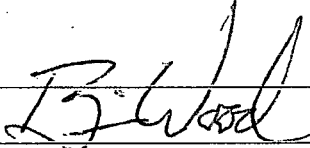


APPLICATION FOR AUTHORIZATION TO INJECT

Case 16250

- I. PURPOSE: XXX Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage _____
Application qualifies for administrative approval? _____ Yes _____ XXX No _____
- II. OPERATOR: PETROLIA ENERGY CORPORATION OGRID 371666
ADDRESS: 710 N. POST OAK ROAD, SUITE 512, HOUSTON TX 77024
CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes XXX No _____ R-8557 & R-8611, since
If yes, give the Division order number authorizing the project: terminated due to inactivity
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
TLSAU 50, 59, 68, 70, & 88
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: BRIAN WOOD TITLE: CONSULTANT
SIGNATURE:  DATE: APR. 30, 2018
E-MAIL ADDRESS: brian@permitswest.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

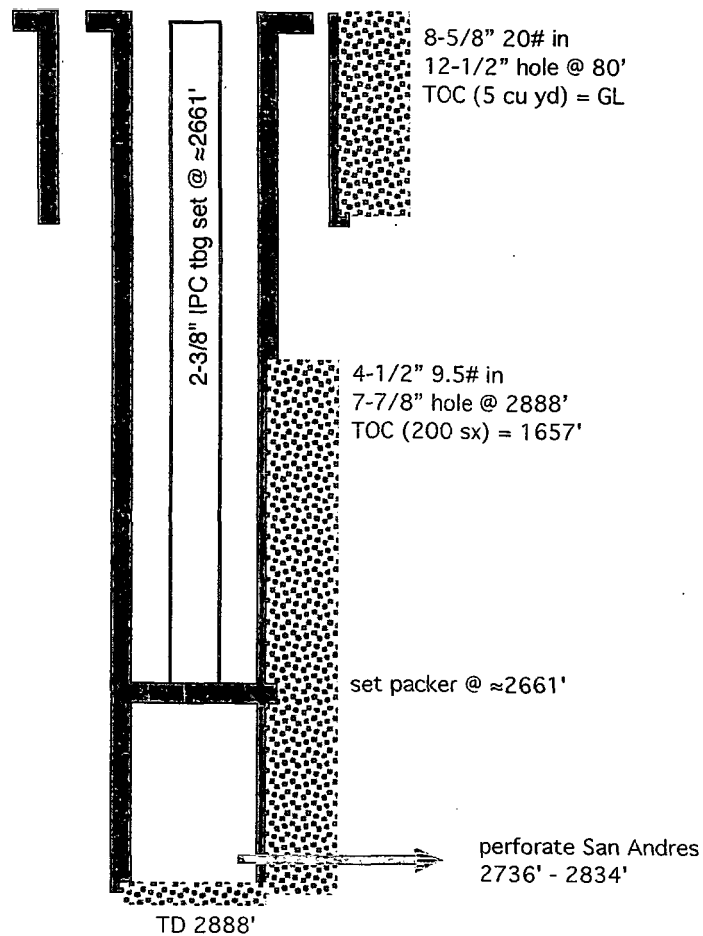
NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

INJECTION WELL DATA SHEET

OPERATOR: PETROLIA ENERGY CORPORATION

WELL NAME & NUMBER: TWIN LAKES SAN ANDRES UNIT 50

WELL LOCATION: 560' FSL & 2310' FEL
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE
 O 31 8 S 29 E

WELLBORE SCHEMATIC

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 12-1/2" Casing Size: 8-5/8"
 Cemented with: _____ sx. or 135 ft³
 Top of Cement: SURFACE Method Determined: VISUAL

Intermediate Casing

Hole Size: _____ Casing Size: _____
 Cemented with: _____ sx. or _____ ft³
 Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 7-7/8" Casing Size: 4-1/2"
 Cemented with: 200 sx. or _____ ft³
 Top of Cement: 1657' Method Determined: CALCULATED
 Total Depth: 2888'

Injection Interval

2736' feet to 2834'

(Perforated or Open Hole; indicate which)
 ■■■■■■■■■■

INJECTION WELL DATA SHEETTubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: 2-3/8" x 5-1/2" 17# INTERNAL & EXTERNAL NICKEL PLATEDPacker Setting Depth: ≈2661'

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

Additional Data

1. Is this a new well drilled for injection? _____ Yes XXX No

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

OIL, THEN CONVERTED TO WIW IN 1988

2. Name of the Injection Formation: SAN ANDRES

3. Name of Field or Pool (if applicable): TWIN LAKES; SAN ANDRES (ASSOC.)
(POOL CODE 61570)

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. _____

NO

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

OVER: NONE IN AREA OF REVIEWUNDER: NONE IN AREA OF REVIEW

INJECTION WELL DATA SHEET

OPERATOR: PETROLIA ENERGY CORPORATION

WELL NAME & NUMBER: TWIN LAKES SAN ANDRES UNIT 59

WELL LOCATION: 330' FNL & 1750' FWL

FOOTAGE LOCATION

C

UNIT LETTER

6

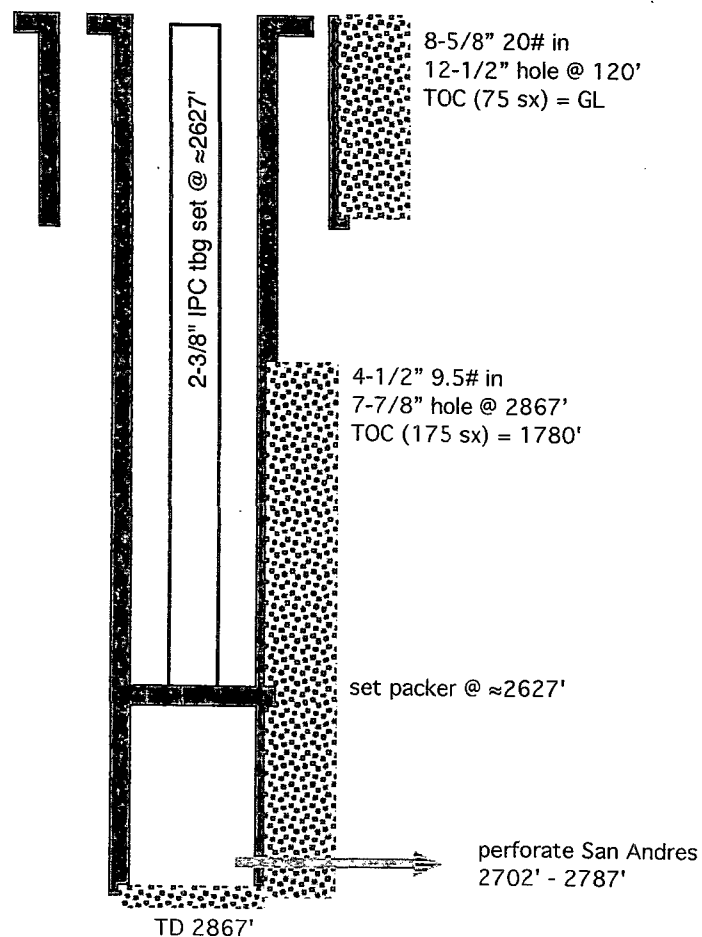
SECTION

9 S

TOWNSHIP

29 E

RANGE

WELLBORE SCHEMATIC

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 12-1/2" Casing Size: 8-5/8"

Cemented with: 75 sx. or ft³

Top of Cement: SURFACE Method Determined: VISUAL

Intermediate Casing

Hole Size: Casing Size:

Cemented with: sx. or ft³

Top of Cement: Method Determined:

Production Casing

Hole Size: 7-7/8" Casing Size: 4-1/2"

Cemented with: 175 sx. or ft³

Top of Cement: 1780' Method Determined: CALCULATED

Total Depth: 2867'

Injection Interval

2702' feet to 2787'

(Perforated or Open Hole; indicate which)

■■■■■■■■■■

INJECTION WELL DATA SHEETTubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: 2-3/8" x 5-1/2" 17# INTERNAL & EXTERNAL NICKEL PLATEDPacker Setting Depth: ≈2627'

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

Additional Data

1. Is this a new well drilled for injection? _____ Yes XXX No

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

OIL, THEN CONVERTED TO WIW IN 1988

2. Name of the Injection Formation: SAN ANDRES

3. Name of Field or Pool (if applicable): TWIN LAKES; SAN ANDRES (ASSOC.)

(POOL CODE 61570)

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. _____

NO

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

OVER: NONE IN AREA OF REVIEWUNDER: NONE IN AREA OF REVIEW

INJECTION WELL DATA SHEET

OPERATOR: PETROLIA ENERGY CORPORATION

WELL NAME & NUMBER: TWIN LAKES SAN ANDRES UNIT 68

WELL LOCATION: 1650' FNL & 330' FWL

FOOTAGE LOCATION

E

UNIT LETTER

6

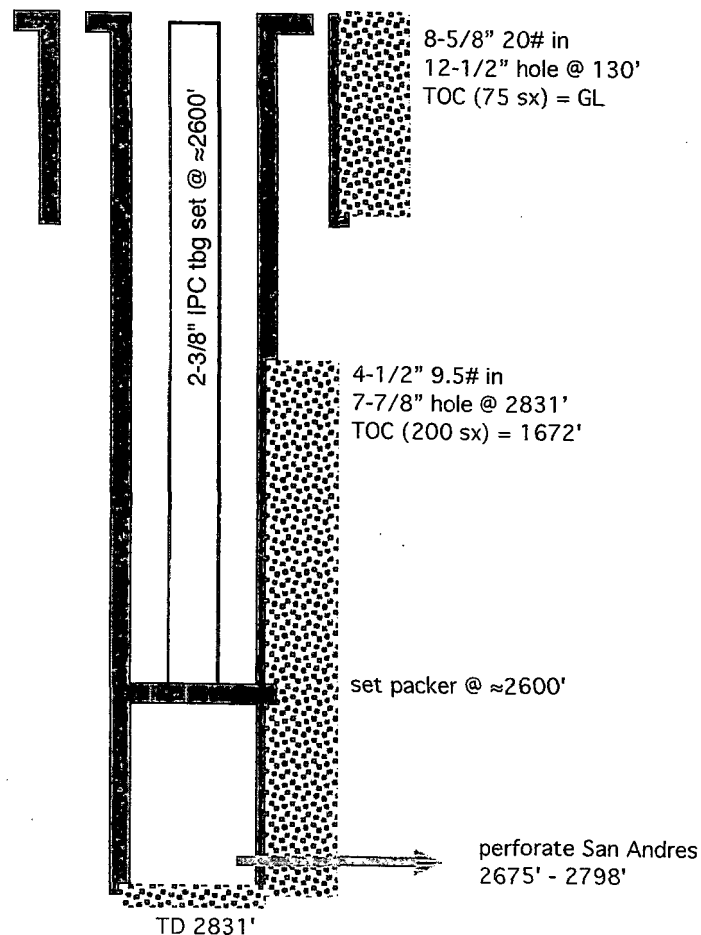
SECTION

9 S

TOWNSHIP

29 E

RANGE

WELLBORE SCHEMATIC

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 12-1/2" Casing Size: 8-5/8"

Cemented with: 75 sx. or ft³

Top of Cement: SURFACE Method Determined: VISUAL

Intermediate Casing

Hole Size: Casing Size:

Cemented with: sx. or ft³

Top of Cement: Method Determined:

Production Casing

Hole Size: 7-7/8" Casing Size: 4-1/2"

Cemented with: 200 sx. or ft³

Top of Cement: 1672' Method Determined: CALCULATED

Total Depth: 2831'

Injection Interval

2675' feet to 2798'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: 2-3/8" x 5-1/2" 17# INTERNAL & EXTERNAL NICKEL PLATEDPacker Setting Depth: ≈2600'

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

Additional Data

1. Is this a new well drilled for injection? _____ Yes XXX No

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

OIL, THEN CONVERTED TO WIW IN 1988

2. Name of the Injection Formation: SAN ANDRES

3. Name of Field or Pool (if applicable): TWIN LAKES; SAN ANDRES (ASSOC.)
(POOL CODE 61570)

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. _____

NO

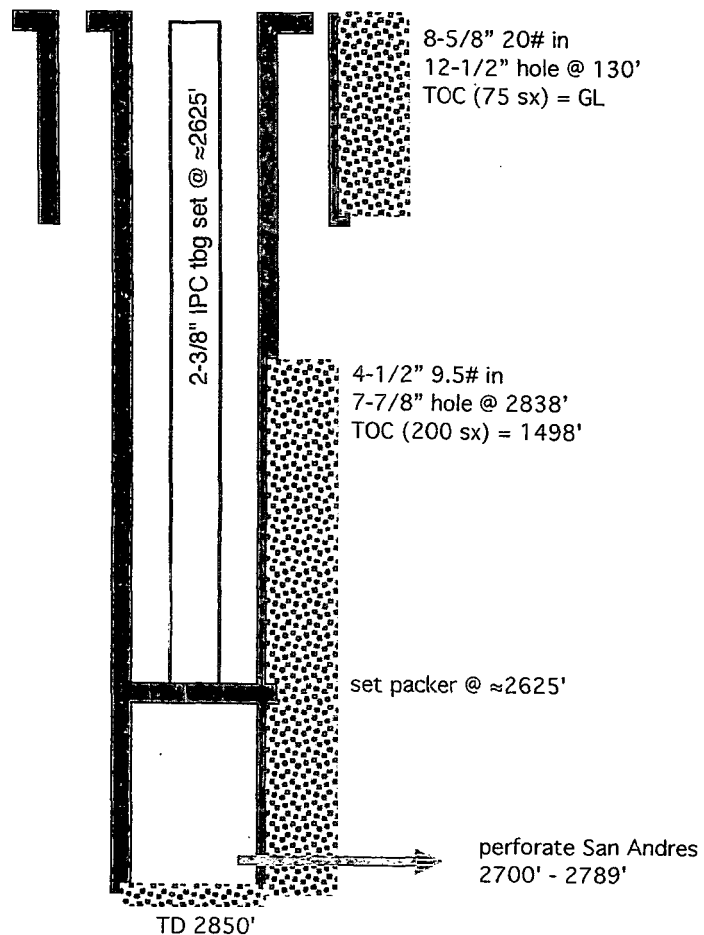
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

OVER: NONE IN AREA OF REVIEWUNDER: NONE IN AREA OF REVIEW

INJECTION WELL DATA SHEET

OPERATOR: PETROLIA ENERGY CORPORATION

WELL NAME & NUMBER: TWIN LAKES SAN ANDRES UNIT 70

WELL LOCATION: 1650' FNL & 2310' FEL
FOOTAGE LOCATIONG
UNIT LETTER6
SECTION9 S
TOWNSHIP29 E
RANGEWELLBORE SCHEMATIC

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 12-1/2" Casing Size: 8-5/8"

Cemented with: 75 sx. or ft³

Top of Cement: SURFACE Method Determined: VISUAL

Intermediate Casing

Hole Size: Casing Size:

Cemented with: sx. or ft³

Top of Cement: Method Determined:

Production Casing

Hole Size: 7-7/8" Casing Size: 4-1/2"

Cemented with: 200 sx. or ft³

Top of Cement: 1498' Method Determined: CALCULATED

Total Depth: 2850'

Injection Interval

2700' feet to 2789'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: 2-3/8" x 5-1/2" 17# INTERNAL & EXTERNAL NICKEL PLATEDPacker Setting Depth: ≈2625'

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

Additional Data

1. Is this a new well drilled for injection? _____ Yes XXX No

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

OIL, THEN CONVERTED TO WIW IN 1988

2. Name of the Injection Formation: SAN ANDRES

3. Name of Field or Pool (if applicable): TWIN LAKES; SAN ANDRES (ASSOC.)
(POOL CODE 61570)

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. _____

NO

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

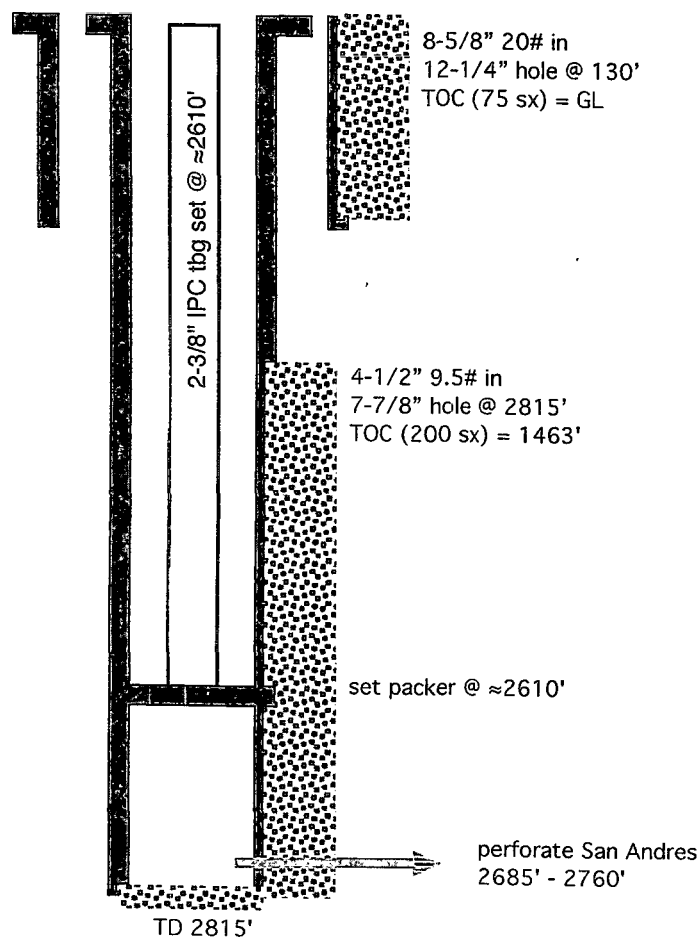
OVER: NONE IN AREA OF REVIEWUNDER: NONE IN AREA OF REVIEW

INJECTION WELL DATA SHEET

OPERATOR: PETROLIA ENERGY CORPORATION

WELL NAME & NUMBER: TWIN LAKES SAN ANDRES UNIT 88

WELL LOCATION: 990' FSL & 2310' FEL
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE
 O 6 9 S 29 E

WELLBORE SCHEMATIC

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 12-1/4" Casing Size: 8-5/8"

Cemented with: 75 sx. or ft³

Top of Cement: SURFACE Method Determined: VISUAL

Intermediate Casing

Hole Size: Casing Size:

Cemented with: sx. or ft³

Top of Cement: Method Determined:

Production Casing

Hole Size: 7-7/8" Casing Size: 4-1/2"

Cemented with: 200 sx. or ft³

Top of Cement: 1463' Method Determined: CALCULATED

Total Depth: 2815'

Injection Interval

2685' feet to 2760'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2-3/8" J-55 4.7# Lining Material: INTERNAL PLASTIC COATType of Packer: 2-3/8" x 5-1/2" 17# INTERNAL & EXTERNAL NICKEL PLATEDPacker Setting Depth: ≈2610'

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

Additional Data

1. Is this a new well drilled for injection? _____ Yes XXX No

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

OIL, THEN CONVERTED TO WIW IN 1988

2. Name of the Injection Formation: SAN ANDRES

3. Name of Field or Pool (if applicable): TWIN LAKES; SAN ANDRES (ASSOC.)
(POOL CODE 61570)

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. _____

NO

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

OVER: NONE IN AREA OF REVIEWUNDER: NONE IN AREA OF REVIEW

- I. Purpose is to reactivate 5 shut-in water injection wells and increase oil recovery. Injection authority terminated on June 10, 2013 due to more than a year of inactivity by the previous Unit operator. The wells will inject into the Twin Lakes; San Andres (Assoc.) Pool. The pool (61570) was discovered in 1964. The Unit and initial waterflood were established in 1987 (R-8557). There have been at least 3 subsequent approvals: R-8611 in 1998, WFX-779 in 2001, and WFX-793 in 2003. This had been an active water flood (29 injectors and 60 oil wells) until a year before its termination. All 5 areas of review are totally within the unit. See Exhibit A for a map and C-102 forms. Well details are:

Twin Lakes San Andres Unit	API	Location	Injection Interval	TD	cumulative injection to date (bbl)
50	30-005- 60796	560 FSL & 2310 FEL 31-8s-29e	2736 - 2834	2888	2,420,653
59	30-005- 60807	330 FNL & 1750 FWL 6-9s-29e	2702 - 2787	2867	399,006
68	30-005- 61007	1650 FNL & 330 FWL 6-9s-29e	2675 - 2798	2831	604,419
70	30-005- 60885	1650 FNL & 2310 FEL 6-9s-29e	2700 - 2789	2850	2,710,249
88	30-005- 61006	990 FSL & 2310 FEL 6-9s-29e	2685 - 2760	2815	1,526,768

- II. Operator: Petrolia Energy Corporation (OGRID 371666)
Operator phone number: (832) 941-0011
Operator address: 710 N. Post Oak Road, Suite 512, Houston TX 77024
Contact for Application: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

- III. A. (1) Unit (300075) size is 4,863.82 acres. See Exhibit B and the following table for more lease and Unit information.

Well	Lease	Tract Number	Acres in Lease	Distance to Closest Unit Boundary Line
50	O'Brien J	26	360	3630'
59	O'Brien L	29	636.13	4861'
68	ditto	ditto	ditto	4402'
70	ditto	ditto	ditto	3987'
88	O'Brien FF	30	320	4302'

A. (2) Casing and cement details are:

WELL	SPUD	TD	HOLE O. D.	CASING O. D.	CASING WEIGHT	SET @	CEMENT	TOC	HOW DETERMINED
50	11/1/80	2888'	12.5"	8.625"	20#	80'	5 cu yd	GL	visual
			7.875"	4.5"	9.5#	2888'	200 sx	1657'	calculated
59	11/8/80	2867'	12.5"	8.625"	20#	120'	75 sx	GL	visual
			7.875"	4.5"	9.5#	2867'	175 sx	1780'	calculated
68	7/9/81	2831'	12.5"	8.625"	20#	130'	75 sx	GL	visual
			7.875"	4.5"	9.5#	2831'	200 sx	1672'	calculated
70	5/11/81	2850'	12.5"	8.625"	20#	130'	75 sx	GL	visual
			7.875"	4.5"	9.5#	2838'	200 sx	1498'	calculated
88	7/10/81	2815'	12.25"	8.625"	20#	130'	75 sx	GL	visual
			7.875"	4.5"	9.5#	2815'	200 sx	1463'	calculated

A. (3) Tubing specifications will be 2-3/8", J-55, 4.7#, and internally plastic coated. Setting depth will be $\approx 75'$ above the highest perforation. Setting depths are expected to be:
 50: 2661' 59: 2627' 68: 2600' 70: 2625' 88: 2610'

A. (4) A 2-3/8" x 5-1/2" 17# internal and external nickel-plated injection packer will be set $\approx 75'$ above the highest perforation. Setting depths are expected to be:
 50: 2661' 59: 2627' 68: 2600' 70: 2625' 88: 2610'

- B. (1) Injection formation will be the Twin Lakes; San Andres (Assoc.) Pool (61570). There are currently 29 injection wells, 69 oil wells, and 1 saltwater disposal well in that pool.
- B. (2) Injection interval will be the San Andres. San Andres ranges in depth from 2044' to 2888' depending on the well. Interval thickness is 766' to 797' depending on the well. See the table on PAGE 1 for more details. All wells are cased holes. See attached C-108 well profiles for more perforation information.
- B. (3) Wells have been drilled. They initially operated as oil wells before being converted to water injection wells in April 1988. They will be reactivated as water injection wells after approval.
- B. (4) The San Andres is the only perforated zone. The only perforated intervals in the wells are those shown in the table on PAGE 1, which is the project's objective.
- B. (5) There is no higher or lower oil or gas zone in the area of review.

IV. This is not a horizontal or vertical expansion of an existing injection project. It is the reactivation of a terminated (due to inactivity) project. Orders R-8557 and R-8611-A cover the San Andres water flood and the location of all wells, as does WFX-779 and WFX-793. Closest unit boundary is 3,630' northeast of #50. The Unit currently has 47 oil wells and 28 water injection wells. The Unit has produced 895,129 barrels of oil and 18,902 Mcf from 1988 to date. At least 25,142,744 barrels of water have been injected to date in the Unit.

V. Exhibit C shows all 45 existing wells within a half-mile radius, regardless of depth. Exhibit D shows all 158 existing wells within a two-mile radius, regardless of depth.

Exhibit E shows all leases (only State and fee) within a half-mile radius. All are in the Unit. Details on the leases within a half-mile are:

Area	Lessor	Lease	Unit Tract #	San Andres Operator
E2SE4 36-8s-28e	NMSLO	K0-2803-0009	3 & 4	Blue Sky & Petrolia
SWSE 36-8s-28e	NMSLO	OG-4681-0013	5	Blue Sky
SENE & SW4 31-8s-29e	fee	Pelto I	24	Petrolia
E2SE4 31-8s-29e	fee	Pelto J	26	Canyon
S2NE4 & W2SE4 31-8s-29e	fee	Pelto J	26	Blue Sky & Petrolia
W2SW4 32-8s-29e	fee	N/A	35	Canyon
NWSE 1-9s-28e	fee	Pelto E	16	Canyon
NENE, S2NE4, NESE, & SESE 1-9s-28e	fee	Pelto E	16	Petrolia & Blue Sky
NWNE 1-9s-28e	fee	Pelto C	13	Petrolia
W2NW4 5-9s-29e	fee	Pelto L	29	Petrolia
W2SW4 5-9s-29e	fee	Pelto FF	30	Petrolia
NWSE 6-9s-29e	fee	Pelto FF	30	Canyon
SWSE & E2SE4 6-9s-29e	fee	Pelto FF	30	Blue Sky, Canyon, & Petrolia
SESW 6-9s-29e	fee	Pelto L	29	Canyon
N2, SWSW & N2SW4 6-9s-29e	fee	Pelto L	29	Blue Sky & Petrolia
SENE 7-9s-29e	fee	N/A	31	Petrolia
N2N2 & S2NE4 7-9s-29e	fee	Pelto Moonshine 7	32	Blue Sky & Petrolia
NWNW 8-9s-29e	fee	Pelto GG	33	Petrolia

Exhibit F shows all lessors (only fee and State) within a two-mile radius. Only fee and State leases are in the Unit. Only fee and State leases are within a two-mile radius of the unit.

VI. Forty-five wells are within a half-mile radius and all penetrated the San Andres. A table abstracting the well construction details and histories of the penetrators is in Exhibit G. Diagrams illustrating the nine P & A wells are in Exhibit H. Diagrams are sequenced by well number. The wells and their distances from the proposed injectors are:

PETROLIA ENERGY CORPORATION
 TLSAU 50, 59, 68, 70, & 88
 CHAVES COUNTY, NEW MEXICO

PAGE 5

API	Operator	Well	Feet From #50	Range	Unit Letter or Lot	Section	Township	TVD	Well Type
3000563189	Petrolia	TLSAU 326	656	29E	N	31	08.0S	2855	O
3000560824	Blue Sky	TLSAU 060	890	29E	2	6	09.0S	2950	O
3000560768	Blue Sky	TLSAU 041	1090	29E	J	31	08.0S	2930	O
3000560767	Petrolia	TLSAU 049	1240	29E	N	31	08.0S	2898	O
3000560810	Canyon	TLSAU 051	1326	29E	P	31	08.0S	2950	P&A
3000560807	Petrolia	TLSAU 059	1448	29E	3	6	09.0S	2867	I
3000560920	Blue Sky	TLSAU 061	1594	29E	1	6	09.0S	2960	I
3000562212	Petrolia	TLSAU 071	1637	29E	2	6	09.0S	2900	O
3000560696	Petrolia	TLSAU 040	1650	29E	K	31	08.0S	2900	SWD
3000560802	Canyon	TLSAU 042	1720	29E	I	31	08.0S	2951	P&A
3000563190	Petrolia	TLSAU 329	1797	29E	3	6	09.0S	2855	O
3000563187	Petrolia	TLSAU 319	1874	29E	J	31	08.0S	2903	O
3000563188	Petrolia	TLSAU 321	1980	29E	1	31	08.0S	2816	O
3000560885	Petrolia	TLSAU 070	2210	29E	G	6	09.0S	2850	I
3000560795	Blue Sky	TLSAU 032	2410	29E	G	31	08.0S	2861	I
3000560984	Blue Sky	TLSAU 069	2538	29E	F	6	09.0S	2850	O
3000560697	Blue Sky	TLSAU 048	2566	29E	4	31	08.0S	2799	O
3000560886	Concho	TLSAU 072	2572	29E	H	6	09.0S	2925	P&A
3000560695	Energy Develop.	TLSAU 031	2708	29E	F	31	08.0S	2918	P&A

PETROLIA ENERGY CORPORATION
 TLSAU 50, 59, 68, 70, & 88
 CHAVES COUNTY, NEW MEXICO

PAGE 6

API	Operator	Well	Feet From #59	Range	Unit Letter or Lot	Section	Township	TVD	Well Type
3000563189	Petrolia	TLSAU 326	797	29E	N	31	08.0S	2855	O
3000560767	Petrolia	TLSAU 049	895	29E	N	31	08.0S	2898	O
3000563190	Petrolia	TLSAU 329	984	29E	3	6	09.0S	2855	O
3000560824	Blue Sky	TLSAU 060	1139	29E	2	6	09.0S	2950	O
3000560984	Blue Sky	TLSAU 069	1324	29E	F	6	09.0S	2850	O
3000561031	Petrolia	TLSAU 058	1427	29E	4	6	09.0S	2823	O
3000560796	Petrolia	TLSAU 050	1448	29E	O	31	08.0S	2888	I
3000563188	Petrolia	TLSAU 321	1628	29E	1	31	08.0S	2816	O
3000560697	Blue Sky	TLSAU 048	1685	29E	4	31	08.0S	2799	O
3000560885	Petrolia	TLSAU 070	1739	29E	G	6	09.0S	2850	I
3000562212	Petrolia	TLSAU 071	1879	29E	2	6	09.0S	2900	O
3000561007	Petrolia	TLSAU 068	1948	29E	5	6	09.0S	2831	I
3000560696	Petrolia	TLSAU 040	1982	29E	K	31	08.0S	2900	S
3000563192	Petrolia	TLSAU 331	2056	29E	F	6	09.0S	2830	O
3000560768	Blue Sky	TLSAU 041	2288	29E	J	31	08.0S	2930	O
3000560657	Petrolia	TLSAU 039	2438	29E	3	31	08.0S	2870	O
3000560920	Blue Sky	TLSAU 061	2465	29E	1	6	09.0S	2960	I
3000560010	Blue Sky	TLSAU 047	2612	28E	P	36	08.0S	2730	O
3000560810	Canyon	TLSAU 051	2624	29E	P	31	08.0S	2950	P&A
3000560995	Blue Sky	TLSAU 078	2639	29E	K	6	09.0S	2825	I

PETROLIA ENERGY CORPORATION
 TLSAU 50, 59, 68, 70, & 88
 CHAVES COUNTY, NEW MEXICO

PAGE 7

API	Operator	Well	Feet From #68	Range	Unit Letter or Lot	Section	Township	TVD	Well Type
3000561032	Petrolia	TLSAU 077	1316	29E	6	6	09.0S	2826	O
3000561031	Petrolia	TLSAU 058	1320	29E	4	6	09.0S	2823	O
3000560984	Blue Sky	TLSAU 069	1326	29E	F	6	09.0S	2850	O
3000561096	Petrolia	TLSAU 067	1328	28E	H	1	09.0S	2740	O
3000561135	Blue Sky	TLSAU 057	1862	28E	1	1	09.0S	2770	I
3000560995	Blue Sky	TLSAU 078	1865	29E	K	6	09.0S	2825	I
3000560809	Blue Sky	TLSAU 076	1878	28E	I	1	09.0S	2730	I
3000560807	Petrolia	TLSAU 059	1948	29E	3	6	09.0S	2867	I
3000563190	Petrolia	TLSAU 329	2056	29E	3	6	09.0S	2855	O
3000563192	Petrolia	TLSAU 331	2093	29E	F	6	09.0S	2830	O
3000560697	Blue Sky	TLSAU 048	2220	29E	4	31	08.0S	2799	O
3000560010	Blue Sky	TLSAU 047	2507	28E	P	36	08.0S	2730	O
3000560028	Petrolia	TLSAU 056	2513	28E	2	1	09.0S	2657	O
3000560885	Petrolia	TLSAU 070	2565	29E	G	6	09.0S	2850	I
3000560767	Petrolia	TLSAU 049	2582	29E	N	31	08.0S	2898	O
3000560468	Blue Sky	TLSAU 066	2652	28E	G	1	09.0S	2615	O

PETROLIA ENERGY CORPORATION
 TLSAU 50, 59, 68, 70, & 88
 CHAVES COUNTY, NEW MEXICO

PAGE 8

API	Operator	Well	Feet From #70	Range	Unit Letter or Lot	Section	Township	TVD	Well Type
3000563190	Petrolia	TLSAU 329	768	29E	3	6	09.0S	2855	O
3000563192	Petrolia	TLSAU 331	878	29E	F	6	09.0S	2830	O
3000562213	Petrolia	TLSAU 080	916	29E	G	6	09.0S	2925	O
3000562212	Petrolia	TLSAU 071	949	29E	2	6	09.0S	2900	O
3000560984	Blue Sky	TLSAU 069	1239	29E	F	6	09.0S	2850	O
3000560982	Canyon	TLSAU 079	1318	29E	J	6	09.0S	2210	P&A
3000560824	Blue Sky	TLSAU 060	1320	29E	2	6	09.0S	2950	O
3000560886	Concho	TLSAU 072	1326	29E	H	6	09.0S	2925	P&A
3000560807	Petrolia	TLSAU 059	1739	29E	3	6	09.0S	2867	I
3000560995	Blue Sky	TLSAU 078	1813	29E	K	6	09.0S	2825	I
3000563189	Petrolia	TLSAU 326	1821	29E	N	31	08.0S	2855	O
3000560993	Blue Sky	TLSAU 081	1864	29E	I	6	09.0S	2880	I
3000560920	Blue Sky	TLSAU 061	1875	29E	1	6	09.0S	2960	I
3000563193	Canyon	TLSAU 333	2063	29E	J	6	09.0S	2830	P&A
3000563140	Petrolia	TLSAU 203	2087	29E	K	6	09.0S	2862	O
3000560796	Petrolia	TLSAU 050	2210	29E	O	31	08.0S	2888	I
3000560767	Petrolia	TLSAU 049	2529	29E	N	31	08.0S	2898	O
3000561007	Petrolia	TLSAU 068	2565	29E	5	6	09.0S	2831	I
3000560810	Canyon	TLSAU 051	2582	29E	P	31	08.0S	2950	P&A
3000561006	Petrolia	TLSAU 088	2638	29E	O	6	09.0S	2815	I

PETROLIA ENERGY CORPORATION
 TLSAU 50, 59, 68, 70, & 88
 CHAVES COUNTY, NEW MEXICO

PAGE 9

API	Operator	Well	Feet From #88	Range	Unit Letter or Lot	Section	Township	TVD	Well Type
3000563140	Petrolia	TLSAU 203	854	29E	K	6	09.0S	2862	O
3000563193	Canyon	TLSAU 333	953	29E	J	6	09.0S	2830	P&A
3000561030	Canyon	TLSAU 087	1238	29E	N	6	09.0S	2774	P&A
3000561106	Petrolia	TLSAU 094	1320	29E	B	7	09.0S	2840	O
3000560982	Canyon	TLSAU 079	1320	29E	J	6	09.0S	2210	P&A
3000561022	Blue Sky	TLSAU 089	1326	29E	P	6	09.0S	2840	O
3000560995	Blue Sky	TLSAU 078	1806	29E	K	6	09.0S	2825	I
3000561603	Concho	TLSAU 093	1814	29E	C	7	09.0S	2780	P&A
3000561107	Blue Sky	TLSAU 095	1866	29E	A	7	09.0S	2840	I
3000560993	Blue Sky	TLSAU 081	1877	29E	I	6	09.0S	2880	I
3000563192	Petrolia	TLSAU 331	2057	29E	F	6	09.0S	2830	O
3000562213	Petrolia	TLSAU 080	2081	29E	G	6	09.0S	2925	O
3000560885	Petrolia	TLSAU 070	2638	29E	G	6	09.0S	2850	I
3000561075	Blue Sky	TLSAU 103	2640	29E	G	7	09.0S	2840	I
3000561554	Pelto	O'Brien L 014	2650	29E	M	6	09.0S	2800	P&A

- VII. 1. Average injection rate will be $\approx$ 600 bwpd per well.
 Maximum injection rate will be 750 bwpd per well.
2. System will be closed. Wells tie into the existing Unit pipeline system.
3. Average injection pressure will be 500 psi. Maximum injection pressures:

TLSAU	Injection Interval	TD	Maximum injection pressure
50	2736' – 2834'	2888'	547 psi
59	2702' – 2787'	2867'	540 psi
68	2675' – 2798'	2831'	535 psi
70	2700' – 2789'	2850'	540 psi
88	2685' – 2760'	2815'	537 psi

4. Injected water will all be Unit produced San Andres water.

5. Sixty-two San Andres oil wells are in the Unit. It is the goal of the project to increase production from the San Andres. Forty-six San Andres water injection wells are in the Unit.

VIII. The Twin Lakes; San Andres is a fine-grained dolomite. Its permeability is reduced by anhydrite occlusions reflecting the tidal flat depositional environment. Strike is north-south. Dip is to the east at a rate of 60' to 100' per mile. A structure map is in Exhibit I. There are currently 1,271 San Andres injection wells and 122 San Andres saltwater disposal wells in New Mexico. Formation tops are:

Well:	50	59	68	70	88
Formation					
Yates	968	930	900	920	910
Queen	1607	1565	1550	1575	1550
Penrose	1710	1663	1636	1656	1638
San Andres	2106	2070	2044	2062	2049
perfs	2736 - 2834	2702 - 2787	2675 - 2798	2700 - 2789	2685 - 2760
TD	2888	2867	2831	2850	2815

No water wells are within a 2-mile radius according to a February 2-3, 2017 field inspection and Office of the State Engineer records (Exhibit J). No existing underground drinking water sources are below the San Andres within a mile radius. State Engineer records show 2 water wells in T. 8 and 9 S. and R. 28 and 29 E. The depth of one (RA 08304) is listed as "shallow". The other (RA 09732) is a 922' deep well. Both are more than two miles west.

There will be >1,000' of vertical separation, anhydrite, and salt between the bottom of the only likely underground water source (Quaternary) and the top of the San Andres.

IX. The wells will be stimulated with acid to clean out scale or fill.

X. A compensated neutron log was run in the #50. Sidewall neutron porosity and dual laterolog micro-SFL logs were run in the other four wells.

XI. No fresh water wells are within two miles (Exhibit J).

XII. Petrolia Energy Corporation is not aware of any geologic or engineering data that may indicate the San Andres is in hydrologic connection with any underground sources of water. Closest Quaternary fault is over 115 miles west (Exhibit K). Water has been injected into the San Andres in Sections 6 and 31 for 24 years. Over 25,125,446 barrels have been injected in the San Andres in the Unit since 1993. The Unit has produced 891,529 barrels of oil and 18,902 Mcf of gas since that year. There are 1,271 injection and 122 saltwater disposal wells currently in the San Andres in New Mexico.

Previous San Andres water flood approvals in the unit include Case 9210, R-8557 in 1987 that established the waterflood, Case 12023, R-8611-A in 1998 which changed the density from 80 acres to 40 acres, WFX-779 in 2001 which authorized 3 wells, and WFX-793 which also authorized 3 wells.

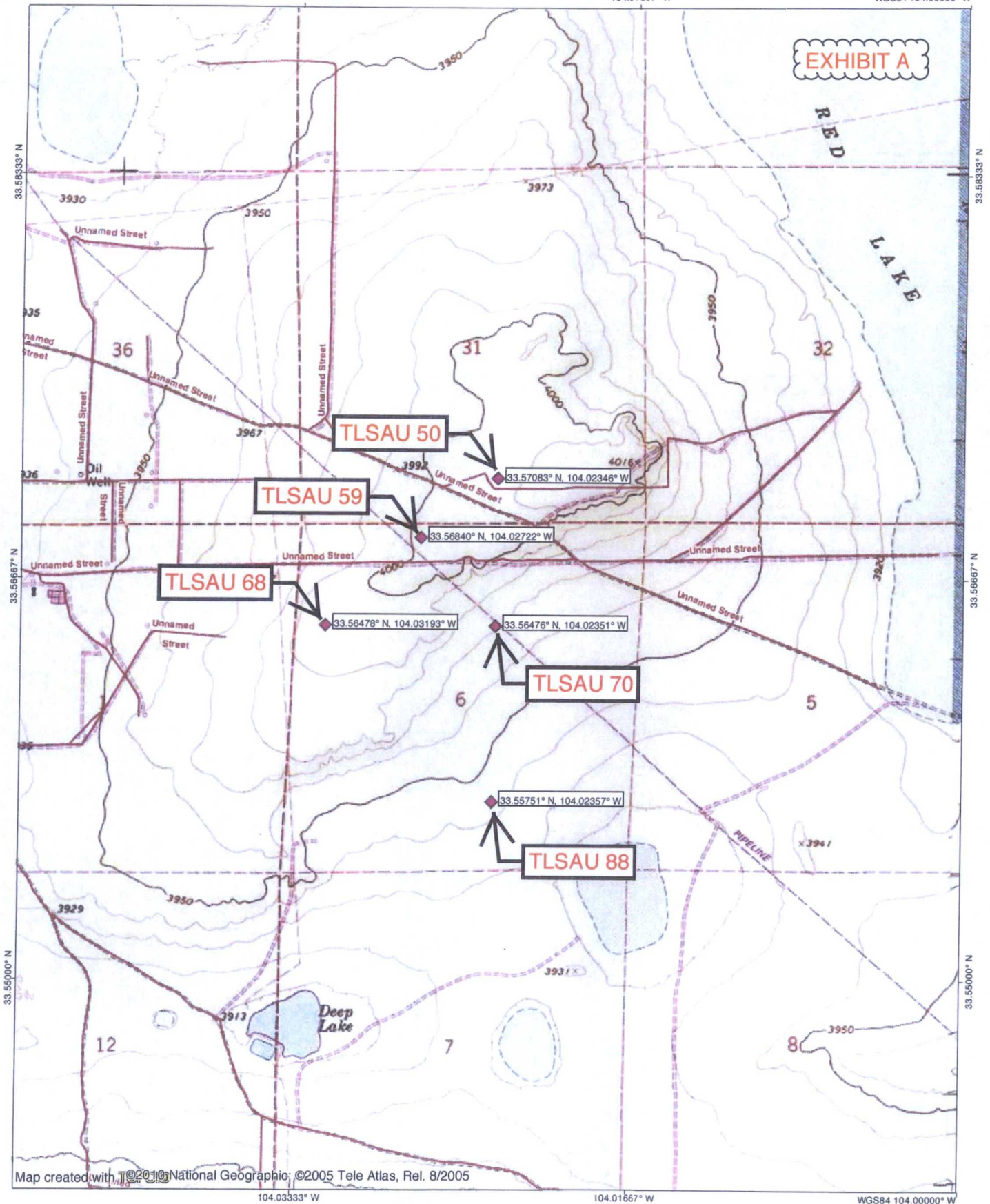
XIII. Surface owner is Crossroads West Phoenix, LLC 9 West 57th St., Suite 4500, New York, NY 10019.

104.03333° W

104.01667° W

WGS84 104.00000° W

EXHIBIT A



Map created with T©2010 National Geographic; ©2005 Tele Atlas, Rel. 8/2005

104.03333° W

104.01667° W

WGS84 104.00000° W



TN 41MN

7.5°

07/20/14

MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form 7-75
Supersedes 6-75
EXHIBIT A

All distances must be from the outer boundaries of the Section

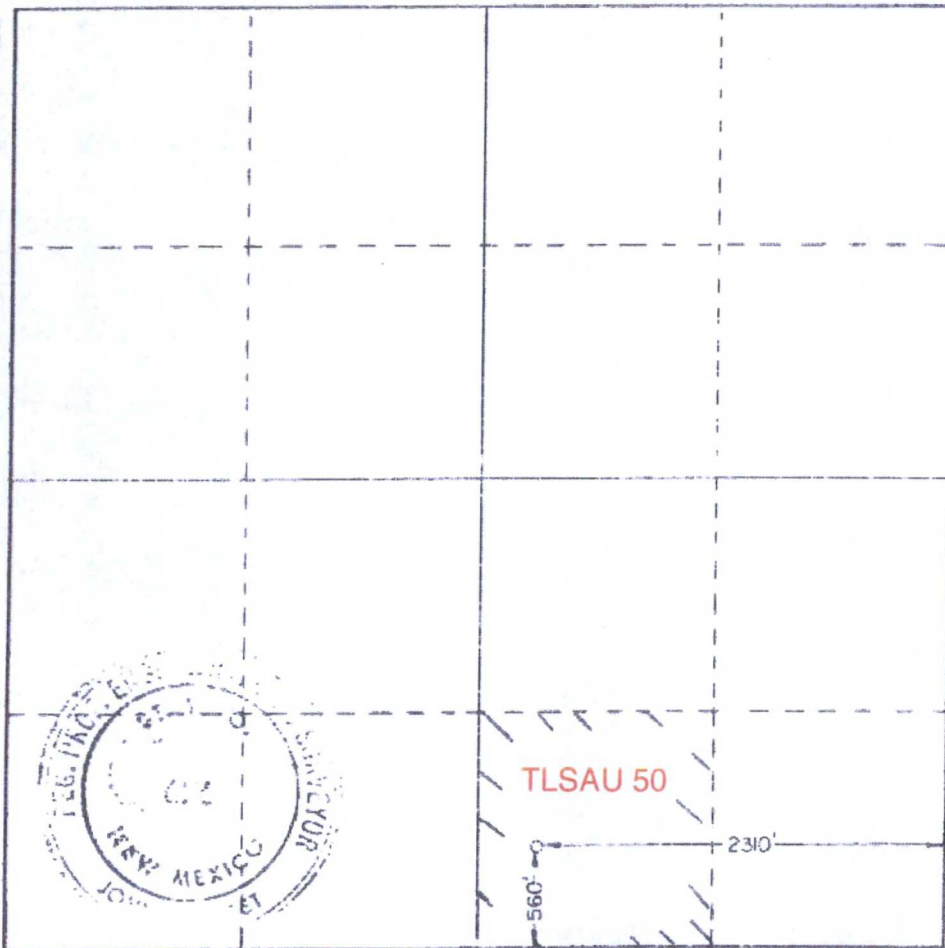
Stevens Oil Co.		Lease		O'Brien "J"	Map No.
Section	31	Township	8 South	Range	29 East
County	Chaves				
Approximate Location of Well:					
560	feet from the	South	line and	2310	feet from the
East Level Elev.	Producing Formation		Tract	Estimated Acreage	
4006.6	San Andres		W. Twin Lakes Assoc.	40	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Donald L. Stevens

Owner

Stevens Oil Company

Date

10-9-80

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

May 27, 1980

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. JOHN W. WEST 676
PATRICK A. ROMERO 6828
Ronald J. Eidson 3239

**MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128

EXHIBIT A

All distances must be from the outer boundaries of the Section.

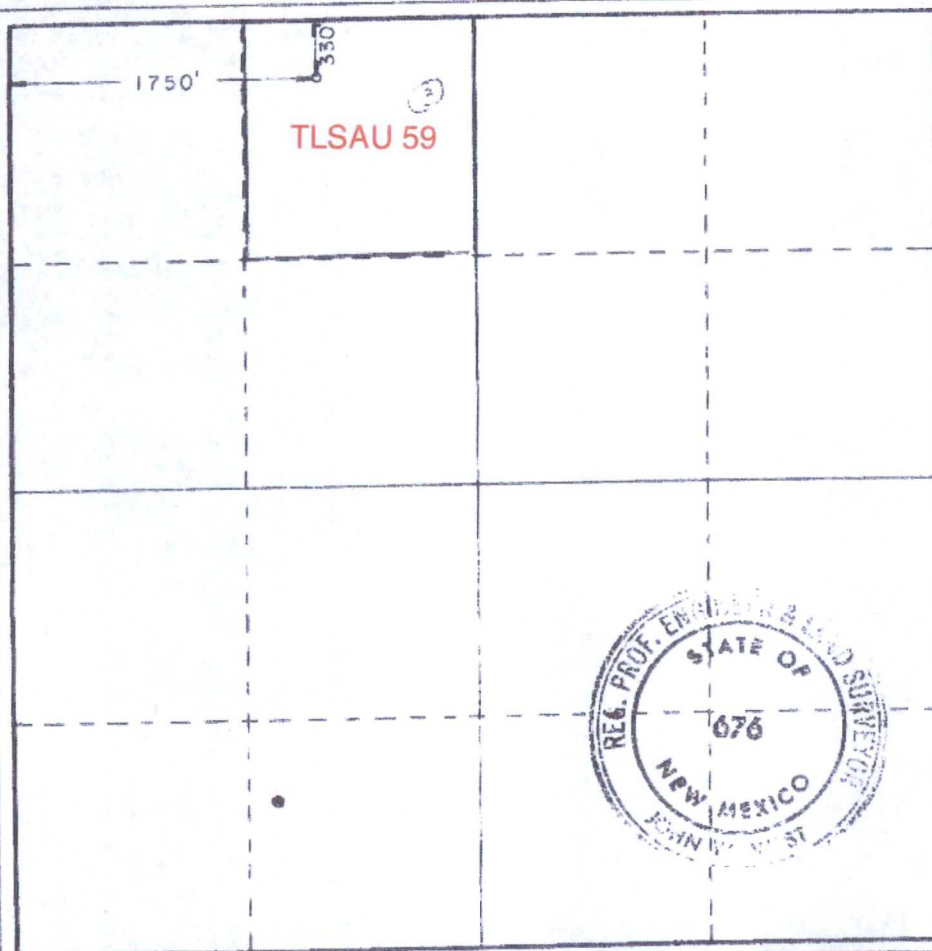
Operator Stevens Oil Company			Lease O'Brien I.		Well No. 1
Tract Letter C	Section 6	Township 9 South	Range 29 East	County Chaves	
Actual Footage Location of Well: 330 feet from the North line and 1750 feet from the West line					
Ground Level Elev 4001.75	Producing Formation San Andres	Pool Twin Lakes Assoc.	Dedicated Acreage: 40.12 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name *Ronald J. Edson*

Position
Owner

Company
Stevens Oil Company

Date
11-5-80

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

October 20, 1980

Registered Professional Engineer
and/or Land Surveyor

John W. West

Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6665
Ronald J. Edson 3239

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600 6930 7260 7590 7920 8250 8580 8910 9240 9570 9900

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Superseded C-128

EXHIBIT A

All distances must be from the outer boundaries of the Section

Lessor Stevens Oil Co.		Lease O'Brien L		Well No. 10
Initial Letter E	Section 6	Township 9 South	Range 29 East	County Chaves
Actual Footage Location of Well: 1650 feet from the north line and 330 feet from the west line				
Ground Level Elev. 3995.0	Producing Formation San Andres	Pool (Unit) Twin Lakes-San Andres Assoc.	Consolidated Acreage 40	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty)
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Signature: *Donald J. Eldon*
Owner

Company: **Stevens Oil Company**

Date: **6-23-81**

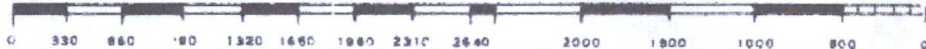
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

Date of Survey: **5-20-81**

Registered Professional Engineer and Land Surveyor

Signature: *John W. West*

Certificate No. **JOHN W. WEST 876**
PATRICK A. ROMERO 888
Ronald J. Eldon 3239



/ MEXICO OIL CONSERVATION COMMISS N
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128

EXHIBIT A

All distances must be from the outer boundaries of the Section

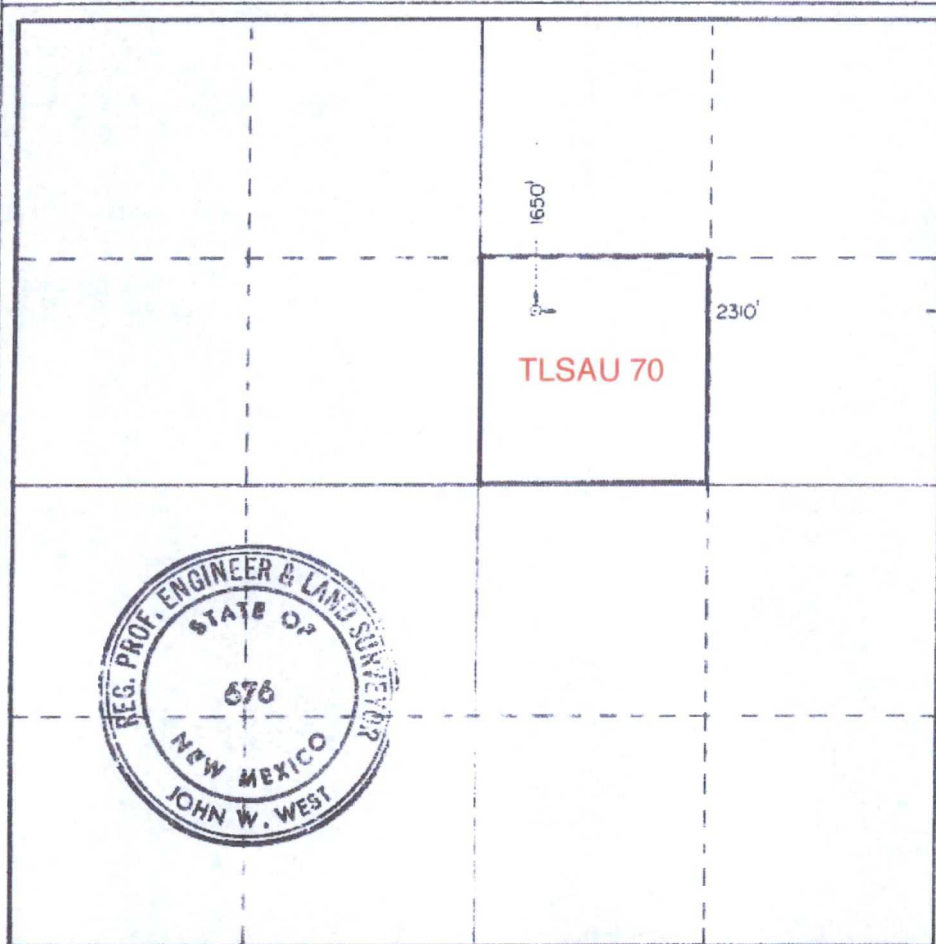
Operator Stevens Oil Co.			Lease O'Brien "L"		Well No. 4
Tract Letter G	Section 6	Township 9 South	Range 29 East	County Chaves	
Actual Footage Location of Well: 1650 feet from the north line and 2310 feet from the east line					
Ground Level Elev 3972.7	Producing Formation San Andres	Pool <i>un-</i> Twin Lakes-San Andres Assoc.	Dedicated Acreage 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (I see reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name *Ronald J. Eidson*
Position _____

Owner

Company
Stevens Oil Co.

Date
2-24-81

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
1-28-81

Registered Professional Engineer and Land Surveyor

John W. West
Certificate No. **JOHN W. WEST 676**

PATRICK A. ROMERO 6663
Ronald J. Eidson 3239



NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128

EXHIBIT A

All distances must be from the outer boundaries of the Section

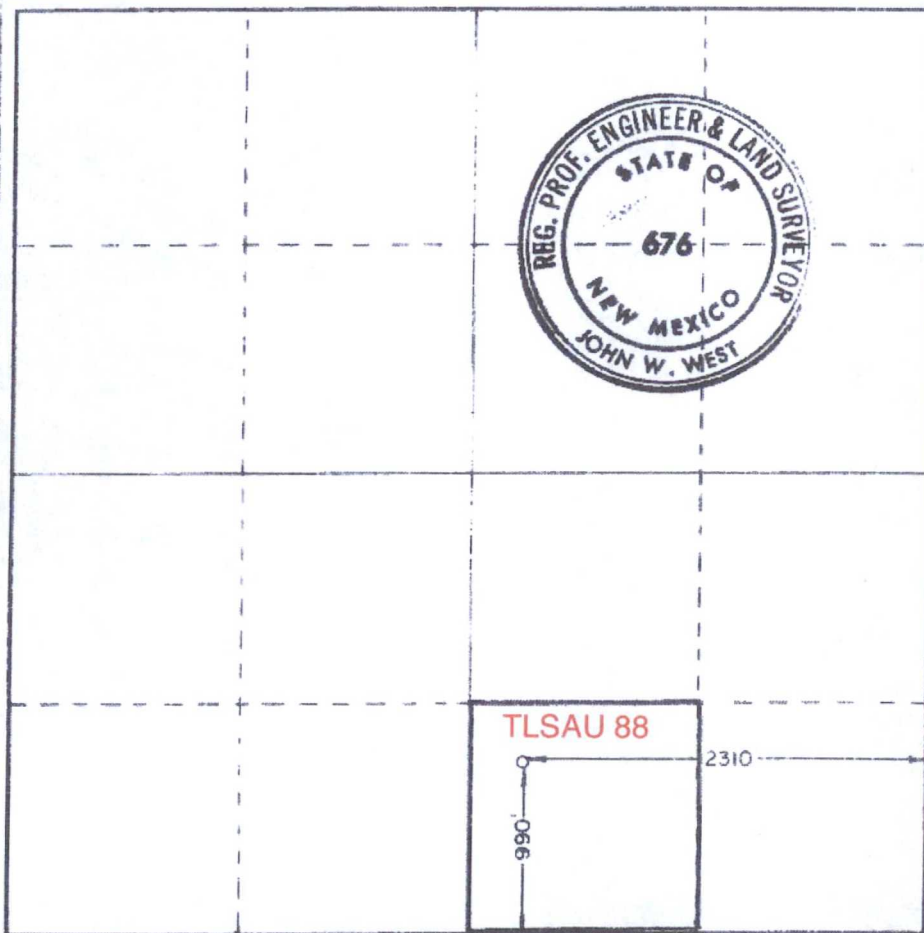
Operator Stevens Oil Co.			Lease O'Brien FF		Well No. 4 XX
Tract Letter 0	Section 6	Township 9 South	Range 29 East	County Chaves	
Actual Footage Location of Well: 990 feet from the south line and 2310 feet from the east line					
Minimum Level Elev. 3930.2	Producing Formation San Andres		Pool Twin Lakes-San Andres Assoc.	Dedicated Acreage 40	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



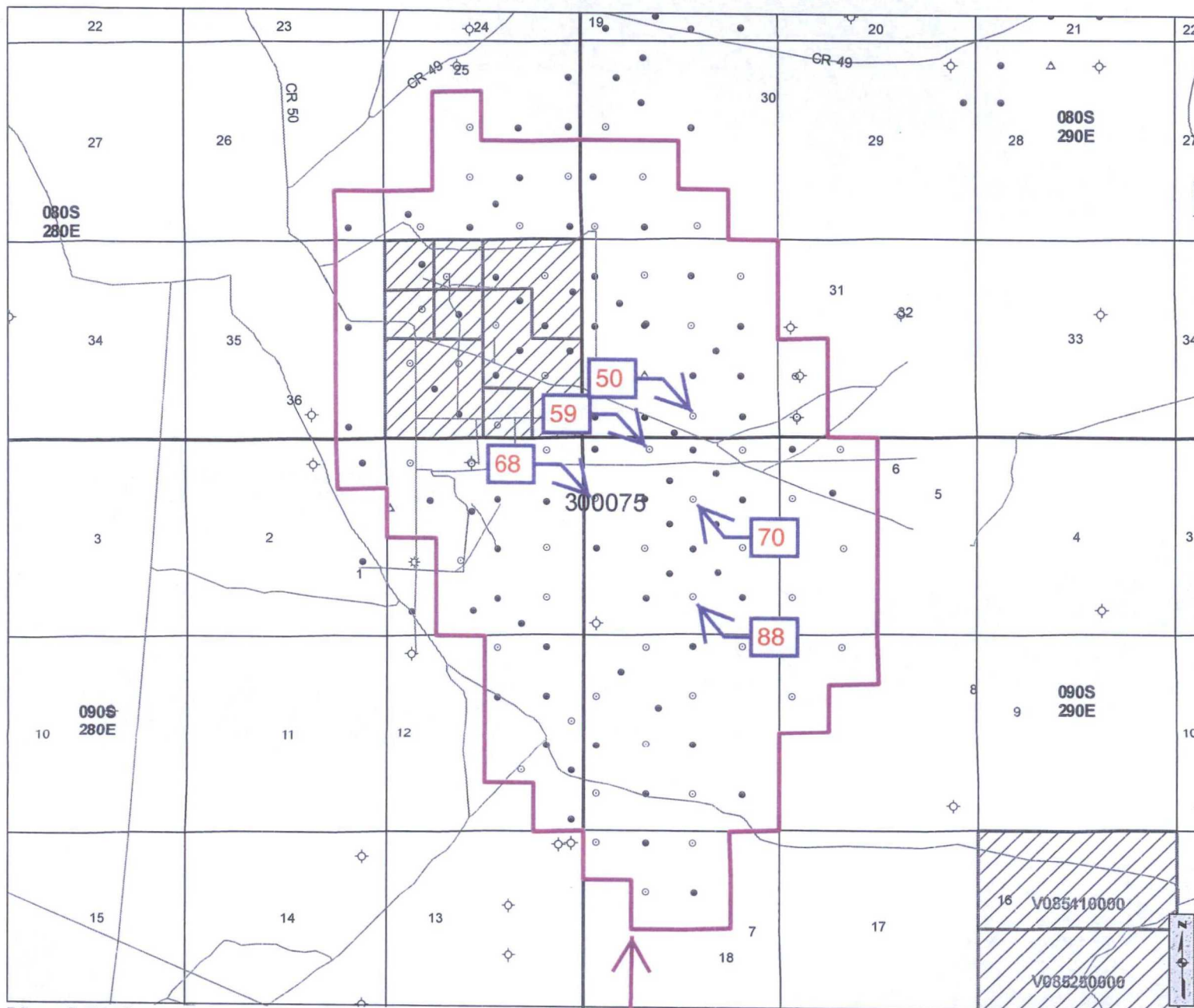
CERTIFICATION

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

Signature: *Ronald J. Eldson*
Name: **Ronald J. Eldson**
Title: **Owner**
Company: **Stevens Oil Company**
Date: **6-23-81**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: **5-27-81**
Registered Professional Engineer and/or Land Surveyor:
Signature: *John W. West*
Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6683
Ronald J. Eldson 3239



Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- NM Hwy
- Local Road
- Continental Divide

Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOCD Order R-111-P
- Potash Enclave Outline

NMOCD Oil and Gas Wells

- CO₂
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

New Mexico State Land Office Oil, Gas and Minerals

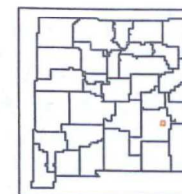
0 0.15 0.3 0.6 0.9 1.2 Miles
Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

The New Mexico State Land Office assumes no responsibility or liability for, or in connection with, the accuracy, reliability or use of the information provided here, in State Land Office data layers or any other data layer.

Land Office Geographic Information Center
logic@slo.state.nm.us

Twin Lakes San Andres Unit boundary

Created On: 4/30/2014 7:29:58 PM



www.nmstatelands.org

EXHIBIT C

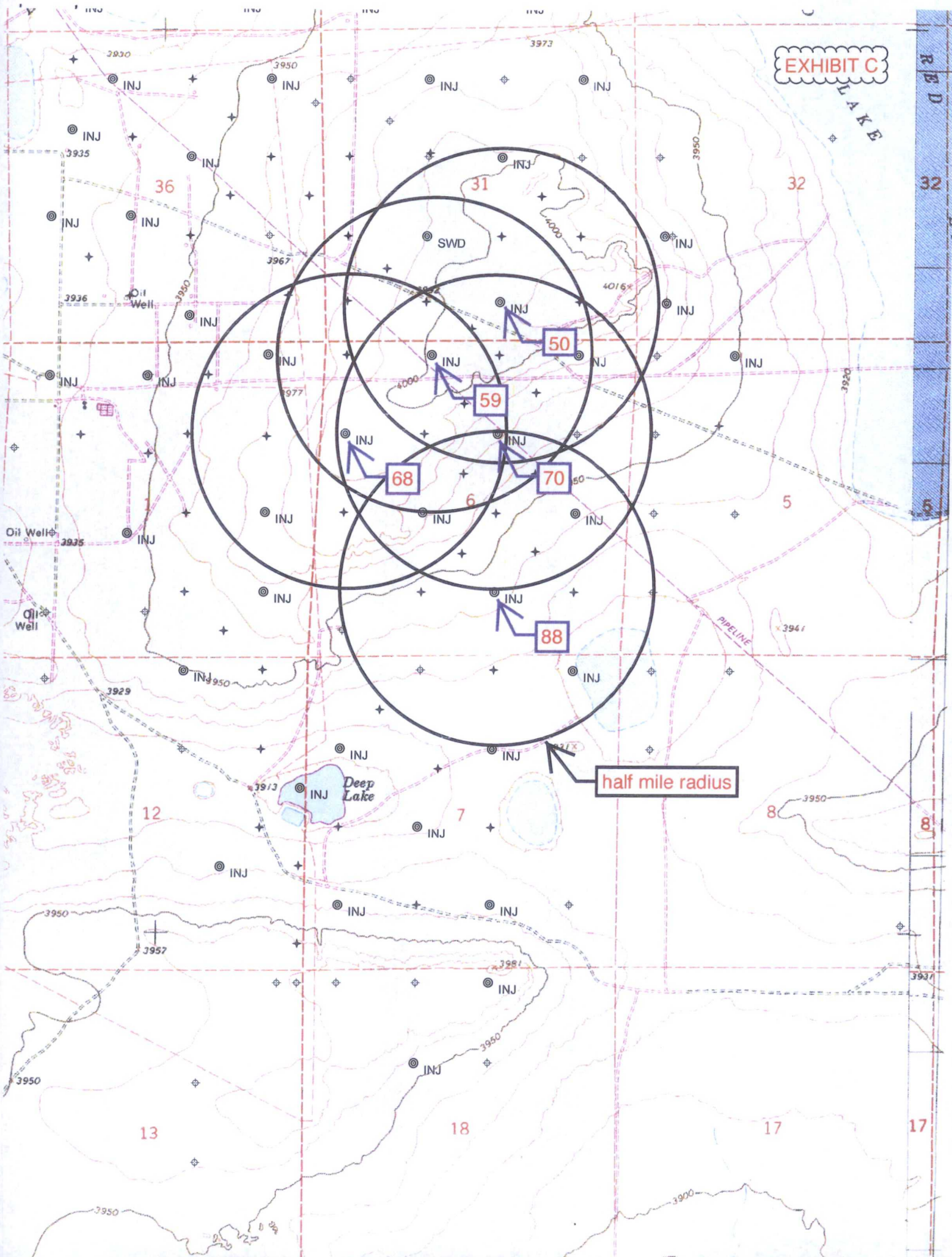
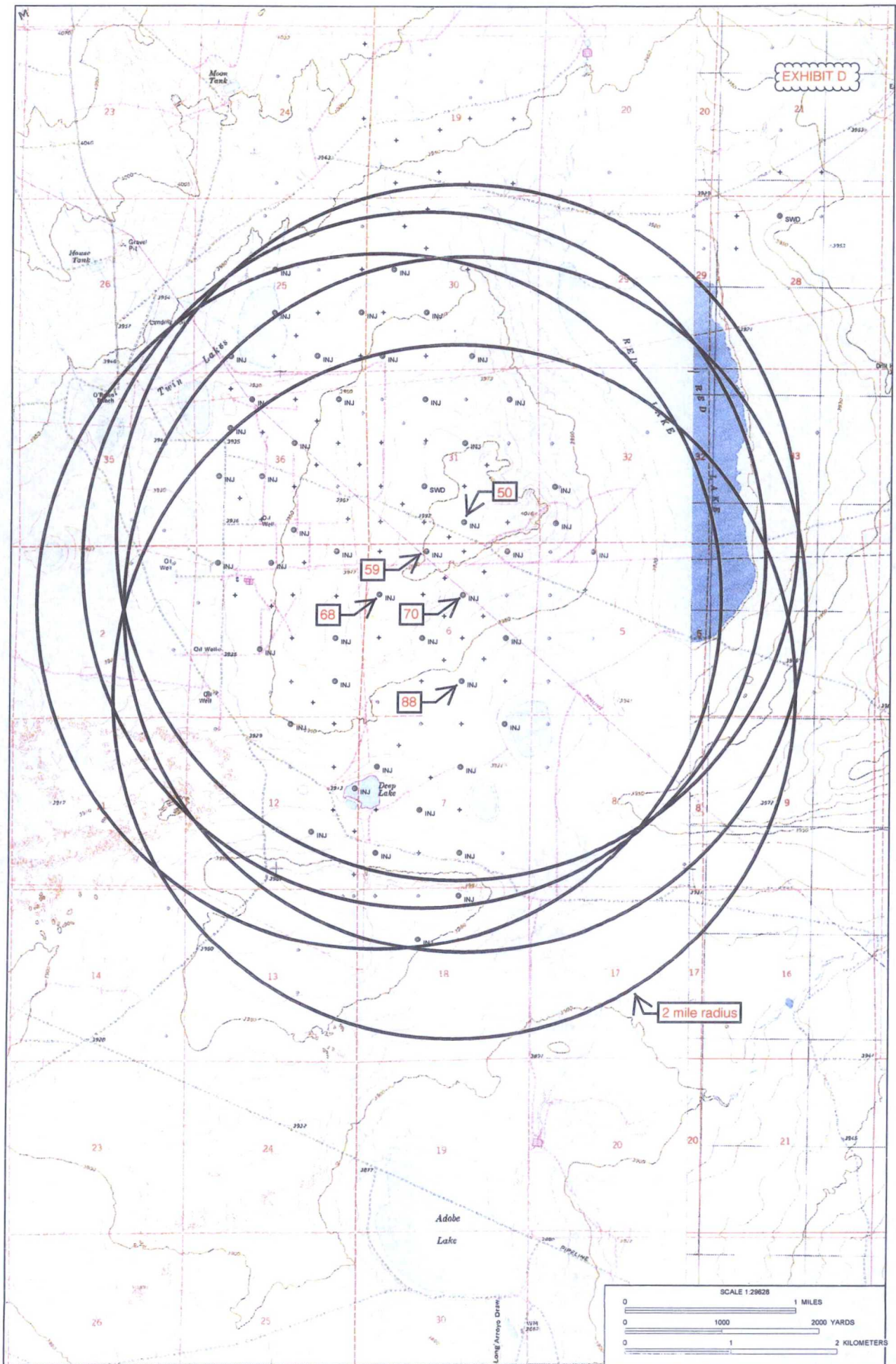
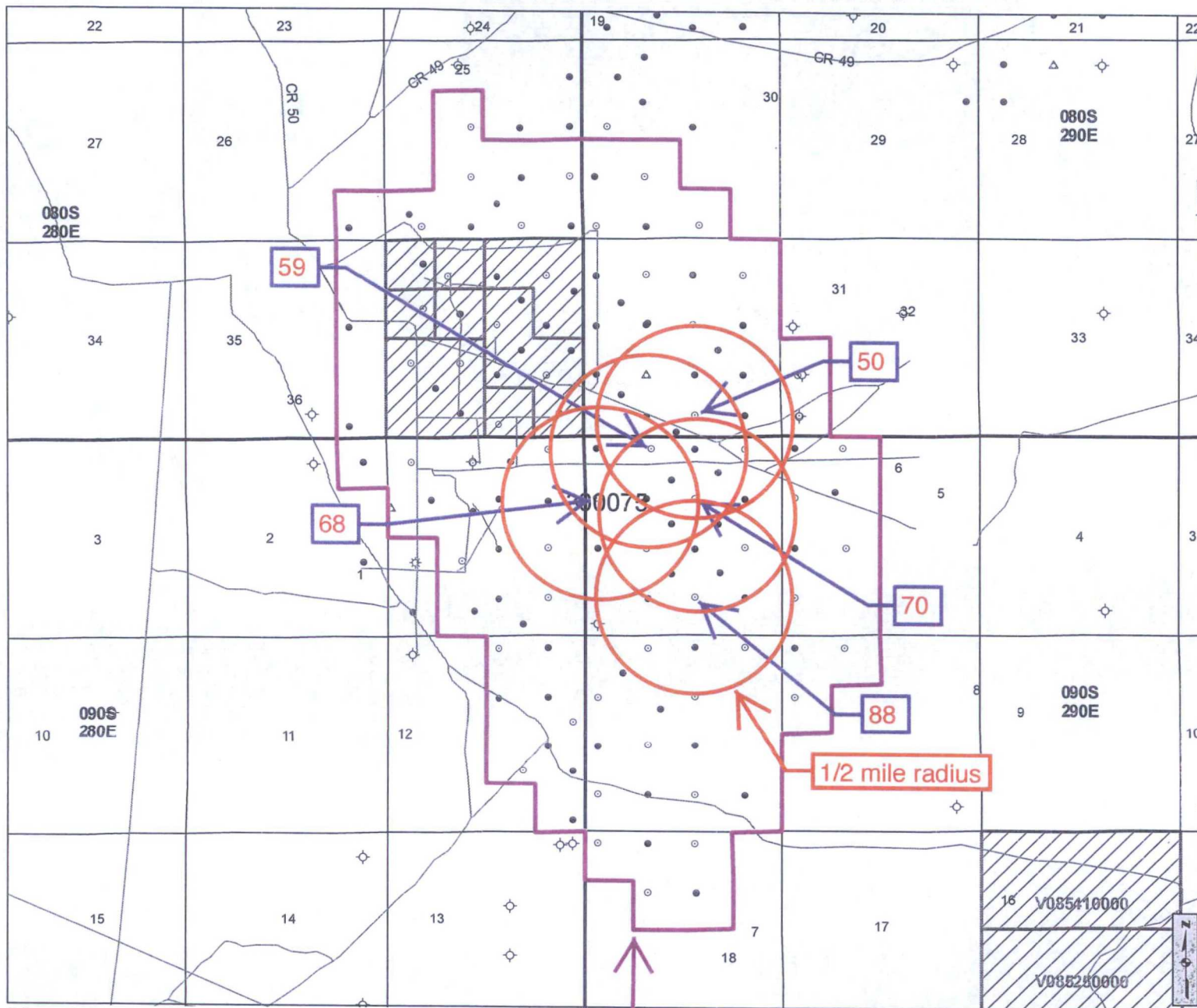


EXHIBIT D





Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- US Hwy
- NM Hwy
- Local Road
- Continental Divide

Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOC Order R-111-P
- Potash Enclave Outline

NMOC Oil and Gas Wells

- CO₂
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

New Mexico State Land Office Oil, Gas and Minerals

0 0.15 0.3 0.6 0.9 1.2 Miles
Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

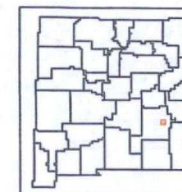
Twin Lakes San Andres Unit boundary

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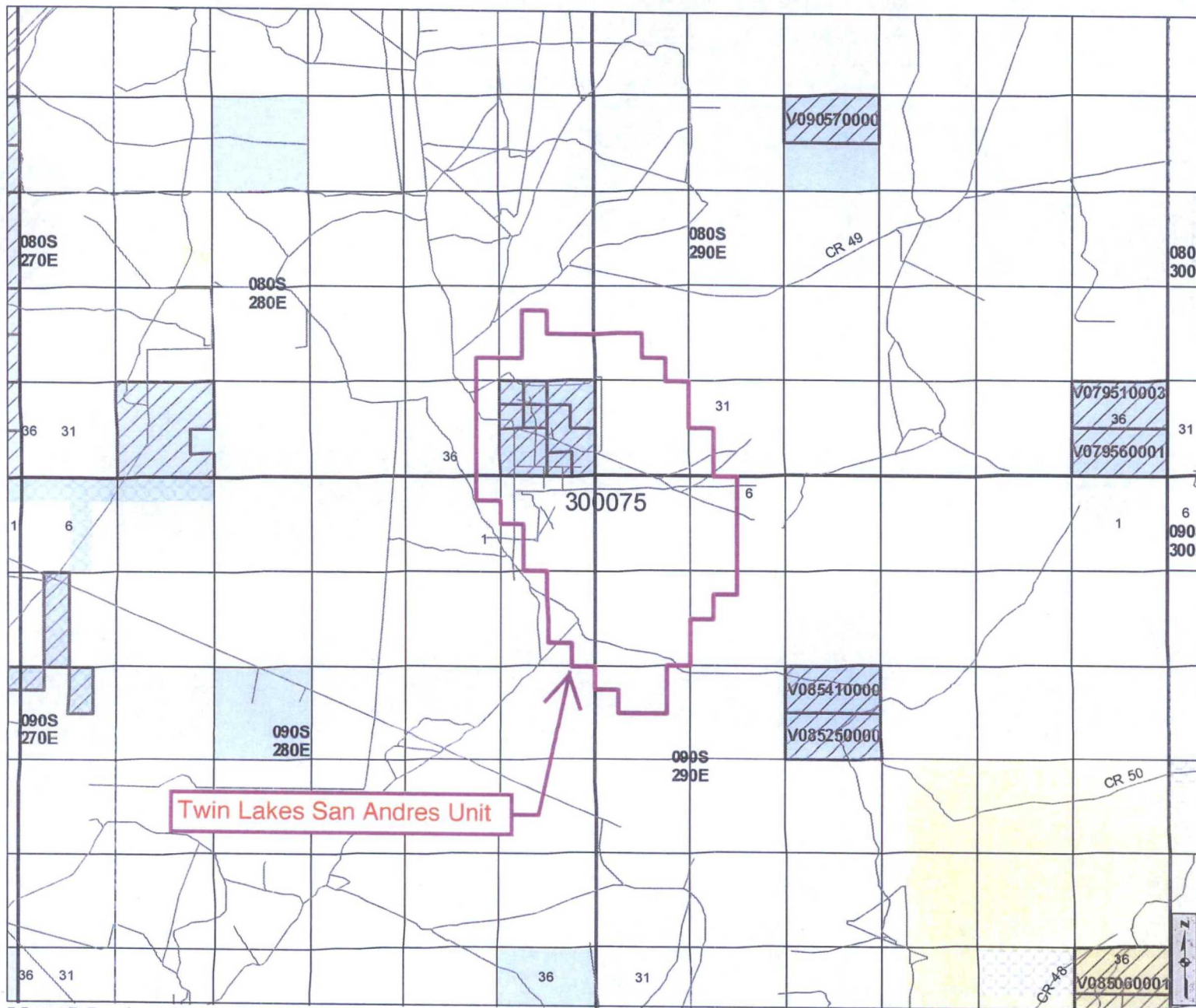
Land Office Geographic Information Center
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EXHIBIT E



www.nmstatelands.org



Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- NM Hwy
- Local Road
- Continental Divide

Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOCD Order R-111-P
- Potash Enclave Outline

NMOCD Oil and Gas Wells

- CO₂
- Injection
- Oil
- Water
- Gas
- Miscellaneous
- Salt Water Disposal
- DA or PA

New Mexico State Land Office

Oil, Gas and Minerals

0 0.25 0.5 1 1.5 2 Miles

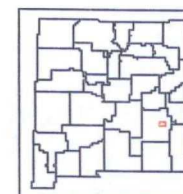
Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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EXHIBIT F



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WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 326	12/1/98	2855	Twin Lake; San Andres	Oil	12.25	8.625	118	3 yds Redi Mix	GL	circulated to GL
30-005-63189					7.875	5.5	2850	900 sx	GL	circulated 124 sx
N-31-8s-29e										
TLSAU 060	12/6/80	2950	Twin Lake; San Andres	Oil	12.5	8.625	135	75 sx	GL	circulated
30-005-60824					7.875	4.5	2950	175 sx	2050	CBL
B-6-9s-29e										
TLSAU 041	9/16/84	2930	Twin Lake; San Andres	Oil	12.5	8.625	80	5 yds Redi Mix	GL	no report
30-005-60768					7.875	4.5	2930	175 sx	1578	calculated
J-31-8s-29e										
TLSAU 049	9/29/80	2898	Twin Lake; San Andres	Oil	12.5	8.625	80	5 yds Redi Mix	GL	circulated
30-005-60767					7.875	4.5	2898	175 sx	1715	calculated
N-31-8s-29e										
TLSAU 051	11/20/80	2950	Twin Lake; San Andres	P&A	12.5	8.625	126	75 sx	GL	no report
30-005-60810					7.875	4.5	2945	175 sx	2112	CBL
P-31-8s-29e										
TLSAU 059	11/7/80	2867	Twin Lake; San Andres	WIW	12.5	8.625	120	75 sx	GL	circulated
30-005-60807					7.875	4.5	2867	175 sx	1780	CBL
C-6-9s-29e										
TLSAU 061	3/23/81	2960	Twin Lake; San Andres	WIW	12.5	8.625	120	75 sx	GL	circulated
30-005-60920					7.875	4.5	2950	200 sx	1608	CBL
A-6-9s-29e										
TLSAU 071	12/26/84	2900	Twin Lake; San Andres	Oil	12.25	8.625	160	100 sx	GL	circulated 15 sx
30-005-62212					7.875	5.5	2900	810 sx	GL	circulated 10 sx
B-6-9s-29e										

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 040	7/7/80	2900	Twin Lake; San Andres	WIW	12.5	8.625	121	75 sx	GL	circulated
30-005-60696					7.875	4.5	2900	125 sx	1657	CBL
K-31-8s-29e										
TLSAU 042	10/25/80	2951	Twin Lake; San Andres	P&A	12.5	8.625	132	75 sx	GL	no report
30-005-60802					7.875	4.5	2951	125 sx	2046	CBL
I-31-8s-29e										
TLSAU 329	11/29/98	2855	Twin Lake; San Andres	Oil	12.25	8.625	112	3 yds Redi Mix	GL	circulated
30-005-63190					7.875	5.5	2849	900 sx	GL	circulated 200 sx
C-6-9s-29e										
TLSAU 319	1/2/99	2903	Twin Lake; San Andres	Oil	12.25	8.625	116	3 yds Redi Mix	GL	circulated
30-005-63187					7.875	5.5	2900	975 sx	GL	circulated 60 sx
J-31-8s-29e										
TLSAU 321	12/21/98	2816	Twin Lake; San Andres	Oil	12.25	8.625	110	3 yds Redi Mix	GL	circulated
30-005-63188					7.875	5.5	2814	900 sx	GL	circulated 24 sx
M-31-8x-29e										
TLSAU 070	5/11/81	2850	Twin Lake; San Andres	WIW	12.5	8.625	130	75 sx	GL	circulated
30-005-60885					7.875	4.5	2838	200 sx	1498	CBL
G-6-9s-29e										
TLSAU 032	10/17/80	2861	Twin Lake; San Andres	WIW	12.5	8.625	80	5 yds Redi Mix	GL	circulated
30-005-60795					7.875	4.5	2861	175 sx	1630	CBL
G-31-8s-29e										
TLSAU 069	6/8/81	2850	Twin Lake; San Andres	Oil	12.25	8.625	130	75 sx	GL	circulated 20 sx
30-005-60984					7.875	4.5	2844	200 sx	1492	calculated
F-6-9s-29e										

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 048	5/21/80	2799	Twin Lake; San Andres	Oil	12.5	8.625	130	75 sx	GL	circulated
30-005-60697					7.875	4.5	2799	125 sx	1954	CBL
M-31-8s-29e										
TLSAU 072	5/29/81	2925	Twin Lake; San Andres	P&A	12.5	8.625	128	75 sx	GL	circulated
30-005-60886					7.875	4.5	2921	200 sx	1596	calculated
H-6-9s-29e										
TLSAU 031	6/17/80	2918	Twin Lake; San Andres	P&A	12.5	8.625	122	75 sx	GL	circulated
30-005-60695					7.875	4.5	2918	125 sx	no report	no report
F-31-8s-29e										

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 326	12/1/98	2855	Twin Lake; San Andres	Oil	12.25	8.625	118	3 yds Redi	GL	circulated
30-005-63189					7.875	5.5	2850	900 sx	GL	circulated 124 sx
N-31-8s-29e										
TLSAU 049	9/29/80	2898	Twin Lake; San Andres	Oil	12.5	8.625	80	5 yds Redi	GL	circulated
30-005-60767					7.875	4.5	2898	175 sx	1715	calculated
N-31-8s-29e										
TLSAU 329	11/29/98	2855	Twin Lake; San Andres	Oil	12.25	8.625	112	3 yds Redi	GL	circulated
30-005-63190					7.875	5.5	2849	900 sx	GL	circulated 200 sx
C-6-9s-29e										
TLSAU 060	12/6/80	2950	Twin Lake; San Andres	Oil	12.5	8.625	135	75 sx	GL	circulated
30-005-60824					7.875	4.5	2950	175 sx	2050	CBL
B-6-9s-29e										
TLSAU 069	6/8/81	2850	Twin Lake; San Andres	Oil	12.25	8.625	130	75 sx	GL	circulated 20 sx
30-005-60984					7.875	4.5	2844	200 sx	1492	calculated
F-6-9s-29e										
TLSAU 058	7/25/81	2823	Twin Lake; San Andres	Oil	12.25	8.625	133	75 sx	GL	circulated
30-005-61031					7.875	4.5	2823	200 sx	1471	calculated
D-6-9s-29e										
TLSAU 050	11/1/80	2888	Twin Lake; San Andres	WIW	12.5	8.625	80	5 yds Redi	GL	circulated
30-005-60796					7.875	4.5	2888	200 sx	1657	CBL
O-31-8s-29e										
TLSAU 321	12/21/98	2816	Twin Lake; San Andres	Oil	12.25	8.625	110	3 yds Redi	GL	cemented to GL
30-005-63188					7.875	5.5	2814	900 sx	GL	circulated 24 sx to pit
M-31-8x-29e										
TLSAU 048	5/21/80	2799	Twin Lake; San Andres	Oil	12.5	8.625	130	75 sx	GL	circulated
30-005-60697					7.875	4.5	2799	125 sx	1954	CBL
M-31-8s-29e										

Sorted by distance from #59

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 070	5/11/81	2850	Twin Lake; San Andres	WIW	12.5	8.625	130	75 sx	GL	circulated
30-005-60885					7.875	4.5	2838	200 sx	1498	CBL
G-6-9s-29e										
TLSAU 071	12/26/84	2900	Twin Lake; San Andres	Oil	12.25	8.625	160	100 sx	GL	circulated 15 sx
30-005-62212					7.875	5.5	2900	810 sx	GL	circulated 10 sx
B-6-9s-29e										
TLSAU 068	7/9/81	2831	Twin Lake; San Andres	WIW	12.25	8.625	130	75 sx	GL	circulated
30-005-61007					7.875	4.5	2831	200 sx	1672	CBL
E-6-9s-29e										
TLSAU 040	7/7/80	2900	Twin Lake; San Andres	WIW	12.5	8.625	121	75 sx	GL	circulated
30-005-60696					7.875	4.5	2900	125 sx	2053	CBL
K-31-8s-29e										
TLSAU 331	12/11/98	2830	Twin Lake; San Andres	Oil	12.25	8.625	114	3 yds Redi	GL	circulated
30-005-63192					7.875	5.5	2825	900 sx	GL	circulated 145 sx
F-6-9s-29e										
TLSAU 041	9/15/80	2930	Twin Lake; San Andres	Oil	12.5	8.625	80	5 yds Redi	GL	no report
30-005-60768					7.875	4.5	2930	175 sx	1578	calculated
J-31-8s-29e										
TLSAU 039	3/11/80	2870	Twin Lake; San Andres	Oil	12.5	8.625	120	75 sx	GL	circulated
30-005-60657					7.875	4.5	2870	125 sx	2047	calculated
L-31-8s-29e										
TLSAU 061	3/23/81	2960	Twin Lake; San Andres	WIW	12.5	8.625	120	75 sx	GL	circulated
30-005-60920					7.875	4.5	2950	200 sx	1608	CBL
A-6-9s-29e										
TLSAU 047	2/20/67	2730	Twin Lake; San Andres	Oil	11	8.625	955	200 sx	GL	circulated
30-005-60010					7.875	4.5	2727	200 sx	1308	calculated
P-36-8s-28e										

Sorted by distance from #59

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 051	11/20/80	2950	Twin Lake; San Andres	P&A	12.5	8.625	126	75 sx	GL	circulated
30-005-60810					7.875	4.5	2945	175 sx	2112	CBL
P-31-8s-29e										
TLSAU 078	6/27/81	2825	Twin Lake; San Andres	WIW	12.25	8.625	128	75 sx	GL	circulated 20 sx
30-005-60995					7.875	4.5	2825	200 sx	1473	CBL
K-6-9s-29e										

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 077	7/18/81	2826	Twin Lake; San Andres	Oil	12.25	8.625	130	75 sx	GL	circulated
30-005-61032					7.875	4.5	2826	200 sx	1474	calculated
L-6-9s-29e										
TLSAU 058	7/25/81	2823	Twin Lake; San Andres	Oil	12.25	8.625	133	75 sx	GL	circulated
30-005-61031					7.875	4.5	2823	200 sx	1471	calculated
D-6-9s-29e										
TLSAU 069	6/8/81	2850	Twin Lake; San Andres	Oil	12.25	8.625	130	75 sx	GL	circulated 20 sx
30-005-60984					7.875	4.5	2844	200 sx	1492	calculated
F-6-9s-29e										
TLSAU 067	8/24/81	2740	Twin Lake; San Andres	Oil	12.25	8.625	130	85 sx	GL	circulated 10 sx
30-005-61096					7.875	4.5	2739	200 sx	GL	no report
H-1-9s-28e										
TLSAU 057	9/30/81	2770	Twin Lake; San Andres	WIW	12.25	8.625	129	75 sx	GL	circulated 25 sx
30-005-61135					7.875	4.5	2770	200 sx	GL	no report
A-1-9s-28e										
TLSAU 078	6/27/81	2825	Twin Lake; San Andres	WIW	12.25	8.625	128	75 sx	GL	circulated 20 sx
30-005-60995					7.875	4.5	2825	200 sx	1473	CBL
K-6-9s-29e										
TLSAU 076	9/20/81	2730	Twin Lake; San Andres	WIW	12.25	8.625	130	75 sx	GL	circulated 25 sx
30-005-60809					7.875	4.5	2730	200 sx	1383	CBL
I-1-9s-28e										
TLSAU 059	11/7/80	2867	Twin Lake; San Andres	WIW	12.5	8.625	120	75 sx	GL	circulated
30-005-60807					7.875	4.5	2867	175 sx	1780	CBL
C-6-9s-29e										

Sorted by distance from #68

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 329	11/29/98	2855	Twin Lake; San Andres	Oil	12.25	8.625	112	3 yds	GL	circulated
30-005-63190					7.875	5.5	2849	900 sx	GL	circulated 200 sx
C-6-9s-29e										
TLSAU 331	12/11/98	2830	Twin Lake; San Andres	Oil	12.25	8.625	114	3 yds	GL	circulated
30-005-63192					7.875	5.5	2825	900 sx	GL	circulated 145 sx
F-6-9s-29e										
TLSAU 048	5/21/80	2799	Twin Lake; San Andres	Oil	12.5	8.625	130	75 sx	GL	circulated
30-005-60697					7.875	4.5	2799	125 sx	1954	CBL
M-31-8s-29e										
TLSAU 047	2/20/67	2730	Twin Lake; San Andres	Oil	11	8.625	955	200 sx	GL	circulated
30-005-60010					7.875	4.5	2727	200 sx	1308	calculated
P-36-8s-28e										
TLSAU 056	8/21/67	2657	Twin Lake; San Andres	Oil	12.25	8.625	450	300 sx	GL	circulated
30-005-60028					7.875	4.5	2657	150 sx	no report	no report
B-1-9s-28e										
TLSAU 070	5/11/81	2850	Twin Lake; San Andres	WIW	12.5	8.625	130	75 sx	GL	circulated
30-005-60885					7.875	4.5	2838	200 sx	1498	CBL
G-6-9s-29e										
TLSAU 049	9/29/80	2898	Twin Lake; San Andres	Oil	12.5	8.625	80	5 yds	GL	circulated
30-005-60767					7.875	4.5	2898	175 sx	1715	calculated
N-31-8s-29e										
TLSAU 066	2/8/78	2615	Twin Lake; San Andres	Oil	11	8.625	42	20 sx	GL	circulated
30-005-60468					7.875	4.5	2575	200 sx	1936	CBL
G-1-9s-28e										

Sorted by distance from #70

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 329	11/29/98	2855	Twin Lake; San Andres	Oil	12.25	8.625	112	3 yds	GL	circulated
30-005-63190					7.875	5.5	2849	900 sx	GL	circulated 200 sx
C-6-9s-29e										
TLSAU 331	12/11/98	2830	Twin Lake; San Andres	Oil	12.25	8.625	114	3 yds	GL	circulated
30-005-63192					7.875	5.5	2825	900 sx	GL	circulated 145 sx
F-6-9s-29e										
TLSAU 080	12/16/84	2925	Twin Lake; San Andres	WIW	12.25	8.625	154	80 sx	GL	circulated 85 sx
30-005-62213					7.875	5.5	2925	850 sx	1650	calculated
G-6-9s-29e										
TLSAU 071	12/26/84	2900	Twin Lake; San Andres	Oil	12.25	8.625	160	100 sx	GL	circulated 15 sx
30-005-62212					7.875	5.5	2900	810 sx	GL	circulated 10 sx
B-6-9s-29e										
TLSAU 069	6/8/81	2850	Twin Lake; San Andres	Oil	12.25	8.625	130	75 sx	GL	circulated 20 sx
30-005-60984					7.875	4.5	2844	200 sx	1492	calculated
F-6-9s-29e										
TLSAU 079	6/11/81	2210	Twin Lake; San Andres	P&A	12.5	8.625	134	75 sx	GL	circulated 20 sx
30-005-60982					7.875	4.5	2878	200 sx	1526	calculated
J-6-9s-29e										
TLSAU 060	12/6/80	2950	Twin Lake; San Andres	Oil	12.5	8.625	135	75 sx	GL	circulated
30-005-60824					7.875	4.5	2950	175 sx	2050	CBL
B-6-9s-29e										
TLSAU 072	5/29/81	2925	Twin Lake; San Andres	P&A	12.5	8.625	128	75 sx	GL	circulated
30-005-60886					7.875	4.5	2921	200 sx	1596	calculated
H-6-9s-29e										

Sorted by distance from #70

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 059	11/7/80	2867	Twin Lake; San Andres	WIW	12.5	8.625	120	75 sx	GL	circulated
30-005-60807					7.875	4.5	2867	175 sx	1780	CBL
C-6-9s-29e										
TLSAU 078	6/27/81	2825	Twin Lake; San Andres	WIW	12.25	8.625	128	75 sx	GL	circulated 20 sx
30-005-60995					7.875	4.5	2825	200 sx	1473	CBL
K-6-9s-29e										
TLSAU 326	12/1/98	2855	Twin Lake; San Andres	Oil	12.25	8.625	118	3 yds	GL	circulated
30-005-63189					7.875	5.5	2850	900 sx	GL	circulated 124 sx
N-31-8s-29e										
TLSAU 081	6/20/81	2880	Twin Lake; San Andres	WIW	12.25	8.625	125	75 sx	GL	circulated
30-005-60993					7.875	4.5	2880	200 sx	1528	CBL
I-6-9s-29e										
TLSAU 061	3/23/81	2960	Twin Lake; San Andres	WIW	12.5	8.625	120	75 sx	GL	circulated
30-005-60920					7.875	4.5	2950	200 sx	1608	CBL
A-6-9s-29e										
TLSAU 333	11/29/98	2830	Twin Lake; San Andres	P&A	12.25	8.625	118	3 yds	GL	circulated
30-005-63193					7.875	5.5	2816	900 sx	GL	circulated 145 sx
J-6-9s-29e										
TLSAU 203	7/25/97	2862	Twin Lake; San Andres	Oil	12.25	8.625	167	110 sx	GL	circulated 25 sx
30-005-63140					7.875	5.5	2848	1100 sx	no report	no report
K-6-9s-29e										
TLSAU 050	11/1/80	2888	Twin Lake; San Andres	WIW	12.5	8.625	80	5 yds	GL	circulated
30-005-60796					7.875	4.5	2888	200 sx	1657	CBL
O-31-8s-29e										

Sorted by distance from #70

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 049	9/29/80	2898	Twin Lake; San Andres	Oil	12.5	8.625	80	5 yds	GL	circulated
30-005-60767					7.875	4.5	2898	175 sx	1715	calculated
N-31-8s-29e										
TLSAU 068	7/9/81	2831	Twin Lake; San Andres	WIW	12.25	8.625	130	75 sx	GL	circulated
30-005-61007					7.875	4.5	2831	200 sx	1672	CBL
E-6-9s-29e										
TLSAU 051	11/20/80	2950	Twin Lake; San Andres	P&A	12.5	8.625	126	75 sx	GL	no report
30-005-60810					7.875	4.5	2945	175 sx	2112	CBL
P-31-8s-29e										
TLSAU 088	7/10/81	2815	Twin Lake; San Andres	WIW	12.25	8.625	130	75 sx	GL	circulated
30-005-61006					7.875	4.5	2815	200 sx	1463	CBL
O-6-9s-29e										

Sorted by distance from #88

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 203	7/25/97	2862	Twin Lake; San Andres	Oil	12.25	8.625	167	110 sx	GL	circulated 25 sx
30-005-63140					7.875	5.5	2848	1100 sx	GL	circulated
K-6-9s-29e										
TLSAU 333	11/29/98	2830	Twin Lake; San Andres	P&A	12.25	8.625	118	3 yds	GL	circulated
30-005-63193					7.875	5.5	2816	900 sx	GL	circulated 145 sx
J-6-9s-29e										
TLSAU 087	8/10/81	2774	Twin Lake; San Andres	P&A	12.25	8.625	134	75 sx	GL	circulated 25 sx
30-005-61030					7.875	4.5	2774	200 sx	1422	calculated
N-6-9s-29e										
TLSAU 094	9/3/81	2840	Twin Lake; San Andres	Oil	12.5	8.625	320	150 sx	GL	circulated 25 sx
30-005-61106					7.875	4.5	2840	900 sx	850	temperature survey
B-7-9s-29e										
TLSAU 079	6/11/81	2210	Twin Lake; San Andres	P&A	12.5	8.625	134	75 sx	GL	circulated 20 sx
30-005-60982					7.875	4.5	2878	200 sx	1526	calculated
J-6-9s-29e										
TLSAU 089	7/18/81	2840	Twin Lake; San Andres	Oil	12.25	8.625	124	75 sx	GL	circulated
30-005-61022					7.875	4.5	2826	200 sx	1474	calculated
P-6-9s-29e										
TLSAU 078	6/27/81	2825	Twin Lake; San Andres	WIW	12.25	8.625	128	75 sx	GL	circulated 20 sx
30-005-60995					7.875	4.5	2825	200 sx	1473	CBL
K-6-9s-29e										
TLSAU 093	6/3/82	2780	Twin Lake; San Andres	P&A	12.5	8.625	176	150 sx	GL	circulated 35 sx
30-005-61603					7.875	4.5	2757	1000 sx	307	CBL
C-7-9s-29e										

Sorted by distance from #88

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CSG O.D.	SET @	CEMENT	TOC	HOW DETERMINED
TLSAU 095	9/5/81	2840	Twin Lake; San Andres	WIW	12.25	8.625	321	150 sx	GL	circulated 25 sx
30-005-61107					7.875	4.5	2840	800 sx	1390	temperature survey
A-7-9s-29e										
TLSAU 081	6/20/81	2880	Twin Lake; San Andres	WIW	12.25	8.625	125	75 sx	GL	circulated
30-005-60993					7.875	4.5	2880	200 sx	1528	CBL
I-6-9s-29e										
TLSAU 331	12/11/98	2830	Twin Lake; San Andres	Oil	12.25	8.625	114	3 yds	GL	circulated
30-005-63192					7.875	5.5	2825	900 sx	GL	circulated 145 sx
F-6-9s-29e										
TLSAU 080	12/16/84	2925	Twin Lake; San Andres	WIW	12.25	8.625	154	80 sx	GL	had 85 sx to surface
30-005-62213					7.875	5.5	2925	850 sx	1650	calculated
G-6-9s-29e										
TLSAU 070	5/11/81	2850	Twin Lake; San Andres	WIW	12.5	8.625	130	75 sx	GL	circulated
30-005-60885					7.875	4.5	2838	200 sx	1498	CBL
G-6-9s-29e										
TLSAU 103	8/9/81	2840	Twin Lake; San Andres	WIW	12.25	8.625	302	180 sx	GL	circulated 15 sx
30-005-61075					7.875	4.5	2821	1100 sx	890	temperature survey
G-7-9s-29e										
O'Brien L 014	4/19/82	2800	Twin Lake; San Andres	P&A	9.875	8.625	134	75 sx	GL	calculated
30-005-61554					7.875	4.5	2800	200 sx	1448	calculated
M-6-9s-29e										

PELTO OIL COMPANY

30-005-61554
spud 4-19-82
P & A 11-24-97

LEASE & WELL NAME: O'Brien L #14

330' FSL 330' FWL

UNIT	SECTION	TOWNSHIP	RANGE
M	6	9S	29E

perf w/ 2 holes @ 1625'
& pump 781 sx to GL

HOLE SIZE: 9 7/8"
CSG: 8 5/8" OD
24#/FT
@ 134'
CMT WITH 75 SX
TOC @ SURFACE (C)

TOC @ 1768' per log

CIBP @ 2600' + 35'

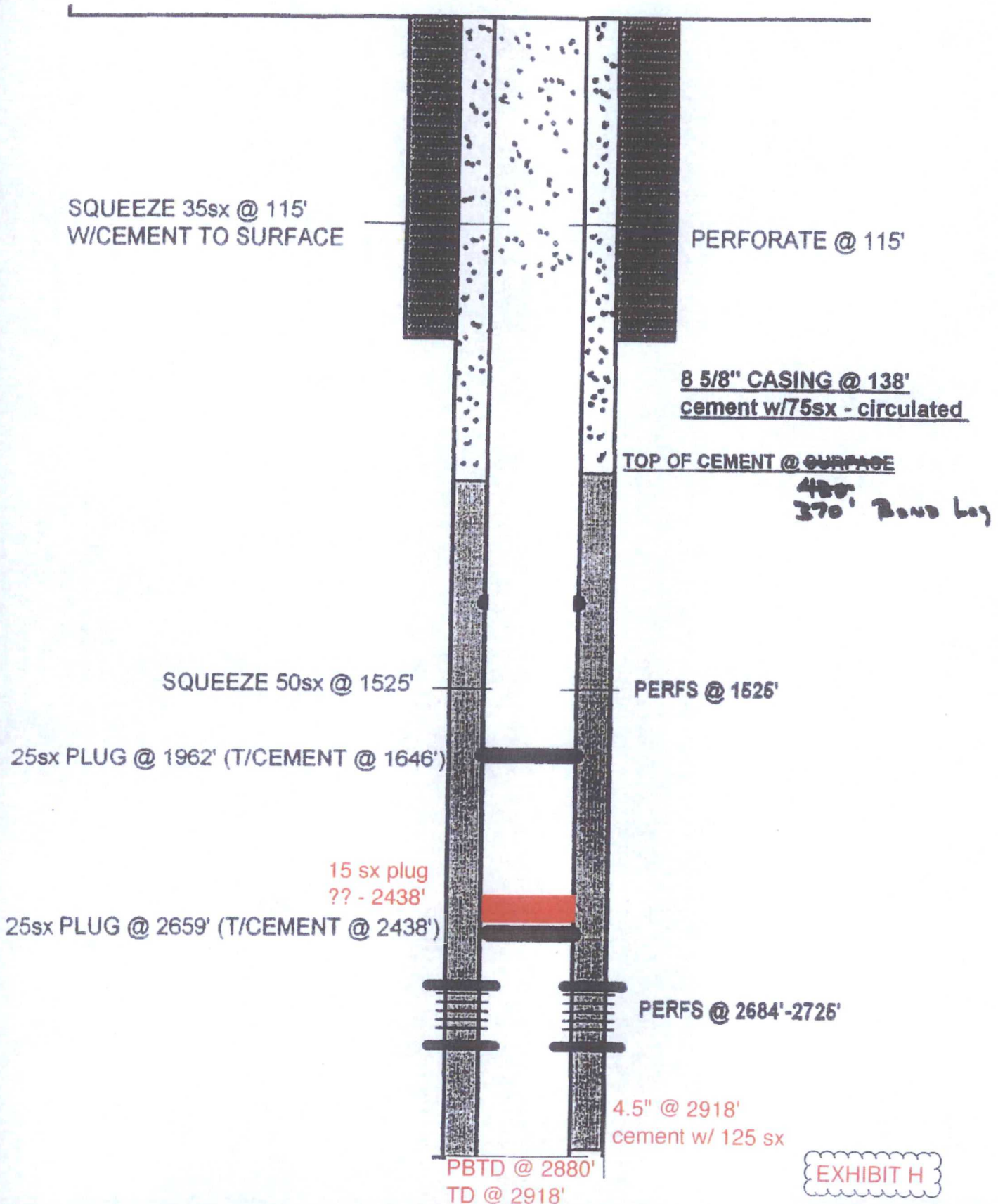
SAN ANDRES
PERFS @ 2637.5-2669'

HOLE SIZE 7 7/8"
CSG: 4 1/2 "OD
10.5#/FT @ 2800'
CMT WITH 200 SX
TOC @ 1448 FT (C)
P8TD None
TD 2800'

EXHIBIT H

Twin Lakes San Andres Unit Well #31 Well Schematic

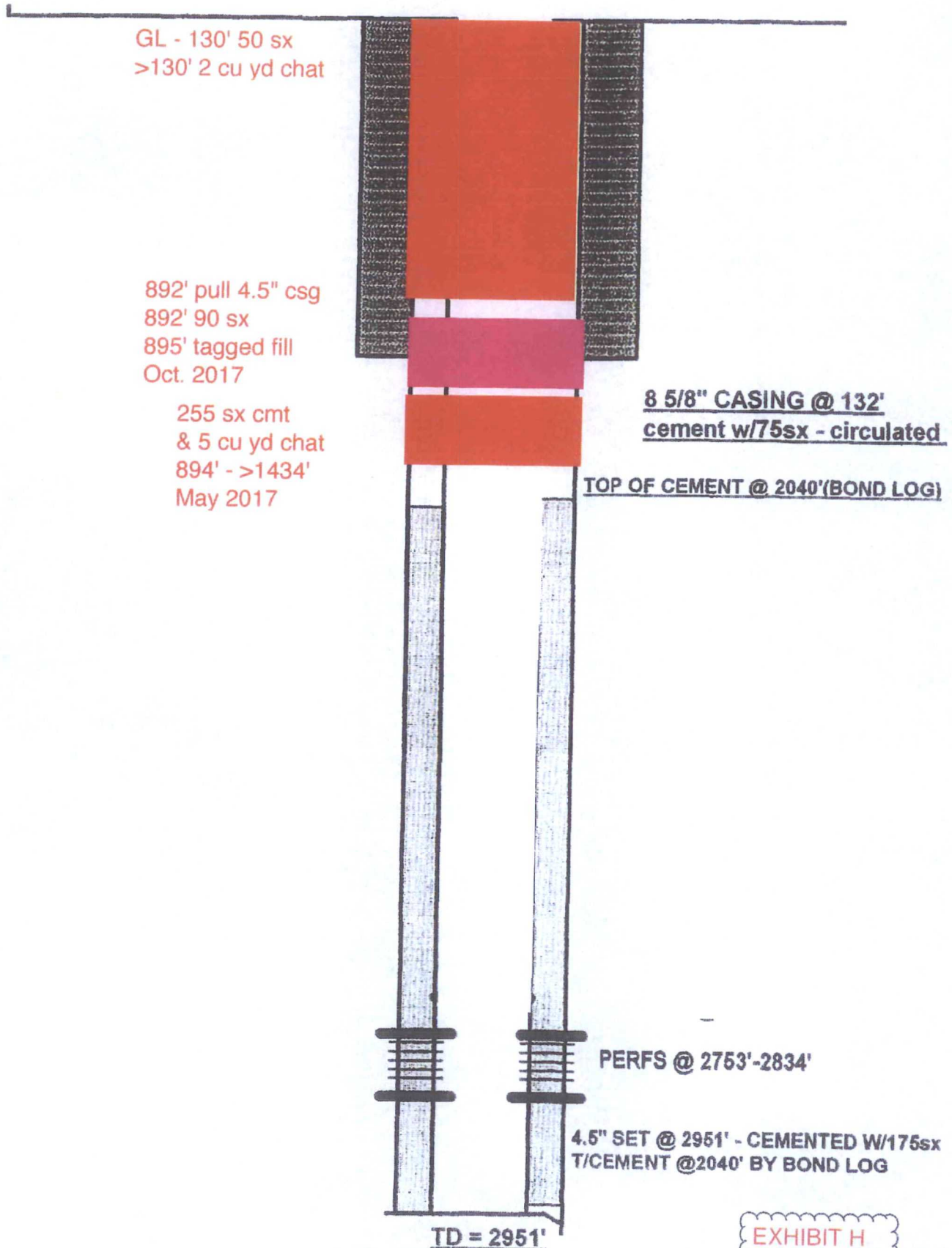
30-005-60695
F-31-8s-29e
spud 6-17-80
P & A 3-29-91



Canyon E & P Company
Twin Lakes San Andres Unit Well #42

30-005-60802
I-31-8s-29e
spud 10-25-80
P & A 10-18-17

31-T8S-R29E, 1650 FSL & 990 FEL



O'BRIEN J-5

TLSA' #42

30-005-60802

TWIN LAKES SAN ANDRES UNIT #51

Canyon E & P Company

30-005-60810

P-31-8s-29e

spud 11-21-80

P&A 9-5-16



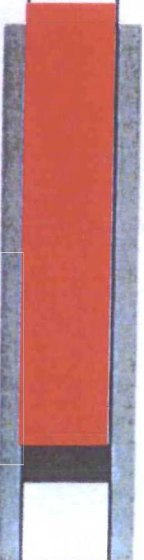
75 sx cmt
GL - 176'
perf @ 176'

8 5/8" @ 126' w/ 75 sx.



35 sx cmt
823'-1000'
perf @ 1000'

TOC -2112' CBL



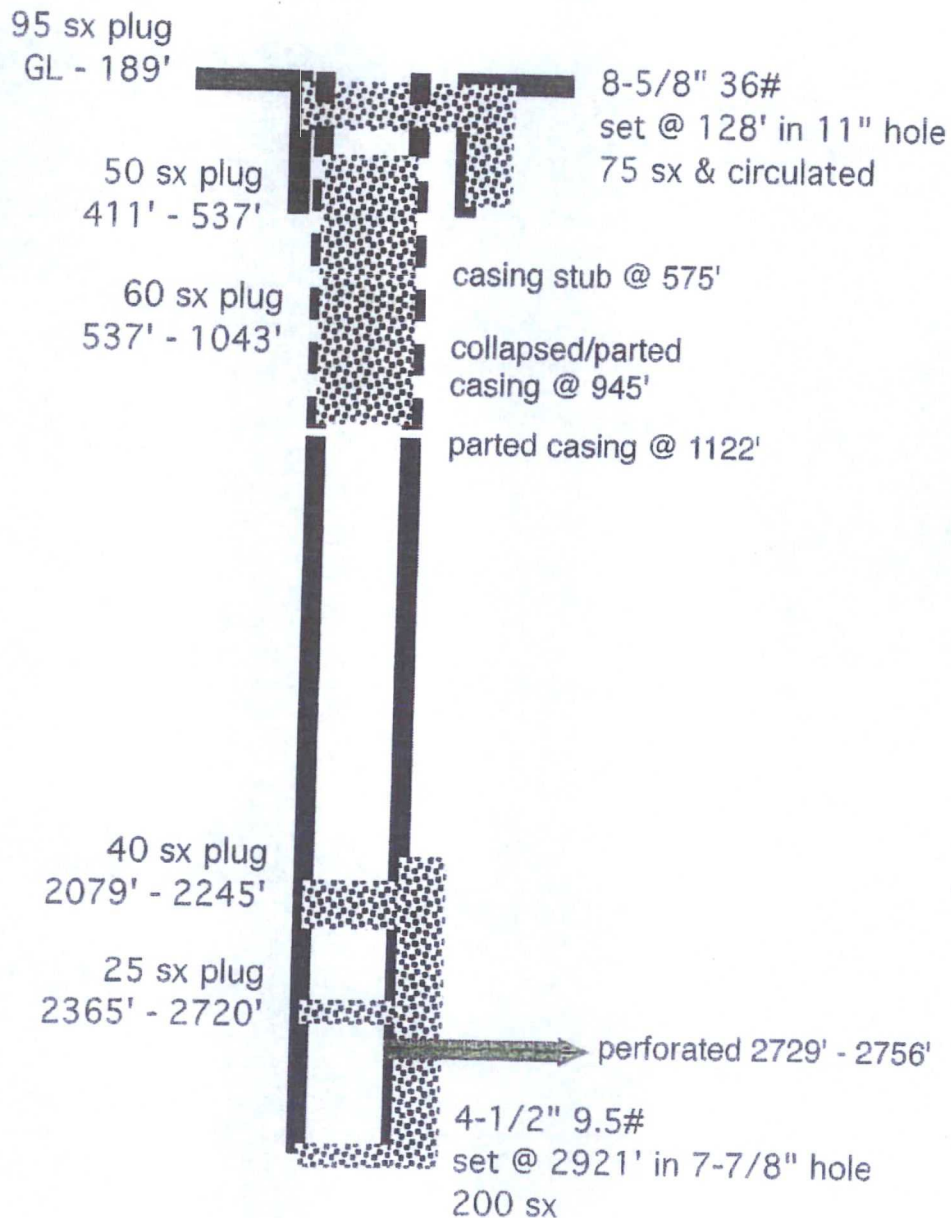
45 sx cmt
2068'-2697'

Perfs 2783'-2812'

4 1/2 " 9.5# @ 2945' w/ 175 sx.

EXHIBIT H

Concho's
Twin Lakes San Andres Unit 72
API 30-005-60086
1650 FNL & 990 FEL 6-9s-29e
Spud: 5-29-81
P&A: 12-7-01



PBTD 2921
TD 2925'
(not to scale)

EXHIBIT H

TWIN LAKES SAN ANDRES UNIT #79

Canyon E & P Company

30-005-60982

J-6-9s-29e

spud 6-11-81

P&A 6-5-17

GL - 184'
55 sx cmt
perf @ 184'

8 5/8" @ 134' w/ 75 sx.

842' - 1000'
35 sx cmt
perf @ 1000'

TOC - UNKNOWN

??' - 2605'
50 sx cmt
2605' CIBP

Perfs 2696'-2775'
4 1/2 " 9.5# @ 2583' w/ 200 sx.

EXHIBIT H

TWIN LAKES SAN ANDRES UNIT #87

Canyon E & P Company

30-005-61030

N-6-9s-29e

spud 8-10-81

P&A 9-13-16



TOC $\approx$ 1800' (calc.)

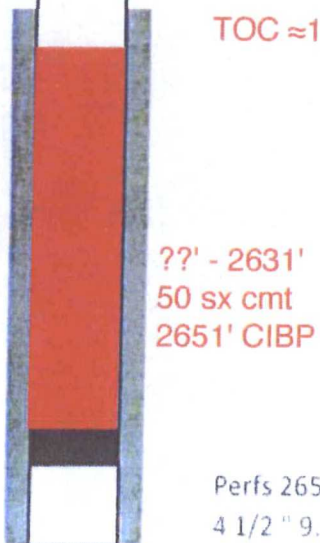


EXHIBIT H

Concho's
Twin Lakes San Andres Unit 93
API 30-005-61603
330 FNL & 1650 FWL 7-9s-29e
Spud: 6-3-82
P & A: 12-21-01

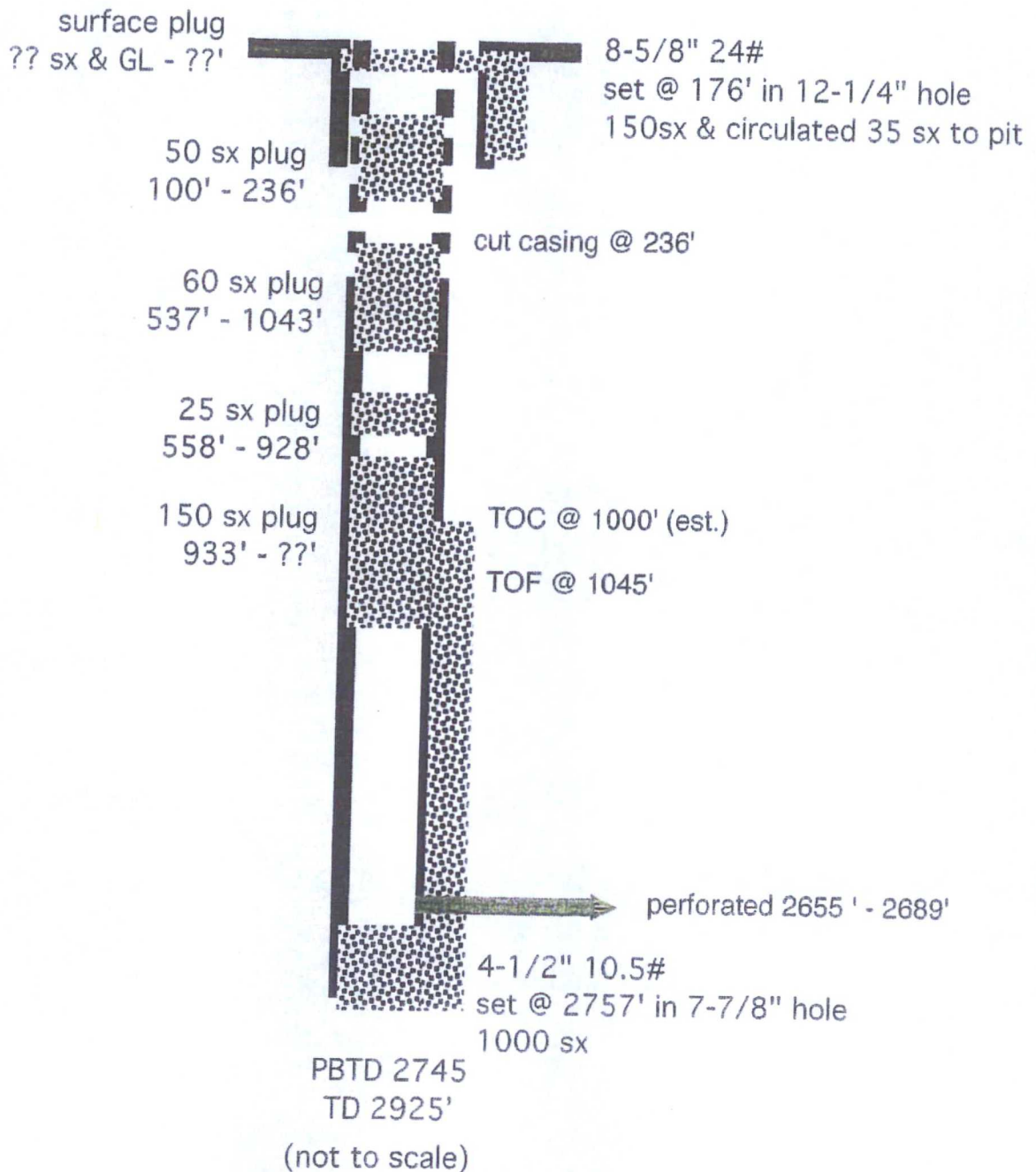


EXHIBIT H

TWIN LAKES SAN ANDRES UNIT #333

Canyon E & P Company

30-005-63193

J-6-9s-29e

spud 11-29-98

P&A 2-19-16

GL - 188'
20 sx cmt

8 5/8" @ 118' w/ Ready Mix to Surface

POOH TO 168'. FILL TO SURFACE W/ CMT.

25 sx cmt
@ 1004'

SPOT 25 SX CMT AT 1000'.

25 sx cmt
@ 2103'

SPOT 25 SX CMT AT 2100'.

??' - 2608'
25 sx cmt
2608' CIBP

CIRCULATE MUD LADEN FLUID

SET CIBP AT 2608'. CAP WITH 25 SX

Perfs 2708' - 2742'

5 1/2" 15 5# @ 2816' w/ 900 sx. Circ.

EXHIBIT H

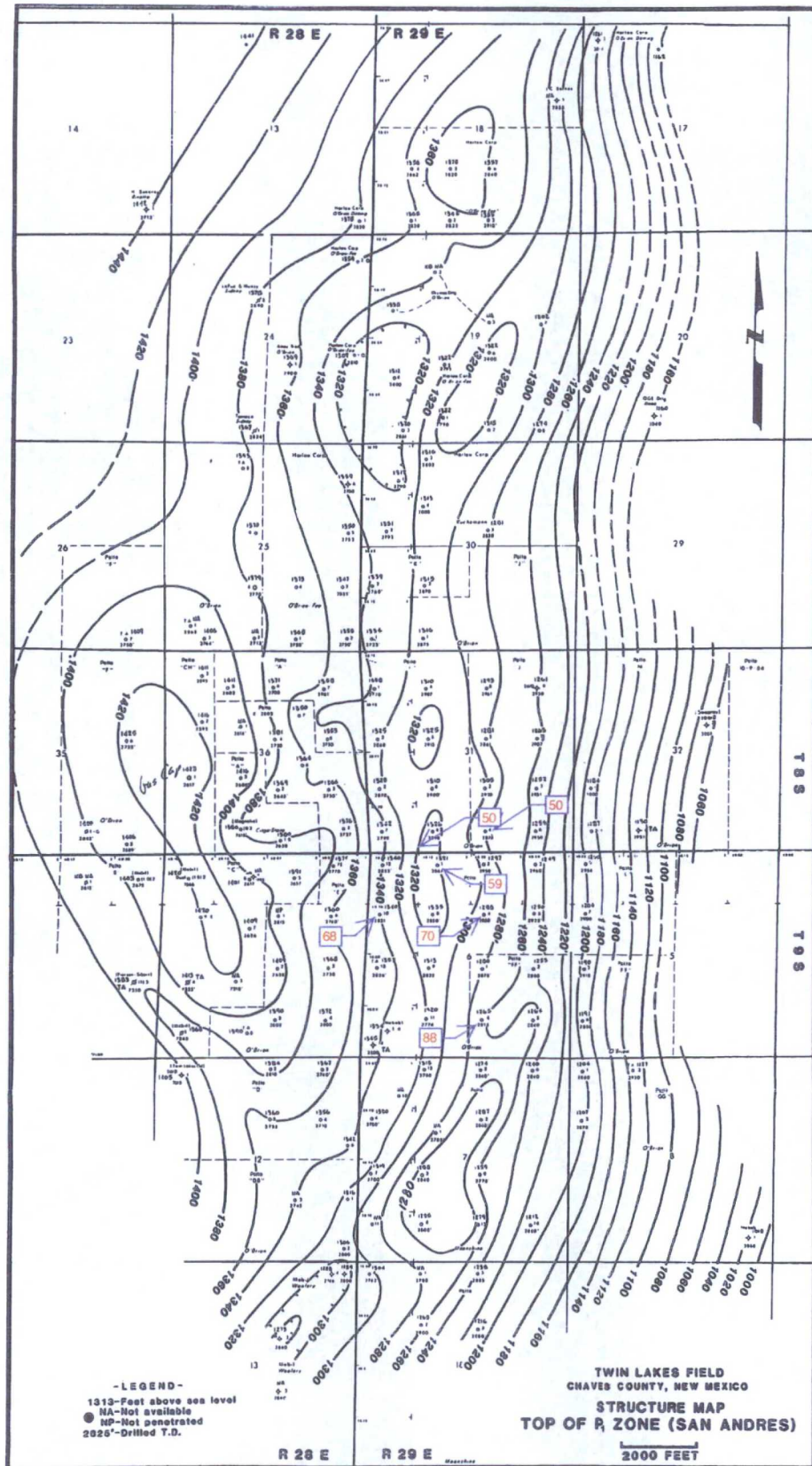


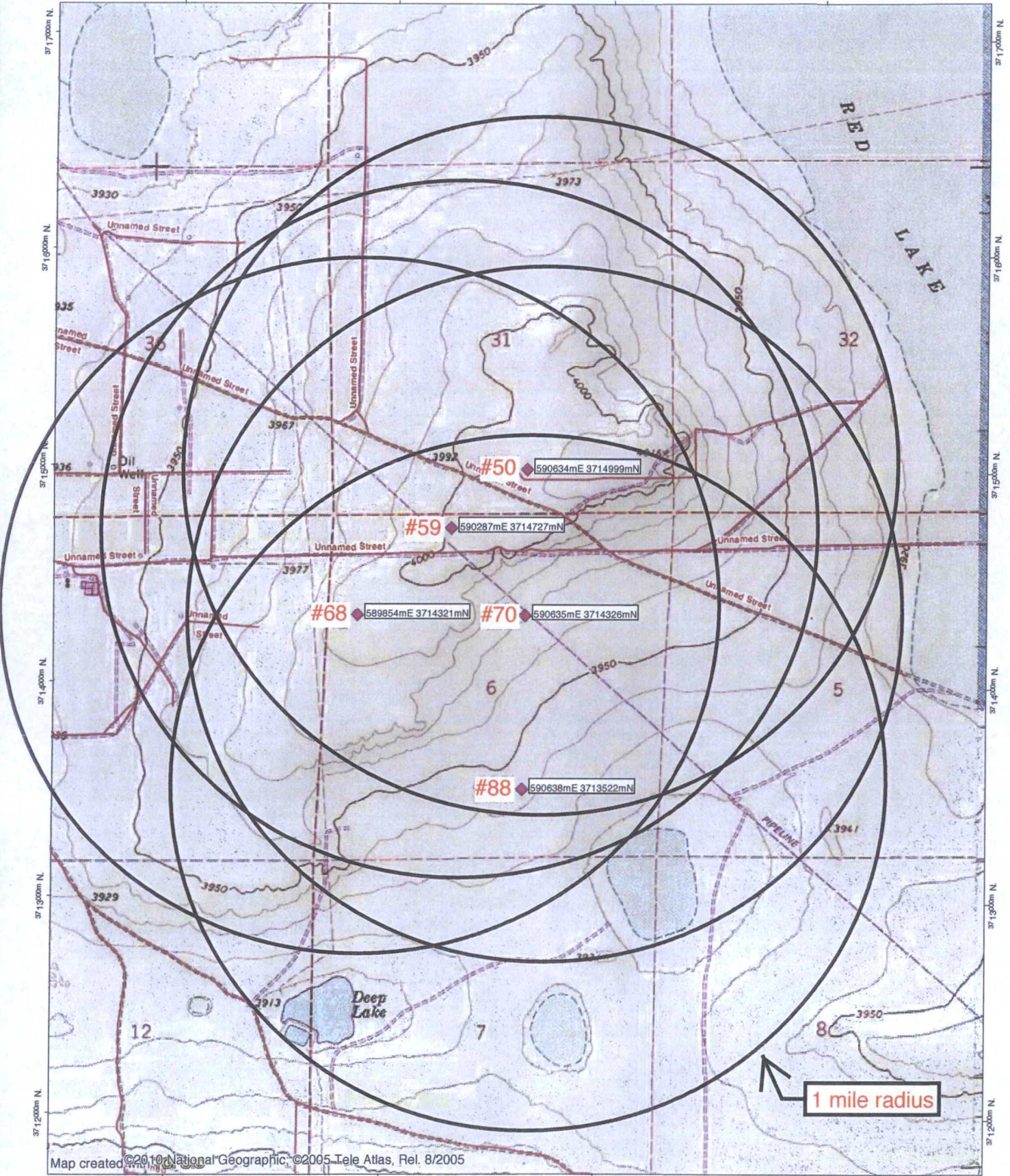
EXHIBIT I

589000m E.

590000m E.

591000m E.

WGS84 Zone 13S 592000m E.



Map created ©2010 National Geographic, ©2005 Tele Atlas, Rel. 8/2005



EXHIBIT J

TN = MN

7.5°

07/20/14



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

UTMNAD83 Radius Search (in meters): **TLSAU #50**

Easting (X): 590634

Northing (Y): 3714999

Radius: 3220

3,220 meters =

10,560' = 2 miles

EXHIBIT J

data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/14 2:08 PM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

UTMNA83 Radius Search (in meters): **TLSAU #50**

Easting (X): 590634

Northing (Y): 3714999

Radius: 3220

3,220 meters =

10,560' = 2 miles

EXHIBIT J

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New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

UTMNAD83 Radius Search (in meters): **TLSAU #59**

Easting (X): 590287

Northing (Y): 3714727

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

EXHIBIT J

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7/14 2:09 PM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION



New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters): **TLSAU #59**

Easting (X): 590287

Northing (Y): 3714727

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

EXHIBIT J

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New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

UTMNAD83 Radius Search (in meters): **TLSAU #68**

Easting (X): 589854

Northing (Y): 3714727

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

EXHIBIT J

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7/14 2:10 PM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters): **TLSAU #68**

Easting (X): 589854

Northing (Y): 3714321

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

EXHIBIT J

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New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

UTMNAD83 Radius Search (in meters): **TLSAU #70**

Easting (X): 590635

Northing (Y): 3714326

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

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7/14 2:11 PM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters): **TLSAU #70**

Easting (X): 590635

Northing (Y): 3714326

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

EXHIBIT J

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New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

UTMNAD83 Radius Search (in meters): **TLSAU #88**

Easting (X): 590638

Northing (Y): 3713522

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

EXHIBIT J

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7/14 2:12 PM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters): **TLSAU #88**

Easting (X): 590638

Northing (Y): 3713522

Radius: 3220

**3,220 meters =
10,560' = 2 miles**

EXHIBIT J

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March 20, 2018

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Sante Fe, New Mexico 87505

RE: Geological Statement
Twin Lakes San Andres Unit #050, 059, 068, 070, & 088 Injection Permit Re-Issuance Application
Chaves County, New Mexico

To whom it may concern:

I have reviewed all currently available geological and engineering data related to the proposed wells and find no evidence for any potential issue with open faults or hydrological connection between injection wells and underground drinking water source in relation to any of the expired injection wells identified under this application, Twin Lakes San Andres Unit #050, #059, #068, #070, & #088.

Regards,

A handwritten signature in black ink, appearing to read "A. Ahmed".

Sarshar Ahmed, Senior Geologist

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1600, 205 - 5th Ave. SW

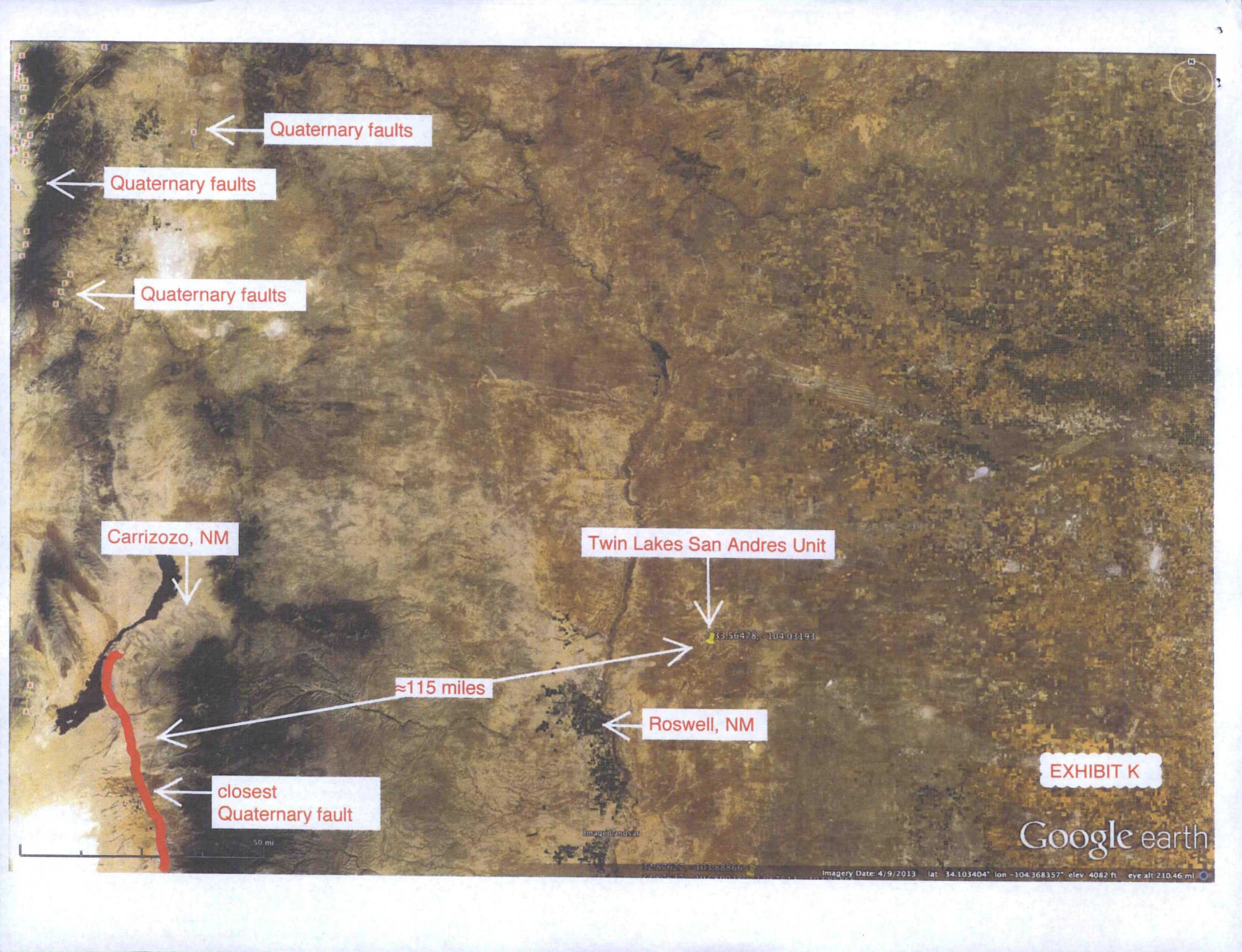
Calgary, AB. T2P 2V7

Canada

Email: sahmad@bowenergy.ca

Phone: +1 (403) 816-4037

EXHIBIT K



Quaternary faults

Quaternary faults

Quaternary faults

Carrizozo, NM

Twin Lakes San Andres Unit

33.56478, -104.03193

≈115 miles

Roswell, NM

closest
Quaternary fault

EXHIBIT K

Google earth

Imagery Date: 4/9/2013 lat: 34.103404° lon: -104.368357° elev: 4082 ft eye alt: 210.46 mi