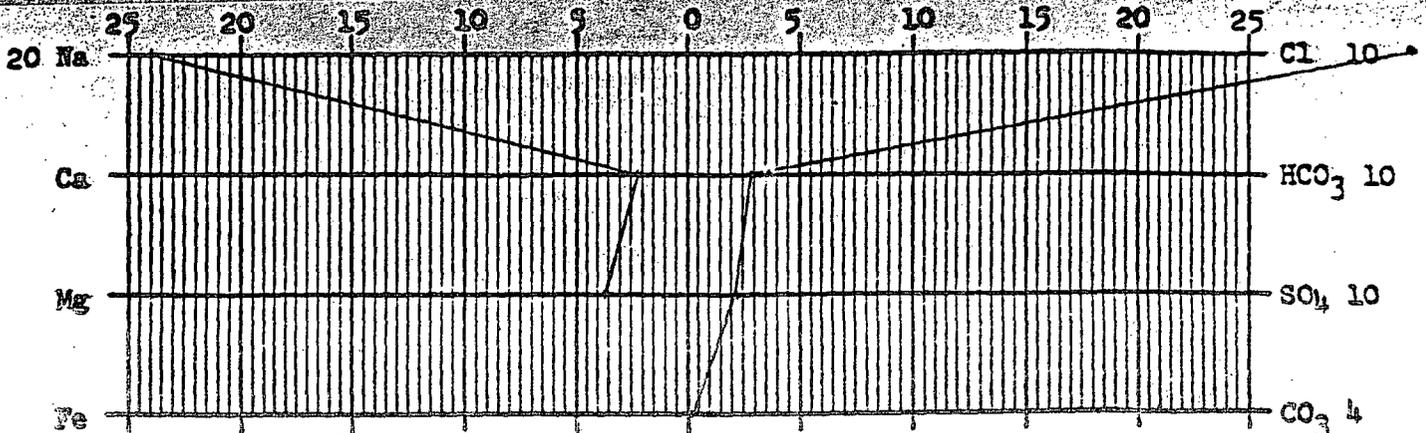
	SAMPLE SIZE	ml.	TIT	AS CaCO3	AS ION	epm
TOTAL ALKALINITY	10		14.4	1440		
P-ALKALINITY	10		0	0		
BICARBONATE	10		14.4	1440	1757	28.81
CARBONATE	10		0	0	TRACE	
CHLORIDE	50 (100:1)		3.5	7.7	15400	434.28
SULFATE					1086	22.59
TOTAL HARDNESS	50		14	280		
CALCIUM	50		5.1	102	41	2.04
MAGNESIUM	50		8.9	178	44	3.58
IRON					NONE DETECTED	
SODIUM (CALCULATED)					11041	480.06
FLUOROCARBONS					PRESENT	
TOTAL DISSOLVED SOLIDS					PRESENT	
					25760	
					8.3	
PH					1.0211 AT 60F	
SPECIFIC GRAVITY					20 OHM-CM AT	
RESISTIVITY					48900 MICROMHOS @ 25C.	
CONDUCTIVITY						

ALL RESULTS EXPRESSED IN PARTS PER MILLION—TRACE IS LESS THAN 0.1 ppm

CC: R. A. ULLRICH
 J. D. EVANS
 J. L. GREEN
 W. F. LORETT
 JOHN BURCHER
 FILE

SANDRA ARAGON

CHEMIST GCR



Scale : ppm

well file



1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

W94-324

Standard A.P.I. Water Analysis Report

Company: MERIDIAN OIL INC.

Date Collected: 10/27/94

Sample ID: COOPER 11

Date Received: 10/27/94

Formation:

Date Analyzed: 10/27-28/94

Location: SW6-29N-11W

County: San Juan State: New Mexico

Collected By: MOI

Analyst: Bill S. / Linda S. Bill

Remarks:

Attention: Ken Johnson

PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
-----------	--------	---------	-----------	--------	---------

Sodium, Na 12,800 mg/l

Chloride, Cl 18,600 mg/l

Potassium, K 270 mg/l

Sulfate, SO4 680 mg/l

Calcium, Ca 102 mg/l

Hydroxide, OH 0 mg/l

Magnesium, Mg 52 mg/l

Carbonate, CO3 0 mg/l

Iron, Fe (total) 35 mg/l

Bicarbonate, HCO3 1,150 mg/l

Sulfide mg/l NOT RUN

Resistivity 0.20 ohm-m

pH 7.8 units

Conductivity 50,200 uS/cm

(@25 Degrees C)

Total Dissolved Solids 31,800 mg/l

Specific Gravity 1.026

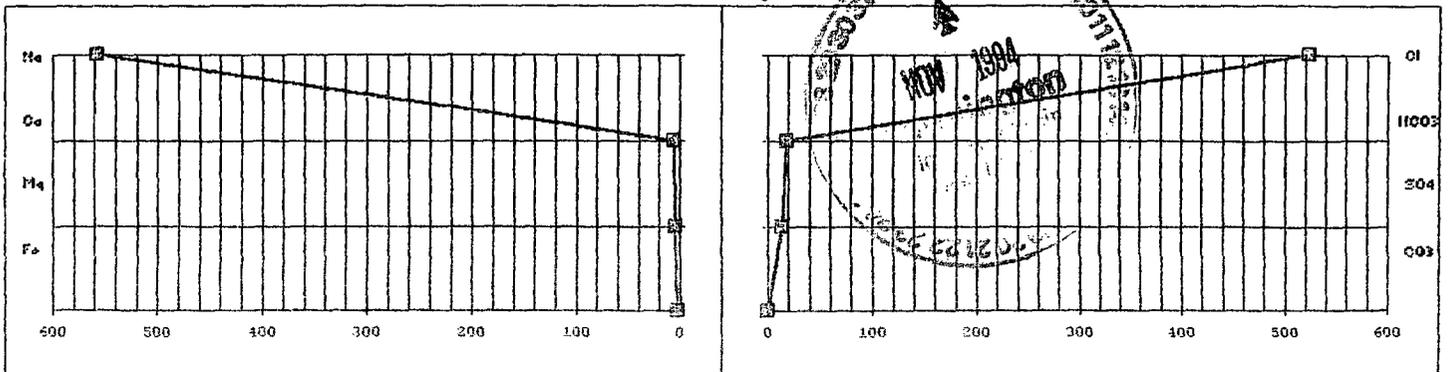
(@60 Degrees F)

Remarks:

Anion/Cation:

978

Stiff Diagram



Scale: Meq/L



1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

W94-329

Standard A.P.I. Water Analysis Report

Company: MERIDIAN OIL INC.
 Sample ID: COOPER 11
 Formation: *MV*
 Location: *NW 10-29N-11W*
 Collected By:

Date Collected: 10/31/94
 Date Received: 11/1/94
 Date Analyzed: 11/1-2/94
 County: San Juan State: New Mexico
 Analyst: Bill S. *Bill*

Remarks:

Attention: Ken Johnson

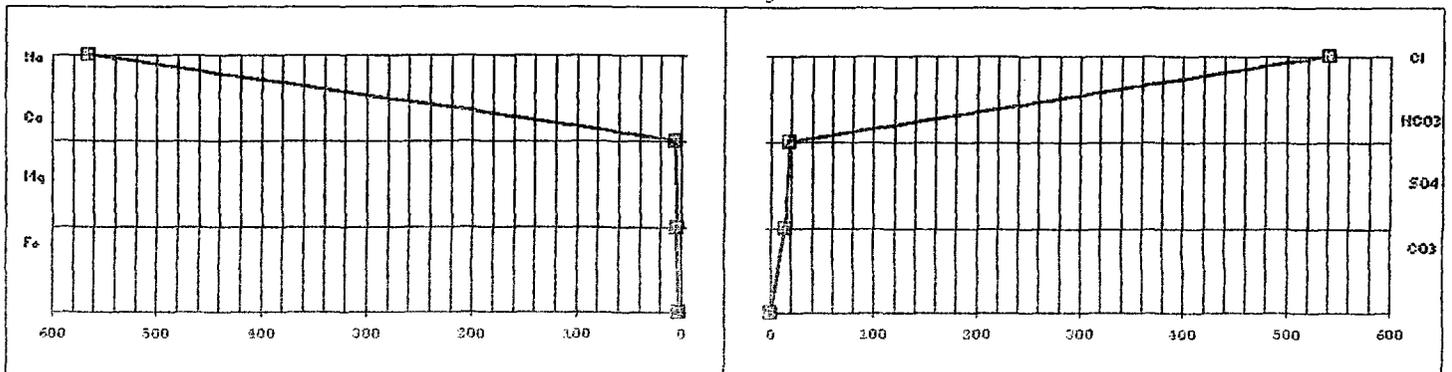
PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	13,000	mg/l	Chloride, Cl	19,170	mg/l
Potassium, K	185	mg/l	Sulfate, SO4	680	mg/l
Calcium, Ca	92	mg/l	Hydroxide, OH	0	mg/l
Magnesium, Mg	55	mg/l	Carbonate, CO3	0	mg/l
Iron, Fe (total)	35	mg/l	Bicarbonate, HCO3	1,150	mg/l
Sulfide		mg/l NOT RUN	Resistivity	0.19	ohm-m
pH	7.5	units	Conductivity	52,300	uS/cm
Total Dissolved Solids	32,200	mg/l	Specific Gravity	1.026	(@60 Degrees F)

Remarks:

Anion/Cation:

99%

Stiff Diagram



Scale: Meq/L

EL PASO NATURAL GAS COMPANY
 SAN JUAN DIVISION
 FARMINGTON, NEW MEXICO
 PRODUCTION DEPARTMENT WATER ANALYSIS

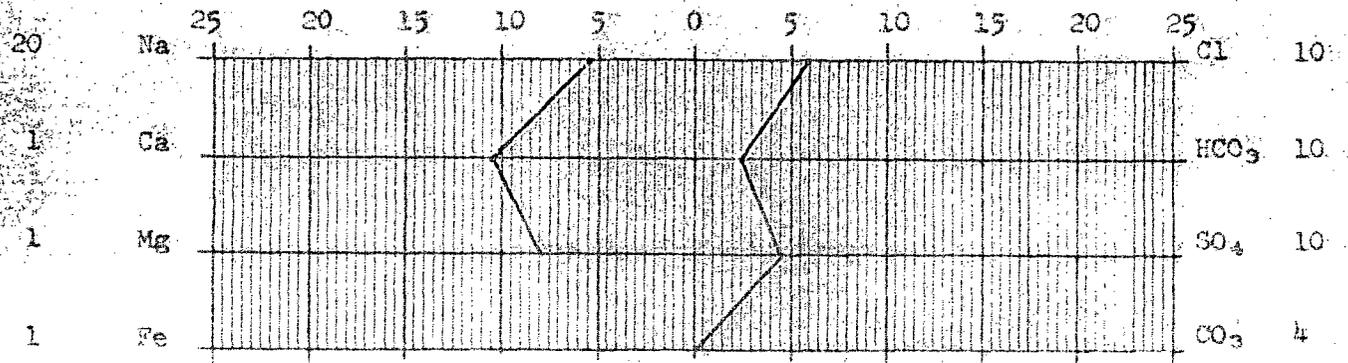
Analysis No. 1-4728 Date 7-10-64
 Operator El Paso Natural Gas Well Name Duff #2
 Location Sec. 5-29N-11W County San Juan State New Mexico
 Field Kutz Formation Mesa Verde
 Sampled From Tubing
 Date Sampled 7-2-64 By Don Adams
 Tubing Pressure _____ Casing Pressure _____ Surface Casing Pressure _____

	ppm	cpm		ppm	cpm
Sodium	2550	111	Chloride	2054	58
Calcium	210	11	Bicarbonate	1535	25
Magnesium	100	8	Sulfate	2240	47
Iron	Present		Carbonate	0	0
H ₂ S	Present		Hydroxide	0	0
			Total Solids Dissolved	<u>37,190</u>	1
			pH	<u>7.7</u>	
			Sp. Gr.	<u>1.036</u>	at <u>60</u> °F
			Resistivity	<u>17</u>	ohm-cm at <u>76</u> °F

- cc: H. P. Logan
 L. M. Parrish, Jr.
 J. E. Ashworth
 E. S. Oberly
 L. D. Calloway
 R. Pritchard (2)
 R. L. Ahrens
 A. H. Viascas
 file

Mc Graw - Ellisbury
 Chemist

Don Adams



EL PASO NATURAL GAS COMPANY
 SAN JUAN DIVISION
 FARMINGTON, NEW MEXICO
 PRODUCTION DEPARTMENT WATER ANALYSIS

Analysis No. 1-6027 Date May 21, 1968
 Operator _____ Well Name _____ Duff #2
 Location Sec. 5-T29N, R 11-W County San Juan State New Mexico
 Field _____ Formation Mesa Verde
 Sampled From Separator Dump
 Date Sampled 4-22-68 By Jim Thrustonson

Tubing Pressure _____ Casing Pressure _____ Surface Casing Pressure _____

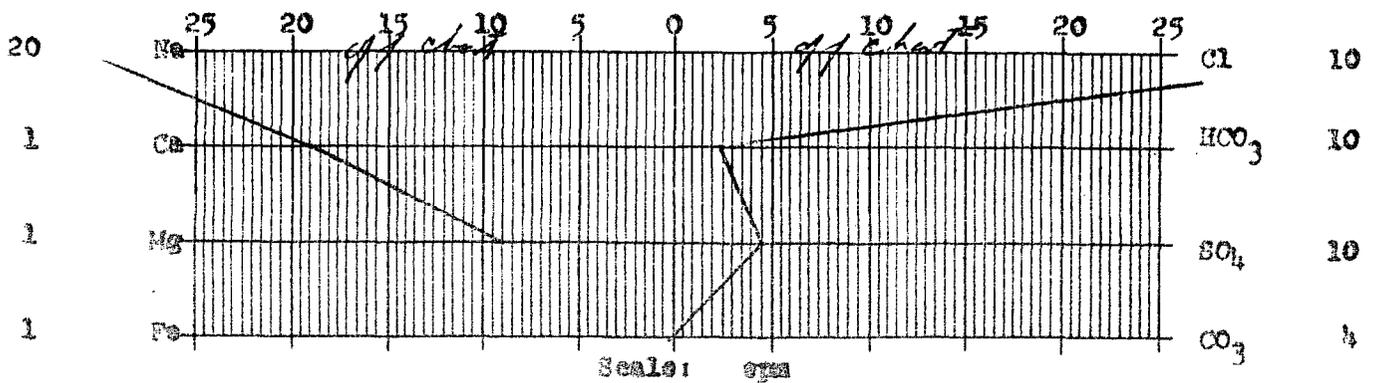
	ppm	eps		ppm	eps
Sodium	<u>13700</u>	<u>597</u>	Chloride	<u>19700</u>	<u>556</u>
Calcium	<u>380</u>	<u>19</u>	Bicarbonate	<u>1500</u>	<u>25</u>
Magnesium	<u>110</u>	<u>9</u>	Sulfate	<u>2160</u>	<u>45</u>
Iron	<u>Present</u>		Carbonate	<u>0</u>	<u>0</u>
H ₂ S	<u>Absent</u>		Hydroxide	<u>0</u>	<u>0</u>

Note: Would not think this to be good for livestock

Total Solids Dissolved 37300
 pH 8.0
 Sp. Gr. 1.033 at 60 °F
 Resistivity 19 ohm-cm at 7

- cc: E. W. Woody L. O. Van Ryan
 R L Ahrens
 J. E. Ashworth
 E. S. Oberly
 Forrest Wood
 W. M. Martin (2) ✓
 A. H. Viescas
 File

R. L. Ellisbury
 Chemist



API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company SOUTHLAND ROYALTY		Sample No. 1	Date Sampled 4-30-84	
Field	Legal Description Sec. 3, T29N, R10W		County or Parish San Juan	State NM
Lense or Unit Hare	Well 15M	Depth	Formation Mesa Verde	Water, B/D water
Type of Water (Produced, Supply, etc.) produced		Sampling Point swab line - 2" off bottom		Sampled By DH

DISSOLVED SOLIDS

CATIONS	mg/l	me/l	ppm
Sodium, Na (calc.)	8245.1	358.64	
Calcium, Ca	176.0	8.78	
Magnesium, Mg	143.3	11.78	
Barium, Ba			
potassium, K ⁺	58.0	1.48	

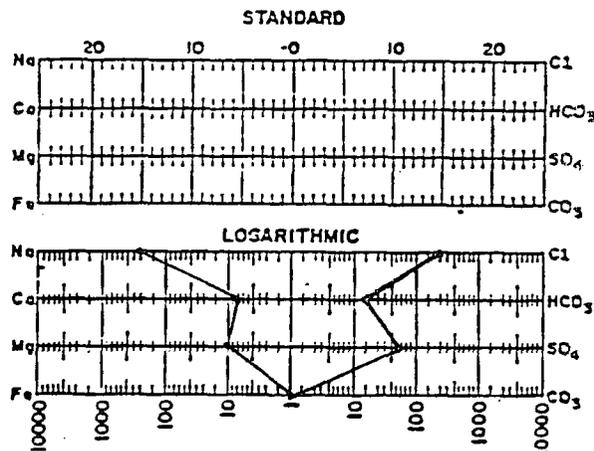
OTHER PROPERTIES

pH	7.0
Specific Gravity, 60/60 F.	1.021
Resistivity (ohm-meters) 73F.	0.31

ANIONS

Chloride, Cl	10,599.9	299.00
Sulfate, SO ₄	3,000.0	62.46
Carbonate, CO ₃		
Bicarbonate, HCO ₃	1,173.0	19.22

WATER PATTERNS — me/l



Total Dissolved Solids (calc.) 23,395.3

Iron, Fe (total) 0

Sulfide, as H₂S 0

REMARKS & RECOMMENDATIONS:

The largest portion of this sample is free water. However, approximately 40% is a water wet emulsion stabilized by FeS and formation fines.

Soluble in 15% HCL

ANALYST: Clay Terry

THE WESTERN COMPANY OF NORTH AMERICA, FARMINGTON, N.M.
(505) 327-6222

Please refer any questions to: Clay Terry, District Engineer or Tom Burris, Field Engineer.

FARMINGTON, NEW MEXICO

LABORATORY WATER ANALYSIS

Report No: _____

Amoco Production

Date: 8/6/82

501 Airport Dr.

Farmington, NM 87401

Attn: Mr. D. Ramsey

MV

This report is the property of National Cementers Corp. and neither it nor any part thereof is to be published or disclosed without first securing the express approval of laboratory management; it may, however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from National Cementers Corporation.

Submitted By: D. Ramsey

Date Received: August 4, 1982

Well No: Johnson Gas Com "E" #1

Depth: Unknown

Formation: Unknown

Location: NW/4, Sec15, T30N, R12W--Sampled 8/2/82 M. Russel

Resistivity	<u>0.21</u>	ohms/m ² /m at 70°F
Temperature	<u>77°F</u>	
Specific Gravity (Sp.Gr.)	<u>1.023</u>	
Total Dissolved Solids	<u>6.5</u>	parts per million*
Calcium (Ca ⁺⁺)	<u>33,200</u>	parts per million
Magnesium (Mg ⁺⁺)	<u>20</u>	parts per million
Chlorides (Cl ⁻)	<u>19,560</u>	parts per million
Carbonates (CO ₃ ⁻⁻)	<u>0</u>	parts per million
Bicarbonates (HCO ₃ ⁻)	<u>753</u>	parts per million
Sulfates (SO ₄ ⁻⁻)	<u>22</u>	parts per million
Iron (Fe ⁺⁺⁺)	<u>Present</u>	parts per million
Potassium (K ⁺)	<u>nil</u>	parts per million
Sodium (Na ⁺) (Difference)	<u>12,291</u>	parts per million
Stability Index (SI)	<u>not required</u>	

REMARKS: _____

* indicates parts per million by weight; uncorrected for Specific Gravity

LABORATORY ANALYST:

Respectfully submitted,

National Cementers Corporation

Clarion A. Cochran

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

EXHIBIT NO. 2

CASE NO. 7949

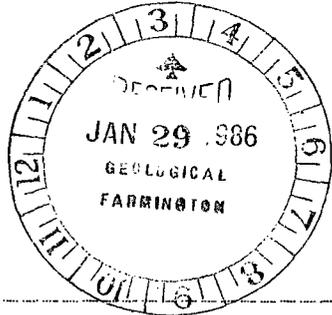
EL PASO NATURAL GAS COMPANY
 SAN JUAN DIVISION
 FARMINGTON, NEW MEXICO
 PRODUCTION DEPARTMENT WATER ANALYSES

MV

ANALYSIS NO.: 1-11836
 OPERATOR: MERIDIAN OIL
 LOCATION: 15-30-11
 WELLD: KUTZ
 SAMPLED FROM: BLOW-LINE (MORNING)
 DATE SAMPLED: 12/9/85
 JOBBING PRESSURE:
 SURFACE CASING PRESSURE:

DATE: JANUARY 22, 1986
 WELL NAME: MORRIS AP #13A
 COUNTY SAN JUAN STATE: NEW MEXICO
 FORMATION: MESA VERDE
 PROBABLY BREAKDOWN ACID.
 SECURED BY: LYNN MIEBOS
 CASING PRESSURE:

	SAMPLE SIZE	ml. TIT	AS CaCO3	AS ION	epm
TOTAL ALKALINITY	50	2.1	42		
ALKALINITY	50	0	0		
CARBONATE	50	2.1	42	51	0.84
BICARBONATE	50	0	0	0	0.00
CHLORIDE	2	17.6		8900	248.16
SULFATE				9728	202.34
TOTAL HARDNESS	5	13.9	2780		
CALCIUM	5	9.2	1840	736	36.80
MAGNESIUM	5	4.7	940	230	18.93
IRON				PRESENT	
TOTAL TDS (CALCULATED)				9099	395.61
HYDROCARBONS					
TOTAL DISSOLVED SOLIDS				25684	
SPECIFIC GRAVITY			1.0208 AT 68F		
RESISTIVITY			28 OHM-CM AT 25C		
CONDUCTIVITY			35200 MICROMHOS @ 25C.		



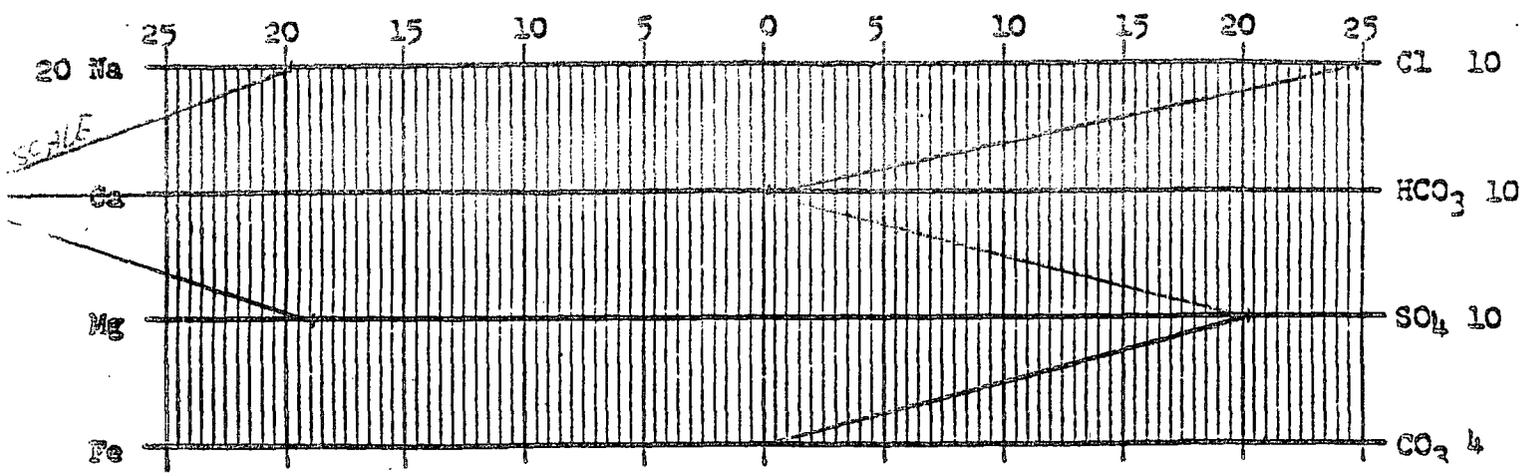
25684
4.7

ALL RESULTS EXPRESSED IN PARTS PER MILLION-TRACE IS LESS THAN 0.1 ppm

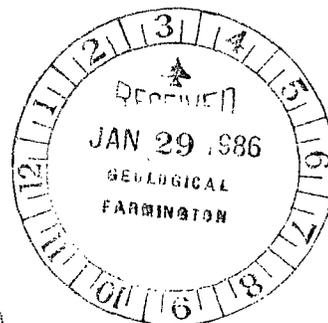
R. A. ULLRICH
 J. D. EVANS
 J. L. GREEN
 W. F. LORETT
 FILE

DENNIS BIRD

CHEMIST *GCK*



EL PASO NATURAL GAS COMPANY
 SAN JUAN DIVISION
 FARMINGTON, NEW MEXICO
 PRODUCTION DEPARTMENT WATER ANALYSES



ANALYSIS NO.: 1-11837
 OPERATOR: MERIDIAN OIL
 LOCATION: 15-30-11
 FIELD: KUTZ
 SAMPLED FROM: BLOW-LINE (AFTERNOON) PROBABLY BREAKDOWN ACID.
 DATE SAMPLED: 12/9/85
 DRIBBING PRESSURE:
 SURFACE CASING PRESSURE:

DATE: JANUARY 22, 1986
 WELL NAME: MORRIS A #13A
 COUNTY SAN JUAN STATE: NEW MEXICO
 FORMATION: MESA VERDE
 SECURED BY: LYNN MIEBOS
 CASING PRESSURE:

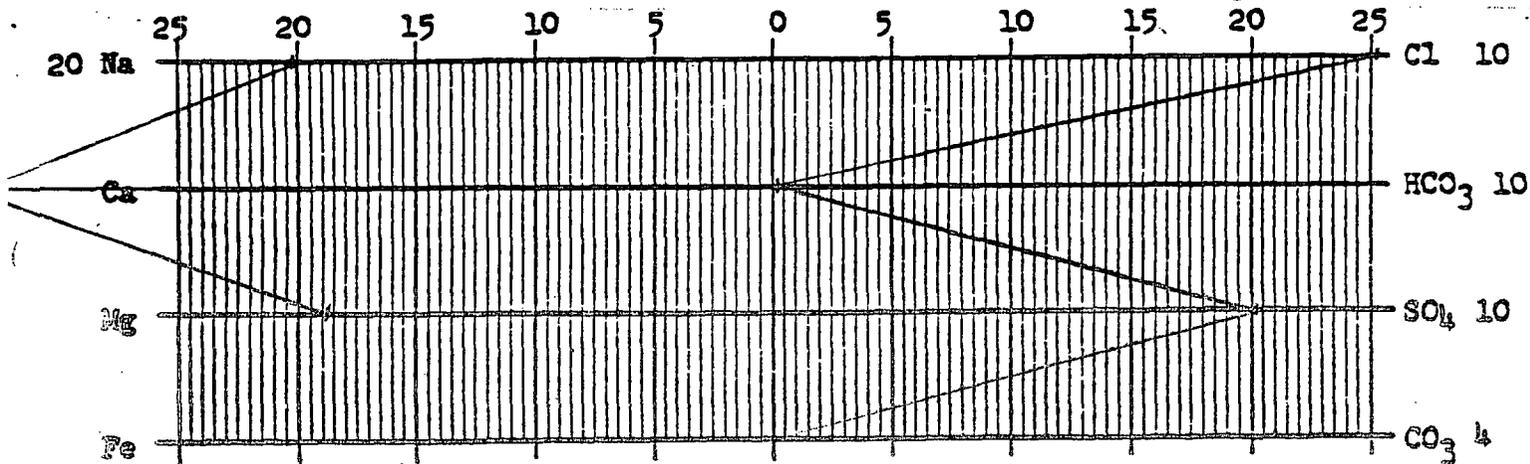
	SAMPLE SIZE	ml. TIT	AS CaCO3	AS ION	epm
TOTAL ALKALINITY	50	6.4	128		
ALKALINITY	50	0	0		
BICARBONATE	50	6.4	128	156	2.56
CARBONATE	50	0	0	0	0.00
CHLORIDE	2	17.8		8900	250.98
SULFATE				9641	200.53
TOTAL HARDNESS	5	12.9	2580		
CALCIUM	5	8.2	1640	656	32.80
MAGNESIUM	5	4.7	940	230	18.93
IRON				PRESENT	
SYNTHETIC TOTAL HARDNESS (CALCULATED)				9254	402.34
HYDROCARBONS					
TOTAL DISSOLVED SOLIDS				25928	5.01
SPECIFIC GRAVITY			1.0217 AT 67F		
RESISTIVITY			28 OHM-CM AT 25C		
INDUCTIVITY			35600 MICROMHOS @ 25C.		

ALL RESULTS EXPRESSED IN PARTS PER MILLION-TRACE IS LESS THAN 0.1 ppm

BY: R. A. ULLRICH
 J. D. EVANS
 J. L. GREEN
 W. F. LORETT
 FILE

DENNIS BIRD

CHEMIST GCK



Lynn
Central

U.S. GEOLOGICAL SURVEY
SALINITY DIVISION
SARASOTA, FLORIDA
FARMINGTON, NEW MEXICO
PRODUCTION DEPARTMENT WATER ANALYSES

ANALYSIS NO.: 1-12093
 OPERATOR: MERIDIAN OIL
 LOCATION: 25-30-11
 FIELD: CEDAR HILL 36... WY
 SAMPLED FROM: TUBING
 DATE SAMPLED: 10-27-86
 TUBING PRESSURE:
 SURFACE CASING PRESSURE:

DATE: NOVEMBER 12, 1986
 WELL NAME: PAYNE #8
 COUNTY SAN JUAN STATE: NEW MEXICO
 FORMATION: MESA VERDE
 SECURED BY: LOREN FOTHERGILL
 CASING PRESSURE:

	SAMPLE SIZE	ml. TIT	AS CaCO3	AS ION	epm
TOTAL ALKALINITY	10	18	1800		
P ALKALINITY	10	0	0		
BICARBONATE	10	18	1800	2196	36.01
CARBONATE	10	0	0	0	0.00
CHLORIDE	3	22.8		7600	214.32
SULFATE				11638	242.07
TOTAL HARDNESS	10	10.2	1020		
CALCIUM	10	7.7	770	306	15.40
MAGNESIUM	10	2.5	250	61	5.00
IRON				PRESENT	
SODIUM (CALCULATED)				10655	471.97
H2S					
HYDROCARBONS				PRESENT	
TOTAL DISSOLVED SOLIDS				33860	
pH				7.4	
SPECIFIC GRAVITY			1.0279 AT 74F		
RESISTIVITY			21 OHM-CM AT 25C		
CONDUCTIVITY			48600 MICROMHOS @ 25C.		

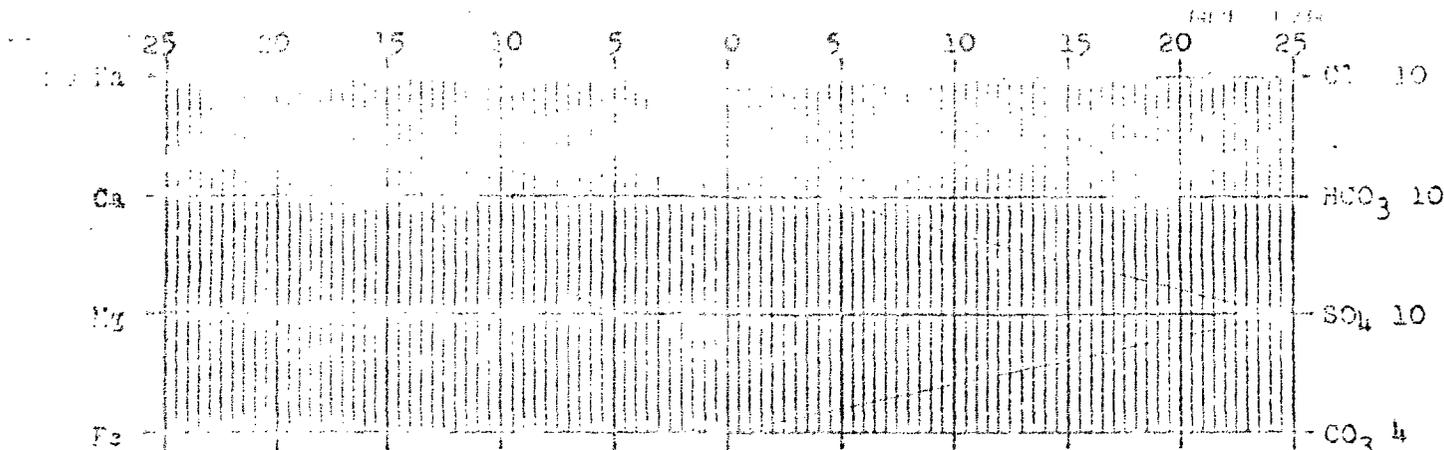
ALL RESULTS EXPRESSED IN PARTS PER MILLION-TRACE IS LESS THAN 0.1 ppm

cc: R. A. ULLRICH
 J. D. EVANS
 J. L. GREEN
 W. F. LORETT
 FILE

BENJAMIN FIELD

CHEMIST CCK

@ Mex. fm team 12... R₁₂ = 13



EL PASO NATURAL GAS COMPANY
 SAN JUAN DIVISION
 FARMINGTON, NEW MEXICO
 PRODUCTION DEPARTMENT WATER ANALYSIS

Lysis No. 1-4197 Date APRIL 25, 1963
 Operator PUBCO Well Name PUBCO FEDERAL NO. 6-B
 Location 990/N 1650/E 6-29-11 County SAN JUAN State NEW MEXICO
 Field UNDESIGNATED Formation CLIFF HOUSE
 Sampled From SEPARATOR
 Date Sampled APRIL 23, 1963 By DICK VILLRICH
 Tubing Pressure _____ Casing Pressure _____ Surface Casing Pressure _____

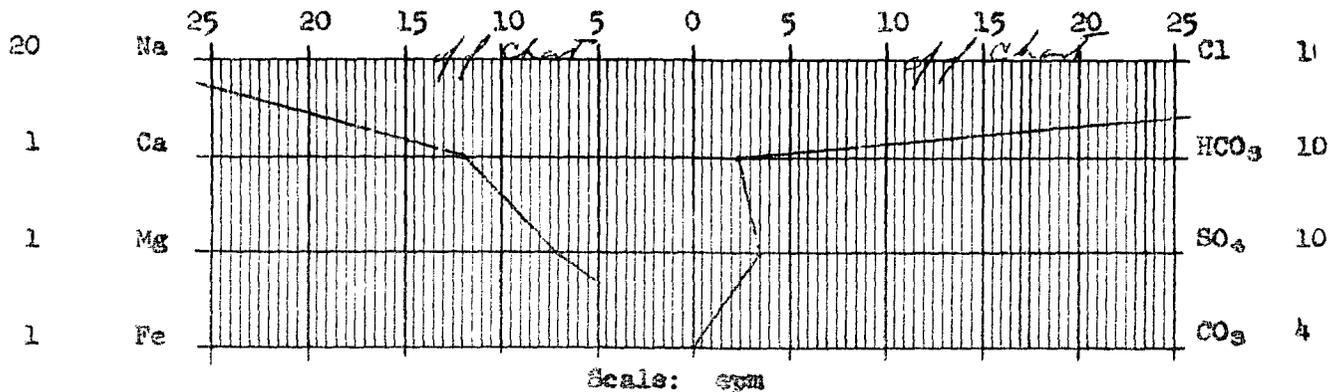
	ppm	epm
Sodium	<u>13800</u>	<u>602</u>
Calcium	<u>235</u>	<u>12</u>
Magnesium	<u>80</u>	<u>7</u>
Iron	<u>Present</u>	
H ₂ S	<u>Absent</u>	

	ppm	epm
Chloride	<u>19400</u>	<u>547</u>
Bicarbonate	<u>2140</u>	<u>35</u>
Sulfate	<u>1820</u>	<u>38</u>
Carbonate	<u>0</u>	<u>0</u>
Hydroxide	<u>0</u>	<u>0</u>

Total Solids Dissolved 38800
 pH 7.25
 Sp. Gr. 1.038 at 60 °F.
 Resistivity 18 ohm-cc at 78 °F.

cc: Ed E. Alsup
 L. M. Parrish, Jr.
 J. E. Ashworth
 E. S. Oberly
 L. D. Galloway
 R. Pritchard (2)
 R. L. Ahrens
 A. H. Vierras
 file

R. L. Ellsbery
 Chemist



Sec 35-T 29th-29th

Report No: 1
Date: 1-23-87
County: SAN JUAN
Field: BLANCO
Formation: Mesaverde
Lease: ZACHERY
Well: 43

Company: UNION TEXAS PETROLEUM
Address:
Attention: STERGIE KATIRGIS
Date Sampled: 1-23-87



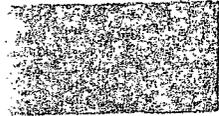
Specific Grav:	1.012	pH:	7.00
Chloride:	15,297 mg/l	Calcium:	397 mg/l
Bicarbonate:	793 mg/l	Magnesium:	75 mg/l
Sulfate:	0.	Total Iron:	0.
Sulfide:	0.	Sodium:	9,440 mg/l
Total Hardness (as CaCO3):	1,301 mg/l	Total Dissolved Solids:	26,302 mg/l
Resistivity:	0.34	Ohm Meters @:	60 F
Potassium:	300 mg/l	Carbonate:	N D

Sample Source:

Remarks:

formation water

Analyst: M. CONREY
Smith Representative: MIKE CONREY





Certified Mail 7006 0100 0007 2050 4729

January 29, 2007

Mr. David Catanach
NMOCD
1220 S. St. Francis St.
Santa Fe, NM 87505

SUBJECT: PRETTY LADY 30-11-34 No. 1 MESAVERDE WATER ANALYSIS

Dear Mr. Catanach:

Merrion Oil & Gas is submitting the attached TDS water analyses of the Mesaverde formation as required by the terms of Administrative Order SWD-1034-A for the Pretty Lady 1 SWD well (API No. 30-045-30922) located in nw se Sec 34, T34N, R11W, San Juan County, New Mexico.

Please give me a call if you have questions or require further information. I may be reached at 505.324.5312 or e-mail at sdunn@merrion.bz.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven S. Dunn", is written over a horizontal line. The signature is fluid and cursive.

Steven S. Dunn
Drilling & Production Manager

Enclosures: Envirotech Lab TDS Analysis

ssd

Cc: NMOCD Aztec Office
Agua Moss, LLC
Well File

I:\MOG\00- Well Files\Operated\New Mexico\Pretty Lady 30-11-34\Correspondence\Pretty Lady MV NMOCD Wtr Analysis.doc

WATER ANALYSIS REPORT



DATE: 7/20/87

PAGE:

TO: Welsh Engineering

LAB NO.:

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

Sample From Basin Disposal ^{(Kimmer) Tanks} Date Sampled 7/17/87 Sampled
Time Sampled By R.W.

PARAMETER	mg/l	me/l	PARAMETER	mg/l	me/l
Acidity (CaCO ₃)			Arsenic		
Alkalinity (CaCO ₃)			Barium		
Bicarbonate	<u>11560</u>	<u>189</u>	Boron		
Carbonate	<u>1870</u>	<u>62.4</u>	Cadmium		
Hydroxide	<u>0</u>	<u>0</u>	Calcium	<u>112</u>	<u>6</u>
Chloride	<u>13940</u>	<u>393</u>	Chromium, Hex		
Chlorine, Free			Total		
Total			Iron, Dissolved		
Fluoride			Total		
Nitrogen, Total			Lead		
Nitrate (N)			Magnesium	<u>37.4</u>	<u>1.9</u>
Ammonia (N)			Mercury		
Phosphate, Ortho			Potassium		
Total			Selenium		
Sulfur, Sulfate	<u>967</u>	<u>20.1</u>	Silver		
Sulfide	<u>0</u>		Sodium	<u>15230</u>	<u>662</u>
BOD ₅					
COD					
Hardness (CaCO ₃)		<u>gr.</u>			
Oil & Grease					
Oxygen, Dissolved					
Phenols					
Solids, Total					
Dissolved	<u>43530</u>				
Suspended					
Settleable		ml/l			
Conductivity	<u>3.9 x 10⁴</u>	µmhos/cm			
pH	<u>8.83</u>	units			
Turbidity		NTU			
Specific Gravity	<u>1.0344</u>				
Date			Date		Analyzed
Received		Preserved?	Analyzed		By

REMARKS:

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC, AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

November 15, 2006

Mr. Marion Maness
Merrion Oil & Gas
610 Reilly Ave
Farmington, NM 87401

Phone: (505) 327-9801

Fax: (505) 324-5350

Client No.: 03048-009

Dear Mr. Maness,

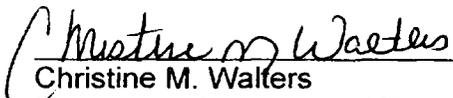
Enclosed are the analytical results for the samples collected from the location know as "Pretty Lady #1". Two water samples were collected by Merrion Oil & Gas designated personnel on 11/14/06, and received by the Envirotech laboratory on 11/14/06 for Total Dissolved Solids.

The samples were documented on Envirotech Chain of Custody No. 1706. The samples were assigned Laboratory Nos. 39153 (#1) and 39154 (#2) for tracking purposes.

The samples were analyzed 11/15/06 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.


Christine M. Walters
Laboratory Coordinator / Environmental Scientist

enc.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Merrion Oil & Gas	Project #:	03048-009
Sample ID:	#1	Date Reported:	11-15-06
Laboratory Number:	39153	Date Sampled:	11-14-06
Sample Matrix:	Water	Date Received:	11-14-06
Preservative:	Cool	Date Analyzed:	11-15-06
Condition:	Cool & Intact	Chain of Custody:	1706

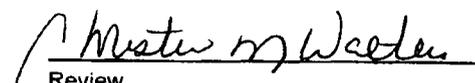
Parameter	Analytical Result	Units
-----------	-------------------	-------

Total Dissolved Solids @ 180C	26,500	mg/L
-------------------------------	--------	------

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Pretty Lady #1.**


Analyst


Review

CHAIN OF CUSTODY RECORD

1706

Client / Project Name		Project Location			ANALYSIS / PARAMETERS					
Merriam Oil & Gas		Pretty Lady #1								
Sampler: MAVION MANESS		Client No. 03048-009								
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	Remarks				
#1	11/14/06	930	39153	Water	1	✓				
#2	11/14/06	1130	39154	Water	1	✓				
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time			
<i>Maion Maness</i>		11/14/06	15:20	<i>Christ Walts</i>		11/14/06	1520			
Relinquished by: (Signature)				Received by: (Signature)						
Relinquished by: (Signature)				Received by: (Signature)						
Call 860-8241		ENVIROTECHINC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615								
(801) 654685										
Sample Receipt					Y	N	N/A			
Received Intact					✓					
Cool - Ice/Blue Ice					✓					

Mar Vista SWD #1 – Application for Authorization to Inject

- 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. (See Attachment E)**

The proposed injection zone is the Cliff House Sandstone within the Mesa Verde Group and is anticipated to be encountered around 3672' TVD (2035' SS) with a thickness of about 45' (base at 3717' TVD & 1990' SS). The Cliff House is a transgressive sand associated with the encroaching Lewis Sea and generally develops in distinct linear trends, running northwest-southeast, which results in thick sand accumulations during regressive pulses. The sands of the Cliff House usually present as clean and blocky on wire line logs, but can also be associated with minor shales and silts. In the area around this proposed site the Cliff House is permeable, but with a very high water saturation. Mud log descriptions from nearby wells describe the sand as being clear, fine grained, peppered with carbonaceous material, sub-rounded, slightly friable & slightly calcareous, and well to poorly sorted.

The deepest underground potable water source will be the Ojo Alamo Sandstone which is anticipated to be encountered at 707' with a thickness of about 120'. A search of the water database of the New Mexico State Engineer's Office supports this as no water wells were reported for any zones below the Ojo Alamo within 50,000' of this location. The vertical distance between the base of the Ojo Alamo and the top of the Cliff House is anticipated to be 2844'. The Kirtland Shale and Lewis Shale will serve as thick barriers protecting against water migration between the injection zone and potable water. Intermediate casing will be set into the Lewis formation and cemented back to surface covering all zones of potable water. Production casing will be set at TD further protecting against contamination.

- X. Attach appropriate logging and test data on well (if well logs have been filed with the Division, they need not be resubmitted).**

Since this well hasn't been drilled, no logs have yet been run. There are logs on file at the NMOCD on the Pretty Lady #1 SWD (30-045-30922) and Basin Disposal (30-045-26862) for the Mesaverde SWD in close proximity to our proposed well. We can supply the logs once the well has been drilled.

- 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.**

Using the USGS Topographic map and New Mexico State Engineer's Data Base there were no water wells in a 1 mile radius of the proposed Mar Vista SWD #1 well.

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

Production zones in the area above the injection zone are the Fruitland, Pictured Cliffs, and Chacra intervals which have all indicated an adequate seal for trapped gas providing evidence of no concern for open fractures or faults. The nearest pay zone above the injection zone is the Chacra sandstone which consists of silty to very fine-grained laminated to bioturbated sandstone deposited in open-shelf to deeper water settings. The lowest pay sand within the Chacra interval will be over 500' above the top of the injection zone. Under-lying the injection zone is the Menefee member of the Mesa Verde Group which consists of interbedded fluvial sandstone, shale, carbonaceous shale and coal. The highest pay sand below the injection zone is over 500' below the base of the injection zone.

**Bill Koerschner
Principal Geologist
ConocoPhillips Company
SJ Basin Unit
505-326-9770**

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of the form (see Attachment H)

- 1. Notice of Publication with the Farmington Daily Times**
- 2. Notice Given to the Surface Owners, NM State Land office and the Bureau of Land Management**
- 3. Notice given to the Off-set Operator - Unit Petroleum Company, Tulsa Oklahoma**

AFFIDAVIT OF PUBLICATION

Ad No. 64254

**STATE OF NEW MEXICO
County of San Juan:**

TIA AVILES, being duly sworn says: That she is the CLASSIFIED MANAGER of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):
Monday, March 8, 2010

And the cost of the publication is \$54.03

Tia Aviles

ON 3/16/10 TIA AVILES appeared before me, whom I know personally to be the person who signed the above document.

Christine Sellers
My Commission Expires - 11/05/11

COPY OF PUBLICATION

NOTICE

ConocoPhillips Company is applying to drill the Mar Vista SWD #1 as a water disposal well. The Mar Vista SWD #1 is staked in the SE/4SW/4 of Section 2, Township 29 North, Range 11 West, San Juan County, New Mexico. The well will dispose of water produced from oil and gas wells into the Mesaverde formation, at a depth of 3675 feet to 3720 feet at a maximum rate of 7000 barrels of water per day, and a maximum pressure of 5000 psi. Interested parties must file objection or requests for hearing with NM Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting Stephanie Dobson, ConocoPhillips Company, 3401 East 30th Street, Farmington, NM 87402. Phone number is (505) 599-3493.

Legal No. 64254 published in The Daily Times on March 8, 2010.



Patsy Clugston
Sr. Regulatory Specialist

ConocoPhillips Company
3401 East 30th Street
Farmington, NM 87402
(505) 326-9518 phone
(505) 599-4062 fax

March 17, 2010

New Mexico State Land Office
Commissioner of Public Lands
Oil, Gas & Minerals Division
P.O. Box 1148
Santa Fe, NM 87504-1148

Bureau of Land Management
1235 La Plata Hwy
Farmington, NM 87401

To Whom it May Concern:

As required by New Mexico Oil Conservation Division rules, please find attached a copy of our Application for Authorization to Inject for the water disposal well referenced below. This disposal well will be an addition to the ConocoPhillips-operated Vasaly #2 SWD. Water will be piped not trucked, to this location from the Vasaly #2 SWD. This letter is notification only, and no action is required on your behalf unless you have questions or objections.

Well Name: Mar Vista SWD #1

Proposed Disposal Zone: Cliffhouse 3675' 3720', interval of the Mesaverde

Location: Unit N, 290' FSL & 2490' FWL; Sec. 2, T29N, R11W, San Juan County, NM

Approximate Location: Approximately 1 mile east of Hwy 550 between Bloomfield and Aztec, NM

Applicant: Burlington Resources Oil & Gas, LP (subsidiary of ConocoPhillips Company)

Applicant's Address: 3401 East 30th Street, Farmington, NM 87401

Submittal Information: Application is for water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. Any objections should be directed to the New Mexico Oil Conservation Division, whose address is 1220 South St. Francis Drive, Santa Fe, NM 87505, within 21 days of your receipt of this letter. Their phone number is (505) 476-3440.

Should you have technical questions, please call Stephanie Dobson at (505) 599-3493. All other questions may be directed to me at the number above.

Sincerely,

Patsy Clugston
Sr. Regulatory Specialist



Patsy Clugston
Sr. Regulatory Specialist

ConocoPhillips Company
3401 East 30th Street
Farmington, NM 87402
(505) 326-9518 phone
(505) 599-4062 fax

If you do not have any objection to this application, please sign and return on executed copy of the attached waiver to the New Mexico Oil Conservation Division, Attn: Richard Ezeanyim, 1220 South St. Francis Drive, Santa Fe, NM 87505, and a copy of the same to the above address.

**WAIVER
MAR VISTA SWD #1**

Bureau of Land Management – hereby waives any objection to the Burlington Resources Oil & Gas, LP, Application for Authorization to Inject into the Mara Vista SWD #1, Unit N, 290 feet FSL & 290' FWL; Sec. 2, T29N, R11W, San Juan County, NM.

Bureau of Land Management

By: _____

Date: _____

Patsy Clugston
Sr. Regulatory Specialist

ConocoPhillips Company
3401 East 30th Street
Farmington, NM 87402
(505) 326-9518 phone
(505) 599-4062 fax

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MAR VISTA SWD #1**

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NM State Land Office

By: _____

Date: _____



Carol Hines
Associate Landman
San Juan Business Unit

ConocoPhillips Company
P.O. Box 4289
Farmington, NM 87499-4289
Phone: 505-326-9831
Cell: 505-320-3265

March 17, 2010

Unit Petroleum Company
P.O. Box 702500
Tulsa, OK 74170-2500
Attn: Land Department

To Whom It May Concern:

As required by New Mexico Oil Conservation Division, please find attached a copy of our Application for Authorization to Inject for the water disposal well referenced below. This disposal well will be an addition to the ConocoPhillips-operated Vasaly #2 SWD. Water will be piped, not trucked, to this location from the Vasaly #2 SWD. This letter is a notification only, and no action is required on your behalf unless you have questions or objections.

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Should you have any technical questions, please call Stephanie Dobson at (505) 599-3493. All other questions may be directed to me at the number above.

Sincerely,

Carol Hines
Associate Landman



Carol Hines
Associate Landman
San Juan Business Unit
ConocoPhillips Company
P.O. Box 4289
Farmington, NM 87499-4289
Phone: 505-326-9831
Cell: 505-320-3265

If you do not have any objection to this application, please sign and return one executed copy of the attached waiver to the New Mexico Oil Conservation Division, Attn: Richard Ezeanyim, 1220 South St. Francis Drive, Santa Fe, NM 87505, and a copy of the same to the above address.

**WAIVER
MAR VISTA SWD #1**

UNIT PETROLEUM COMPANY hereby waives any objection to the Burlington Resources Oil & Gas, LP, Application for Authorization to Inject into the Mar Vista SWD #1, Unit N; 290 feet FSL & 2490" FWL; Sec. 2, T29N, R11W, San Juan County, NM.

UNIT PETROLEUM COMPANY

By: _____

Date: _____

8518 1141 2411 8518

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man Vista SWD #1

Sent To: Unit Petroleum Co.
 Street, Apt. No., or PO Box No.: P.O. Box 702500
 City, State, ZIP+4: Tulsa, OK, 74170

PS Form 3800, June 2002 See Reverse for Instructions

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3/18/10

Postmark
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man Vista SWD #1

Sent To: New State Land Office
 Street, Apt. No., or PO Box No.: Commission of Public Lands
 P.O. Box
 City, State, ZIP+4: Santa Fe, NM 87504-1148

PS Form 3800, June 2002 See Reverse for Instructions

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3/18/10

Postmark
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man Vista SWD #1

Sent To: Bureau of Land Management
 Street, Apt. No., or PO Box No.: 1235 La Plata Hwy
 City, State, ZIP+4: Alameda, NM 87401

PS Form 3800, June 2002 See Reverse for Instructions

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Thursday, April 22, 2010 4:48 PM
To: 'Clugston, Patricia L'
Cc: Ezeanyim, Richard, EMNRD; Perrin, Charlie, EMNRD; Hayden, Steven, EMNRD
Subject: Disposal application from Burlington Resources Oil & Gas, L.P.: 30-045-35126 Cliff House Interval

Hello Patsy:

You didn't mention it in the application but these AOR wells were poorly cemented - but fortunately were squeezed later on after casing leaks were detected in the Cliff House – this alone implies the waters are not too good in this area, and this interval should be cemented properly.

Sending you my questions – this will likely be all of them unless I see more AOR issues:

- a. Source Water: The Vasaly SWD takes waters from which formations or Pools?
- b. Surface Owner: Is the State Land Office the owner of this well site?
- c. Notice Requirements:

As you probably know (but I must be sure you know), the C-108 form does not have the correct language on notice requirements – applicants must look at Part 26 of Division Rules to see the correct language. The parties requiring notice (an entire copy of the C-108) are all parties controlling minerals within the AOR. If a tract is unleased, the mineral owner still controls the minerals and notice to them will work for that instance. Since there are no Cliff house producing wells nearby, the parties to notice are those with mineral leases in the Cliff house. It seems BLM/SLO and Unit Petro were noticed with this application.

Are Unit Petro and Burlington the only parties with mineral leases in the Cliff house within this ½ mile AOR?
Are BLM/SLO the only mineral owners within the AOR? Are there any Fee owners? Are all lands leased?

We have been asking applicants for SWD and NSL applications to split up the notice area into tracts and label each tract and list all parties controlling minerals within each tract. Please ask your land people to let me know who controls the mineral rights in the Cliff House interval within all tracts of land at least partially contained in the ½ mile AOR.

I don't see other issues here than the 2 main issues that Burlington already very ably addressed – thank you for that. I do think you are being a bit optimistic in the amount of water you expect to put in this well – maybe for a while this volume will work?

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Jones, William V., EMNRD

From: Clugston, Patricia L [Patsy.L.Clugston@conocophillips.com]
Sent: Thursday, April 22, 2010 5:02 PM
To: Jones, William V., EMNRD
Cc: Davis, Richard T; Wierenga, Diane S.; Dobson, Stephanie L; Madubom, Marcel
Subject: RE: Disposal application from Burlington Resources Oil & Gas, L.P.: 30-045-35126 Cliff House Interval

Hi Will, I am just leaving for a week, have a 4 day weekend planned. I can finalize by answers to you on Tuesday. I know that BLM & OCD are the Surface owners of the pad and lease road. There are no FEE owners within the area. I am thinking that the only mineral owners were BR & Unit Petro. Water taken by the Vasaly is FC mainly, but also receives conventional water (any produced water needing disposal). I can see if land will will get us a lease map as you have described below. Hopefully they can get this for me to give to you by early next week. I appreciate you working on this permit. It is a high priority for us. I'll get back with you real soon. Thanks again. Patsy

Richard and Diane,
Can you review Mr. Jones with the NMOCD's note below and prepare something to address his issues? Thanks. Patsy

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Thursday, April 22, 2010 4:48 PM
To: Clugston, Patricia L
Cc: Ezeanyim, Richard, EMNRD; Perrin, Charlie, EMNRD; Hayden, Steven, EMNRD
Subject: Disposal application from Burlington Resources Oil & Gas, L.P.: 30-045-35126 Cliff House Interval

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William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

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Injection Permit Checklist (03/15/2010)

Case SWD 1217 WFX PMX IPI 4/26/10 Permit Date (A/M/J) UIC Q#
 # Wells 1 Well Name: CAR VISTA # 1
 API Num: (30-) 045-3236 Spud Date: NEW New/Old: N (UIC primacy March 7, 1982)
 Footages 290 FSL/2490 FWL Unit N Sec 2 Tsp 29N Rge 11W County SAN JUAN
 Operator: Bushy Resources OIL & GAS, L.P. Contact: Patsy Clayton
 OGRID: 14538 RULE 5.9 Compliance (Wells) 3/6996 (Finan Assur) OK IS 5.9 OK? OK
 Operator Address: P.O. BOX 4289, Farmington, NM 87499

Current Status: UNDRILLED

Planned Work to Well:

Planned Tubing Size/Depth: 4 1/2" @ 3900'

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing Surface	17 1/2 13 3/8			CIRC
Existing Intermediate	12 1/4 9 5/8		1053 CF	CIRC
Existing Long String	8 3/4 7 1/2	3900	323 CF	2150 CBL

new well

DV Tool Liner Open Hole 3900 Total Depth 3900

Well File Reviewed new well

Diagrams: Before Conversion After Conversion Elogs in Imaging File: will be filed

Intervals:	Depths	Formation	Producing (Yes/No)	GENERAL LOCATION
Above (Name and Top)	2759	Auriferous		
Above (Name and Top)	3015	Chaco		
Injection..... Interval TOP:	3675	CLIFF H.		735 PSI Max. WHIP
Injection..... Interval BOTTOM:	3720 3720	CLIFF H.		Open Hole (Y/N)
Below (Name and Top)				Deviated Hole?

3675 / 3720 / 7350

Sensitive Areas: Capitan Reef Cliff House OK Salt Depths

.... Potash Area (R-111-P) Potash Lessee Noticed?

Fresh Water: Depths: 707 to 827' Wells none Analysis? Affirmative Statement

Disposal Fluid Sources: Analysis?

Disposal Interval Production Potential/Testing/Analysis Analysis:

Notice: Newspaper (Y/N) Surface Owner SLO Mineral Owner(s) SLO/STC

RULE 26.7(A) Affected Parties: UNIT Petro

Area of Review: Adequate Map (Y/N) Well List (Y/N)

Active Wells 3 Num Repairs 0 Producing in Injection Interval in AOR NO

P&A Wells 0 Num Repairs All Wellbore Diagrams Included?

Questions/Required Work:

Request Sent _____ Reply: _____

Request Sent _____ Reply: _____

Request Sent _____ Reply: _____