

HOLLAND & HART LLP



Adam G. Rankin  
agrarkin@hollandhart.com

December 20, 2011

**VIA HAND DELIVERY**

Jami Bailey, Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

*Case 14790*

RECEIVED OOD  
2011 DEC 20 P 3:35

**Re: Application of OXY USA, Inc. for authorization to conduct a pressure maintenance project in the Old Millman Ranch Bone Spring Pool through its Government AB No. 9 well, Eddy County, New Mexico.**

Dear Ms. Bailey:

Enclosed in triplicate is the above-referenced application of Oxy USA Inc. ("OXY"), as well as a copy of a legal advertisement. OXY respectfully requests that this matter be placed on the docket for the January 19, 2012, examiner hearing.

Very truly yours,

Adam G. Rankin

Enclosures

cc: David Stewart, OXY

Holland & Hart LLP

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CASE 14790:

**Application of OXY USA, Inc. for authorization to conduct a pressure maintenance project in the Old Millman Ranch Bone Spring Pool through its Government AB No. 9 well, Eddy County, New Mexico.** Applicant in the above-styled cause seeks an order authorizing a pressure maintenance project in the Old Millman Ranch Bone Spring Pool through its Government AB No. 9 well, with a surface location 330 feet from the North line and 230 feet from the East line of Section 10, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico.. Said well is located approximately 11 miles northeast of Carlsbad, New Mexico.

Case 14790

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery ☒ Pressure Maintenance Disposal Storage  
Application qualifies for administrative approval? Yes ☒ No
- II. OPERATOR: OXY USA WTP Limited Partnership Government AB #9  
ADDRESS: P.O. Box 50250 Midland, TX 79710  
CONTACT PARTY: David Stewart PHONE: 432-685-5717
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☒ Yes ☐ No  
If yes, give the Division order number authorizing the project: R-11328
- 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. Attached
- 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. Attached
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected; Avg-500BWPD - Max-1000BWPD
  2. Whether the system is open or closed; Closed
  3. Proposed average and maximum injection pressure; Avg-1000psi - Max-1275psi
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, Attached
  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.). Attached
- \*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. Attached
- IX. Describe the proposed stimulation program, if any. Attached
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).  
Logs already on file with the NMOCD.
- \*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. Attached
- 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. Attached
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. Attached
- 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: Alfredo Yaguaracuto TITLE: Sr. Reservoir Engineer  
SIGNATURE: [Signature] DATE: 12/15/2011  
E-MAIL ADDRESS: alfredo.yaguaracuto@oxy.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: 8/23/10 - Referred to hearing

### III. WELL DATA

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

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

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

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

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

### XIV. PROOF OF NOTICE

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

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

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

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

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

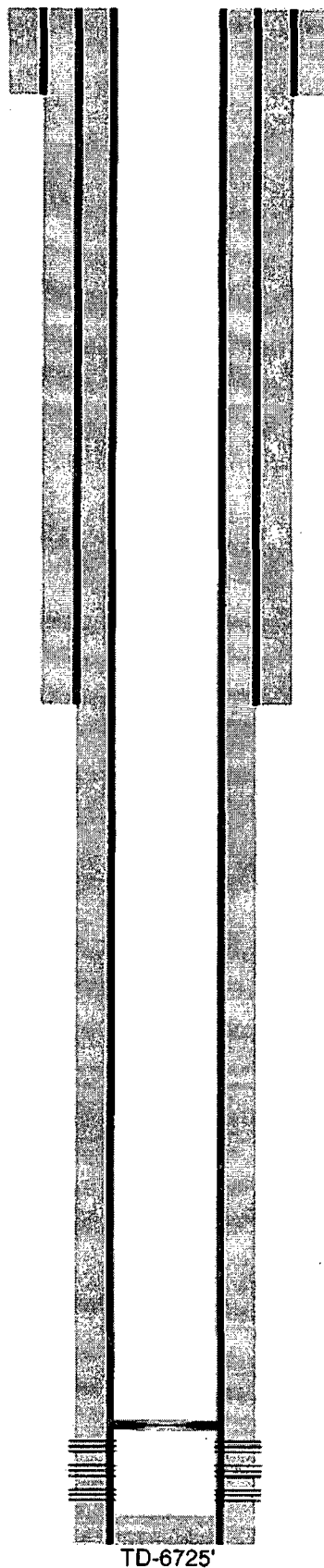
## INJECTION WELL DATA SHEET

OPERATOR: OXY USA WTP Limited PartnershipWELL NAME & NUMBER: Government AB #9WELL LOCATION: SL-330 FNL 230 FEL BHL-772 FNL 660 FEL NENE(A) 10 20S 28E  
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATA  
Surface CasingHole Size: 17-1/2" Casing Size: 13-3/8" @ 400'Cemented with: 614 sx. or ft<sup>3</sup>Top of Cement: Surface Method Determined: CirculatedIntermediate CasingHole Size: 11" Casing Size: 8-5/8" @ 3005'Cemented with: 1400 sx. or ft<sup>3</sup>Top of Cement: Surface Method Determined: CirculatedProduction CasingHole Size: 7-7/8" Casing Size: 5-1/2" @ 6718'Cemented with: 910 sx. or ft<sup>3</sup>Top of Cement: Surface Method Determined: CircTotal Depth: 6725'Injection Interval6378 feet to 6619 feet

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2-7/8" 6.5# N80 Lining Material: polylinedType of Packer: Baker Loc-SetPacker Setting Depth: 6320'Other Type of Tubing/Casing Seal (if applicable): N/AAdditional Data1. Is this a new well drilled for injection? Yes ☒ No ☐If no, for what purpose was the well originally drilled? Producing Oil Well2. Name of the Injection Formation: Bone Spring3. Name of Field or Pool (if applicable): Old Millman Ranch Bone Spring Assoc. (48035)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. No5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Yates-1024' Delaware-3266' Bone Spring-4579'1<sup>st</sup> Bone Spring-6368'

OXY USA WTP LP - Current  
Government AB #9  
API No. 30-015-27964



17-1/2" hole @ 400'  
13-3/8" csg @ 400'  
w/ 614sx-TOC-Surf-Circ

11" hole @ 3005'  
8-5/8" csg @ 3005'  
w/ 1400sx-TOC-Surf-Circ

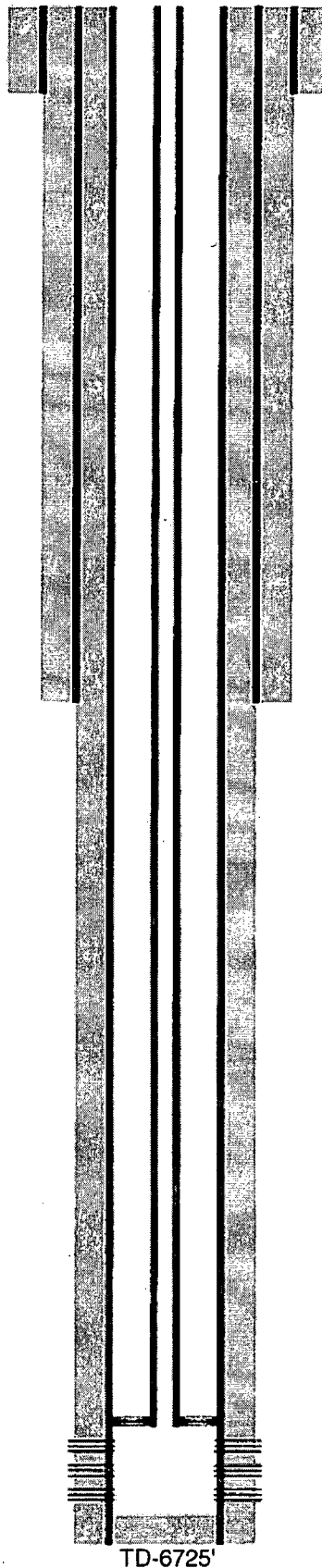
7-7/8" hole @ 6725'  
5-1/2" csg @ 6718'  
w/ 910sx-TOC-Surf-Circ

12/05-CIBP @ 6314'

Perfs @ 6378-6619'

TD-6725'

OXY USA WTP LP - Proposed  
Government AB #9  
API No. 30-015-27964



17-1/2" hole @ 400'  
13-3/8" csg @ 400'  
w/ 614sx-TOC-Surf-Circ

11" hole @ 3005'  
8-5/8" csg @ 3005'  
w/ 1400sx-TOC-Surf-Circ

7-7/8" hole @ 6725'  
5-1/2" csg @ 6718'  
w/ 910sx-TOC-Surf-Circ

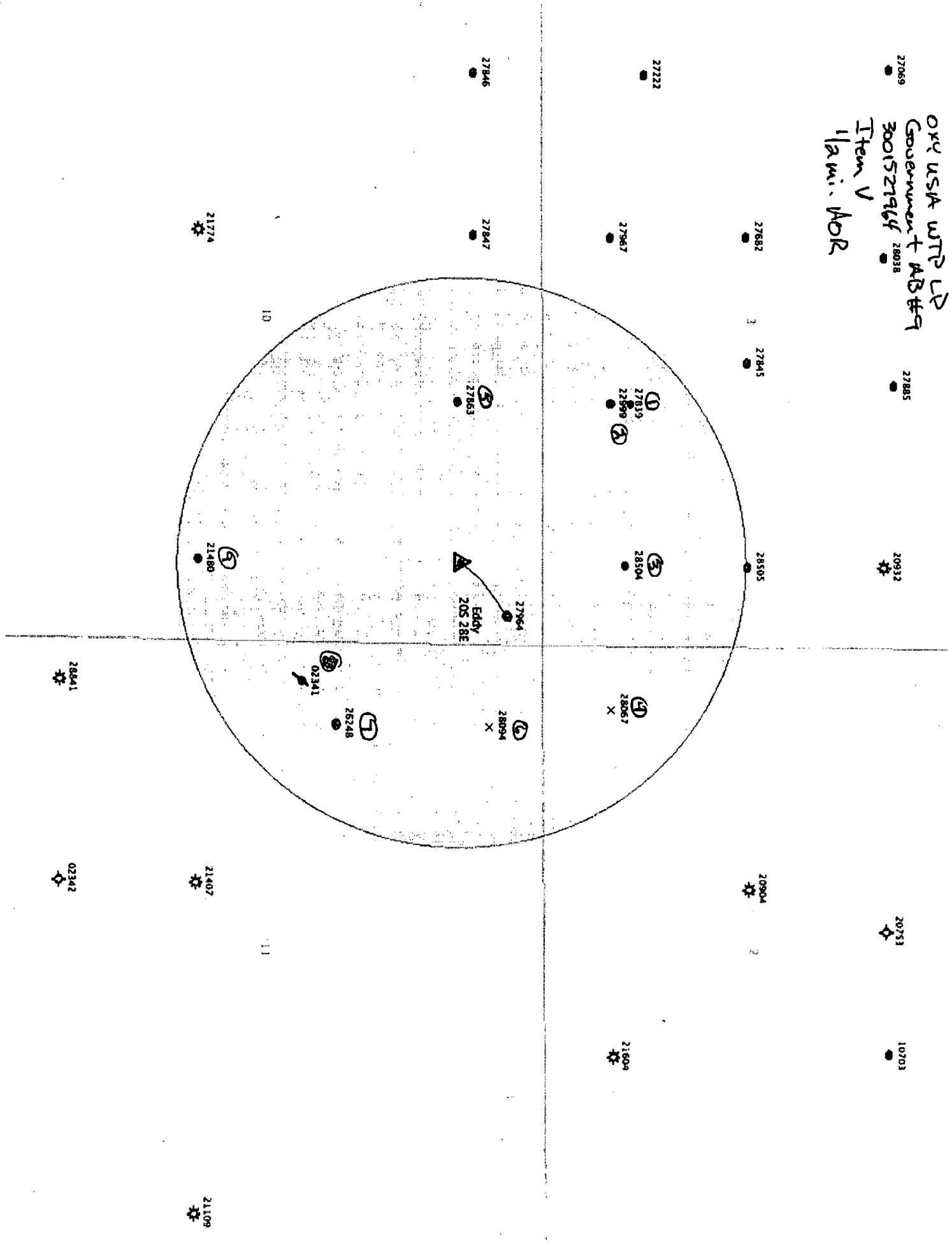
2-7/8" tbg & Baker LS @ 6320'

Perfs @ 6378-6619'

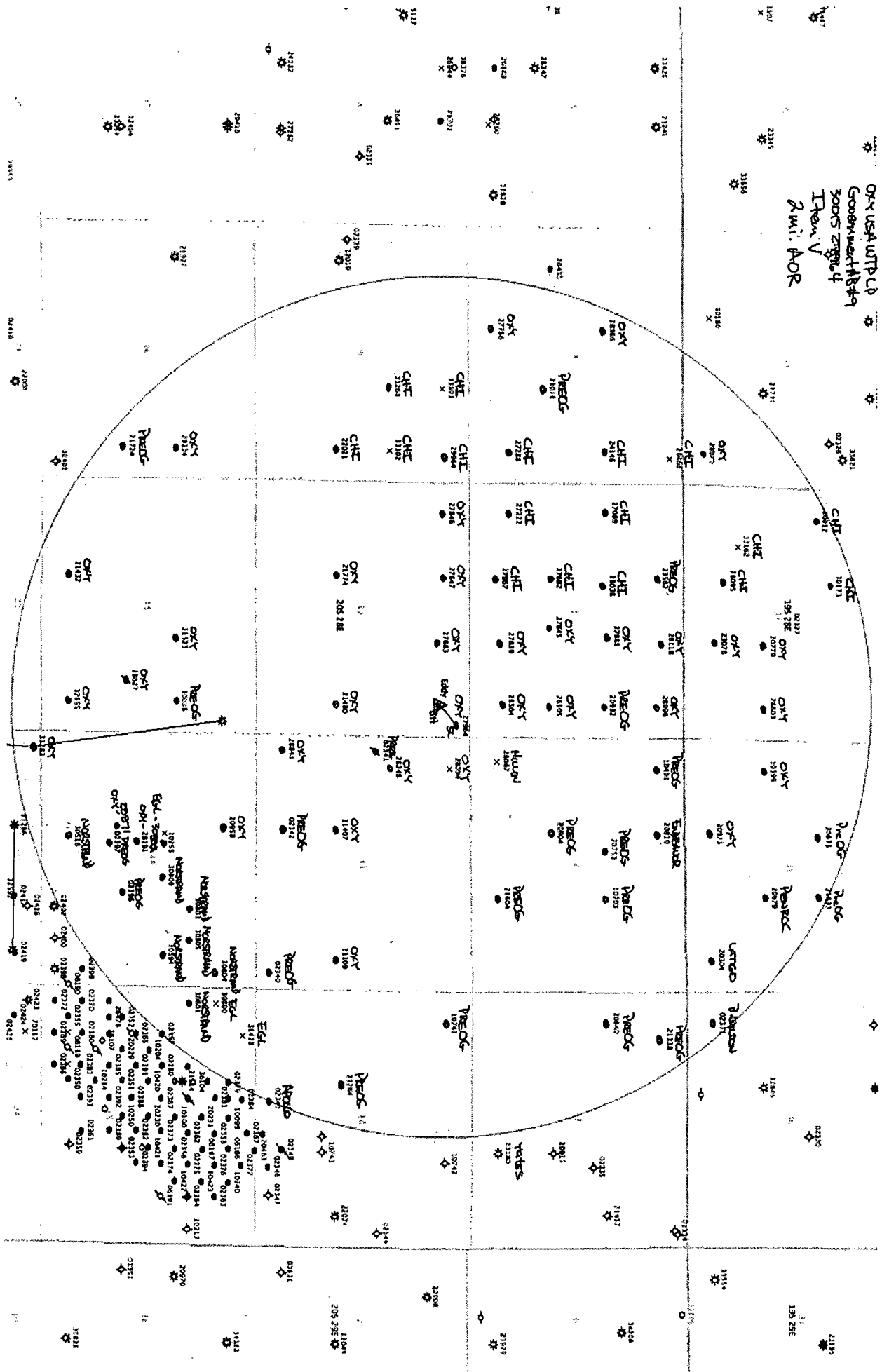
TD-6725'



OXY USA WTP LP  
 Government AB#9  
 3001527964  
 Item V  
 11a mi. AOR



OXY USA WTP CD  
Government #49  
3005 27064  
Item V  
2 mi. AOR

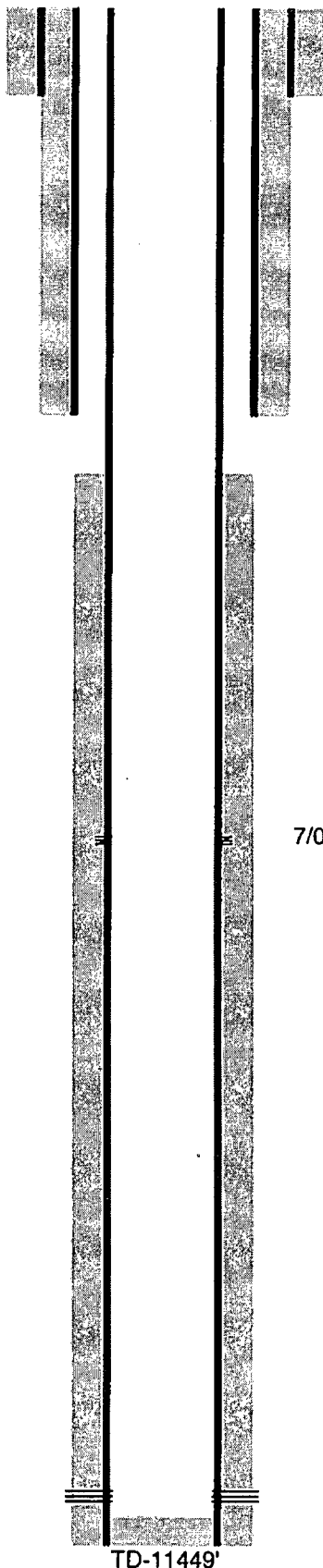


C-108 - Item VI  
Government AB #9  
AREA OF REVIEW

OPERATOR	LEASE	WELL NO.	API NO.	PLAT	LOCATION	DATE DRILLED	TD	PERFS	CASING-CEMENT	STATUS
OXY USA WTP LP	Government S	3	3001527839	1	810 FSL 1980 FSL O-3-205-28E	2/9/94	6550'	6254'-6515'	13-3/8" @ 413' w/ 4158x - TOC-Surf-CLIC 8-5/8" @ 3015' w/ 14508x - TOC-Surf-CLIC 5-1/2" @ 6550' w/ 7358x - TOC-3200'-TS	Act Oil Old Millman Ranch Bone Spring
OXY USA WTP LP	Government S	2	3001522999	2	660 FSL 1980 FSL O-3-205-28E	1/21/80	11329'	11214'-11237'	13-3/8" @ 400' w/ 17508x - TOC-Surf-CLIC 8-5/8" @ 3030' w/ 1708x - TOC-Surf-CLIC 5-1/2" @ 11320' w/ 8508x - TOC-6300'-CBL 7/08-Perf @ 6190-6270 Sgs 11558x - TOC-3667'-TS	Act Gas Winchester Morrow
OXY USA WTP LP	Government S	7	3001528504	3	810 FSL 660 FSL P-3-245-29E	6/7/95	6680'	6106'-6560'	13-3/8" @ 405' w/ 5708x - TOC-Surf-CLIC 8-5/8" @ 3000' w/ 10808x - TOC-Surf-CLIC 5-1/2" @ 6680' w/ 5458x - TOC-3060'-CBL	Act Oil Old Millman Ranch Bone Spring
Hillin Production Co.	JCN State	1	3001528067	4	660 FSL 510 FSL M-2-205-28E	...	...	...	...	Act Loc Not Drilled
OXY USA WTP LP	Government AB	8	3001527863	5	810 FSL 1980 FSL B-10-205-28E	4/26/94	6620'	6300'-6516'	13-3/8" @ 418' w/ 12008x - TOC-Surf-CLIC 8-5/8" @ 3010' w/ 14008x - TOC-Surf-CLIC 5-1/2" @ 6620' w/ 5358x - TOC-1400'-CBL	Act Oil Old Millman Ranch Bone Spring
OXY USA Inc.	Government AB	10	3001528094	6	510 FSL 650 FSL D-11-205-28E	...	...	...	...	Act Loc Not Drilled
OXY USA WTP LP	Government AB	5	3001526248	7	1980 FSL 660 FSL E-11-205-28E	1/1/90	11400'	11016'-11259'	13-3/8" @ 595' w/ 6508x - TOC-Surf-CLIC 8-5/8" @ 3020' w/ 22008x - TOC-Surf-CLIC 5-1/2" @ 11400' w/ 9758x - TOC-2900'-TS	Act Gas Burton Flat Morrow
Johnson & Pollard	Crosby	1	3001507341	8	2310 FSL 310 FSL E-11-205-28E	7/1/45	1188'	1170'-1198'	12-1/2" @ 230' 10" @ 460' w/ 508x	Act Pre-Drilled
OXY USA WTP LP	Government AB	2	3001521480	9	1980 FSL 660 FSL I-10-205-28E	2/28/75	11449'	9114'-9140'	13-3/8" @ 614' w/ 6508x - TOC-Surf-CLIC 9-5/8" @ 2770' w/ 17708x - TOC-Surf-CLIC 5-1/2" @ 11449' w/ 10358x - TOC-7600'-TS 3/05-Perf @ 7500 Sgs 13558x - TOC-1800'-CBL	Act Gas Burton Flat Morrow, North

\*Wellbore does not penetrate the injection interval.

OXY USA WTP LP  
Government S #2  
API No. 30-015-22999  
Winchester Morrow



17-1/2" hole @ 400'  
13-3/8" csg @ 400'  
w/ 1750sx-TOC-Surf-Circ

12-1/4" hole @ 3030'  
8-5/8" csg @ 3030'  
w/ 1770sx-TOC-Surf-Circ

7/08-Perf @ 6190-6270'sqz w/1355sx-TOC-3667'-TS

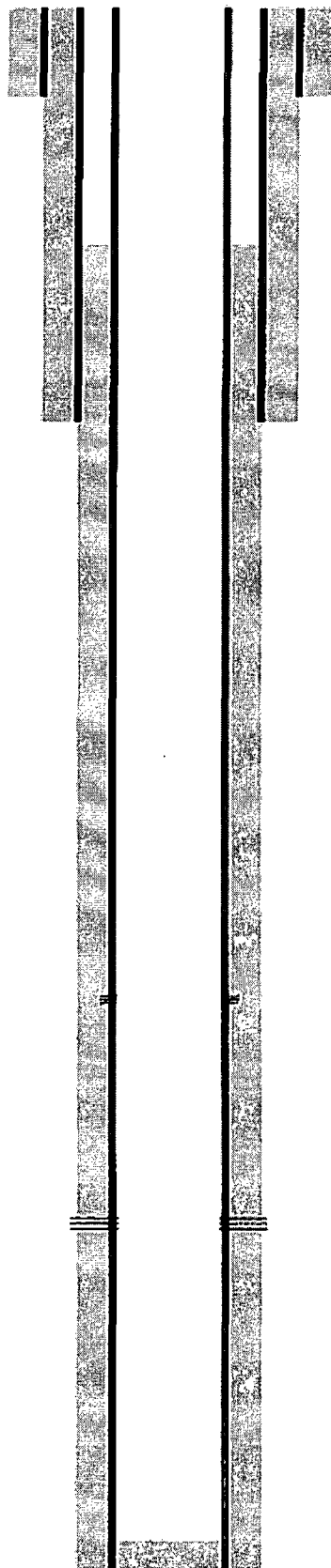
7-7/8" hole @ 11320'  
5-1/2" csg @ 11320'  
w/ 850sx-TOC-6300'-CBL

PB-11336'

Perfs @ 11214-11237'

TD-11449'

OXY USA WTP LP  
Government AB #2  
API No. 30-015-21480  
Burton Flat Wolfcamp, North



17-1/2" hole @ 614'  
13-3/8" csg @ 614'  
w/ 650sx-TOC-Surf-Circ

12-1/4" hole @ 2770'  
9-5/8" csg @ 2770'  
w/ 1770sx-TOC-Surf-Circ

3/05-Perf @ 7500'sqz w/1355sx-TOC-1800'-CBL

Perfs @ 9114-9140'

8-3/4" hole @ 11449'  
5-1/2" csg @ 11449'  
w/ 1025sx-TOC-7600'-TS

PB-11336'

TD-11449'



## Water Analysis Report

5/5/2010

Address:

Customer: OXY USA

Lease: Gov AB

Attention:

Formation:

Salesman: Lonnie Byram

CC: Bone Springs

Target Name: Gov AB 7 -

Sample Point: Gov AB 7

Sample Date: 08/25/2009

Test Date: 08/28/2009

## Water Analysis(mg/L)

Calcium	2165
Magnesium	778
Barium	
Strontium	
Sodium(calc.)	72935
Bicarbonate Alkalinity	183
Sulfate	619
Chloride	118000
Resistivity	0.0329

## Appended Data(mg/L)

CO2	200
H2S	5
Iron	7
Oxygen	
Manganese	

## Physical Properties

Ionic Strength(calc.)	3.44
pH(calc.)	6.25
Temperature(°F)	90
Pressure(psi)	50
Density	9.46

## Additional Data

Specific Gravity	1.14
Total Dissolved Solids(Mg/L)	194687
Total Hardness(CaCO3 Eq Mg/	8601

Dew Point	
Lead	
Zinc	

## Calcite Calculation Information

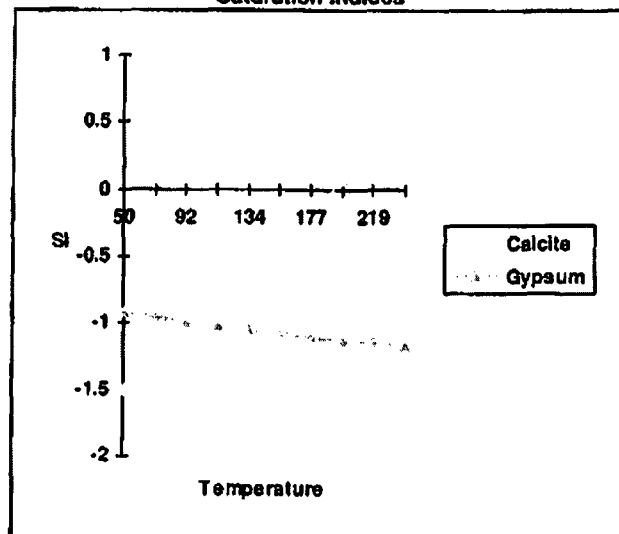
Calculation Method	Value
CO2 in Brine(mg/L)	200

Remarks:

## SI &amp; PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	-1.12	
Gypsum (Calcium Sulfate)	-0.98	
Hemihydrate (Calcium Sulfate)	-1.02	
Anhydrite (Calcium Sulfate)	-0.92	
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		

## Saturation Indices



## Saturation Index Data Points

	50	71	92	113	134	156	177	198	219	240
Calcite	-1.51	-1.31	-1.10	-0.87	-0.65	-0.41	-0.17	0.08	0.34	0.61
Gypsum	-0.92	-0.95	-0.99	-1.02	-1.05	-1.07	-1.10	-1.12	-1.14	-1.16

Lab Tech.:

Item VII (4)



## Water Analysis Report

5/5/2010

Address:

Customer: OXY USA

Lease: Gov S

Attention:

Formation:

Salesman: Lonnie Byram

CC: Bone Springs

Target Name: Gov S 3

Sample Point: Gov S 3

Sample Date: 08/25/2009

Test Date: 08/28/2009

## Water Analysis(mg/L)

Calcium	1764
Magnesium	632
Barium	
Strontium	
Sodium(calc.)	50821
Bicarbonate Alkalinity	305
Sulfate	206
Chloride	83000
Resistivity	0.0468

## Appended Data(mg/L)

CO2	100
H2S	15
Iron	17
Oxygen	
Manganese	

## Physical Properties

Ionic Strength(calc.)	2.42
pH(calc.)	6.48
Temperature(°F)	90
Pressure(psi)	50
Density	9.12

## Additional Data

Specific Gravity	1.10
Total Dissolved Solids(Mg/L)	136745
Total Hardness(CaCO3 Eq Mg)	7000

Dew Point	
Lead	
Zinc	

## Calcite Calculation Information

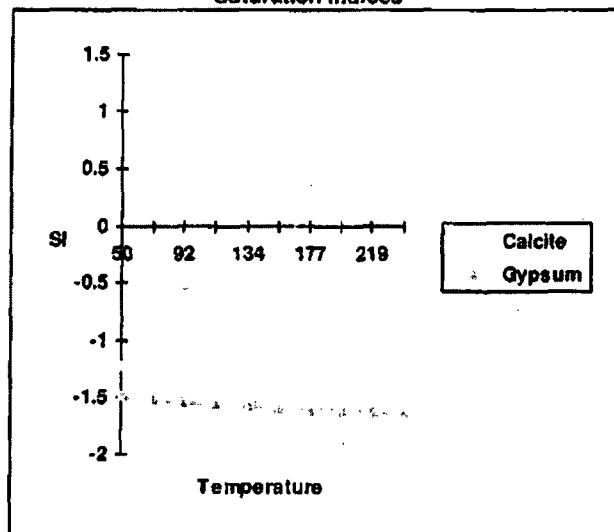
Calculation Method	Value
CO2 in Brine(mg/L)	100

Remarks:

## SI &amp; PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	-0.84	
Gypsum (Calcium Sulfate)	-1.54	
Hemihydrate (Calcium Sulfate)	-1.57	
Anhydrite (Calcium Sulfate)	-1.58	
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		

## Saturation Indices



## Saturation Index Data Points

	50	71	92	113	134	156	177	198	219	240
Calcite	-1.23	-1.03	-0.81	-0.59	-0.37	-0.13	0.11	0.36	0.62	0.89
Gypsum	-1.49	-1.52	-1.54	-1.56	-1.57	-1.59	-1.60	-1.61	-1.62	-1.63

Lab Tech.:

ITEM VII (4)



## Water Analysis Report

5/5/2010

Address:

Customer: OXY USA

Lease: Gov S

Attention:

Formation:

Salesman: Lonnie Byram

CC: Bone Springs

Target Name: Gov S 7

Sample Point: Gov S 7

Sample Date: 08/25/2009

Test Date: 08/28/2009

## Water Analysis(mg/L)

Calcium	1925
Magnesium	729
Barium	
Strontium	
Sodium(calc.)	50430
Bicarbonate Alkalinity	244
Sulfate	206
Chloride	83000
Resistivity	0.0469

## Appended Data(mg/L)

CO2	150
H2S	15
Iron	8
Oxygen	
Manganese	

## Physical Properties

Ionic Strength(calc.)	2.43
pH(calc.)	6.21
Temperature(°F)	90
Pressure(psi)	50
Density	9.12

## Additional Data

Specific Gravity	1.09
Total Dissolved Solids(Mg/L)	136542
Total Hardness(CaCO3 Eq Mg)	7800

Dew Point	
Lead	
Zinc	

## Calcite Calculation Information

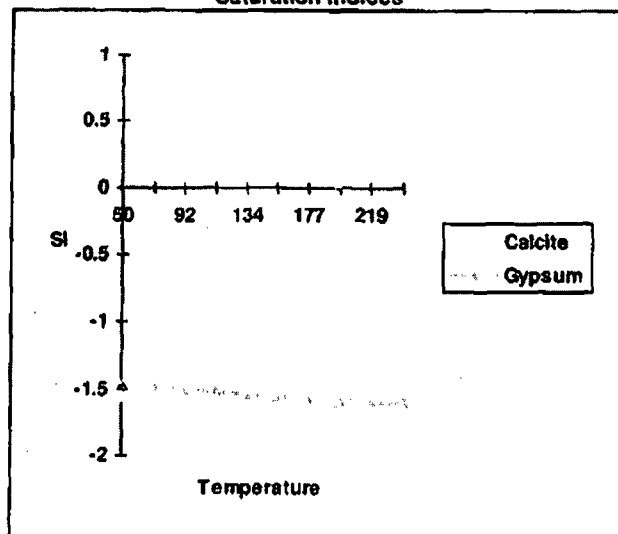
Calculation Method	Value
CO2 in Brine(mg/L)	150

Remarks:

## SI &amp; PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	-1.17	
Gypsum (Calcium Sulfate)	-1.50	
Hemihydrate (Calcium Sulfate)	-1.54	
Anhydrite (Calcium Sulfate)	-1.55	
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		

## Saturation Indices



## Saturation Index Data Points

	50	71	92	113	134	156	177	198	219	240
Calcite	-1.56	-1.36	-1.14	-0.92	-0.70	-0.46	-0.22	0.03	0.29	0.56
Gypsum	-1.46	-1.48	-1.50	-1.52	-1.54	-1.56	-1.57	-1.58	-1.59	-1.60

Lab Tech.:



OXY USA Inc.  
Government AB #9  
30-015-27964

**Item VIII**

**Geologic Data:**

Lithological Detail: Sandstone

Geological name: Bone Spring

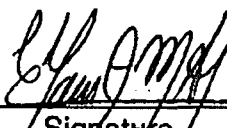
Zone thickness: 259'

Depth: 6369'

Depth of Bottom Of Deepest Fresh Water: 60'

**Item XII**

I 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.

  
\_\_\_\_\_  
Signature

*Alfredo Yaguaracuto*  
\_\_\_\_\_  
Name

*Sr. Reservoir Engineer*  
\_\_\_\_\_  
Title

COOPERMENT AB #9  
C-108 - Attachment Item X

COMPANY: OXY USA INC.  
WELL: GOVERNMENT AB #9  
FIELD: OLD MILLMAN RANCH  
COUNTY: EDDY STATE: NEW MEXICO

COUNTY: EDDY  
Field: OLD MILLMAN RANCH  
Location: 330' FNL & 230' FEL  
Well: GOVERNMENT AB #9  
Company: OXY USA INC.

Schlumberger  
COMPENSATED NEUTRON  
LITHO-DENSITY  
GAMMA RAY

330' FNL & 230' FEL

Elev.: 3294.5 F  
G.L. 3288 F  
D.F. 3283.5 F

Permanent Datum: GROUND LEVEL  
Log Measured From: KELLY BUSHING  
Drilling Measured From: KELLY BUSHING

Elev.: 3288 F  
18.5 F above Perm. Datum

API Serial No. SECTION 10 TOWNSHIP 20S RANGE 28E

Logging Date	Run Number	Depth Order	Schlumberger Depth	Bottom Log Interval	Top Log Interval	Casing Outer Size @ Depth	Casing Schlumberger	Bit Size	Type Fluid In Hole	Density	Viscosity	Fluid Loss	PH	Source Of Sample	FM @ Measured Temperature	FMF @ Measured Temperature	FMF @ Measured Temperature	Source FMF	FMF @ MFT	FMF @ MFT	Machine Recorded Temperature	Circulation Stopped	Time	Logger On Bottom	Unit Number	Location	Recorded By	Witnessed By
4-JUN-1984	1	6725 F	6720 F	6717 F	390 F	8 625 IN	2016 F	7.875 IN	MT-10-GEL	8.1 LB/G	28.8	12.4 CG	8.5	SHAKER	0.108 CH/M	78 DEGF	0.095 CH/M	78 DEGF	MEAS	0.077 @ 113	0.097 @ 113	3. JUN-1984	20-30	4-JUN-1984	FOSEWELL	MARK LIEBENZ	TOM THINNEY	

Logging Date	Run Number	Depth Order	Depth	Bottom Log Interval	Top Log Interval	Casing Outer Size @ Depth	Casing Schlumberger	Bit Size	Type Fluid In Hole	Density	Viscosity	Fluid Loss	PH	Source Of Sample	FM @ Measured Temperature	FMF @ Measured Temperature	FMF @ Measured Temperature	Source FMF	FMF @ MFT	FMF @ MFT	Machine Recorded Temperature	Circulation Stopped	Time	Logger On Bottom	Unit Number	Location	Recorded By	Witnessed By
	Run 1																											
	Run 2																											
	Run 3																											
	Run 4																											

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

OTHER SERVICES1  
OS1: DUL/MSFL  
OS2: LDT/CNL  
OS3: CORES  
OS4:  
OS5:

OTHER SERVICES2  
OS1:  
OS2:  
OS3:  
OS4:  
OS5:

REMARKS: RUN NUMBER 1

REMARKS: RUN NUMBER 2

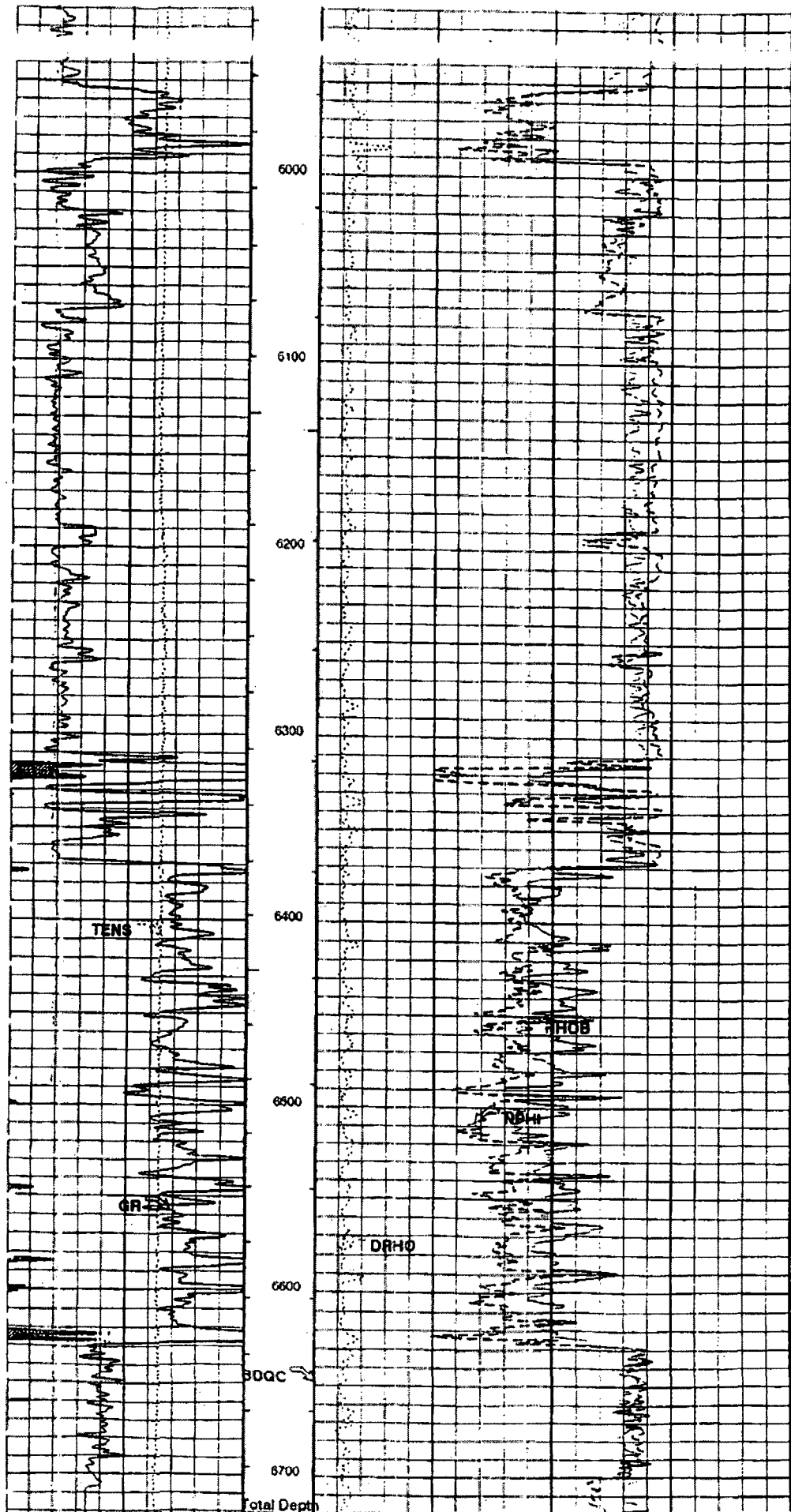
ALL SCALES AT CLIENT REQUEST  
CEMENT VOLUME SHOWN RIGHT  
SIDE OF DEPTH TRACK

FIG: MDC #1

OPERATORS: GOMEZ AND VASQUEZ

THANK YOU FOR CALLING SCHLUMBERGER!

Government AB#49  
ITEM X Page 2



~~Attachment 5~~ Item XI



# Water Analysis Report

5/28/2010

Address:

Customer: OXY USA  
Attention: Jerry Harrison

Lease: Gov AB  
Formation:  
Salesman: Jeromie Pickering

CC:

Target Name: Gov AB Fresh Water

Sample Point: Gov AB Fresh Water

Sample Date: 05/12/2010

Test Date: 05/24/2010

## Water Analysis(mg/L)

Calcium	802
Magnesium	778
Barium	
Strontium	
Sodium(calc.)	2706
Bicarbonate Alkalinity	49
Sulfate	2483
Chloride	6000
Resistivity	0.4993

## Appended Data(mg/L)

CO2	0
H2S	17
Iron	0
Oxygen	
Manganese	

## Physical Properties

Ionic Strength(calc.)	0.30
pH(calc.)	
Temperature(°F)	90
Pressure(psi)	50
Density	8.40

## Additional Data

Specific Gravity	1.01
Total Dissolved Solids(Mg/L)	12818
Total Hardness(CaCO3 Eq Mg/	5194

Dew Point	
Lead	
Zinc	

## Calcite Calculation Information

Calculation Method	Value
CO2 in Brine(mg/L)	0

Remarks:

## SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)		
Gypsum (Calcium Sulfate)	-0.50	
Hemihydrate (Calcium Sulfate)	-0.38	
Anhydrite (Calcium Sulfate)	-0.74	
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		

Lab Tech.:

**Service List- C-108 Application**  
**OXY USA Inc.**  
**Government AB #9**  
**Sec. 10 T20S R28E**  
**Eddy County, New Mexico**

**STATE OF NEW MEXICO**  
**ENERGY & MINERALS DEPARTMENT**  
**OIL CONSERVATION DIVISION**  
**1220 SOUTH ST. FRANCIS DRIVE**  
**SANTA FE, NM 87505**

**STATE OF NEW MEXICO**  
**ENERGY & MINERALS DEPARTMENT**  
**OIL CONSERVATION DIVISION**  
**1301 W. GRAND AVENUE**  
**ARTESIA, NM 88210**

**SURFACE OWNER:**

**UNITED STATE DEPT OF INTERIOR**  
**BUREAU OF LAND MANAGEMENT**  
**620 E. GREENE ST.**  
**CARLSBAD, NM 88220**

**GRAZING LEASE:**

**MASO O MENOS LIVESTOCK LLC**  
**P.O. BOX 831**  
**ARTESIA, NM 88281**

**OFFSET OPERATORS:**

**OXY USA INC.**  
**P.O. BOX 4294**  
**HOUSTON, TX 77210-4294**



December 20, 2011

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

TO: AFFECTED PARTIES

**Re: Application of OXY USA, Inc. for authorization to conduct a pressure maintenance project in the Old Millman Ranch Bone Spring Pool through its Government AB No. 9 well, Eddy County, New Mexico.**

Ladies and Gentlemen:

This letter is to advise you that OXY USA, Inc. ("OXY") has filed the enclosed application with the New Mexico Oil Conservation Division seeking authority to implement a pressure maintenance project in the Old Millman Ranch Bone Spring Pool through its Government AB No. 9 well, with a surface location 330 feet from the North line and 230 feet from the East line of Section 10, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico. Said well is located approximately 11 miles northeast of Carlsbad, New Mexico. A copy of this application with attached Oil Conservation Division Form C-108 is enclosed for your information.

This application has been set for hearing before a Division Examiner at 8:15 a.m. on January 19, 2012. The hearing will be held in Porter Hall in the Oil Conservation Division's Santa Fe Offices located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 1208.B to file a Pre-hearing Statement four days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

Sincerely,

Adam G. Rankin  
Attorney for OXY