DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
5/12/2015		PRG	5/12/2015	SWD	pMAM1513251671

ABOVE THIS LINE FOR DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

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

Application Acronyms:

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

RECEIVED OCD
2015 MAY 12 A 9:54

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX X SWD ☐ IPI ☐ EOR ☐ PPR

SWD

Murchison Oil & Gas, Inc.
Jackson Unit 5 15363
30-025-33873

[D] Other: Specify _____

POW

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

- SWD; Bell Canyon Cherry Canyon 96802

[A] X Working, Royalty or Overriding Royalty Interest Owners

[B] X Offset Operators, Leaseholders or Surface Owner

[C] X Application is One Which Requires Published Legal Notice

[D] X Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] X For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

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

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

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

Brian Wood		Consultant	5-12-15
Print or Type Name	Signature	Title	Date

brian@permitswest.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: MURCHISON OIL & GAS, INC.

ADDRESS: 1100 MIRA VISTA BLVD., PLANO TX 75093

CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. *Additional sheets may be attached if necessary.*

IV. Is this an expansion of an existing project? _____ Yes XXX No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

Jackson Unit 5
30-025-33873
SWD;Bell Canyon
-Cherry Canyon

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: B Wood DATE: MAY 11, 2015

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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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.

Side 1

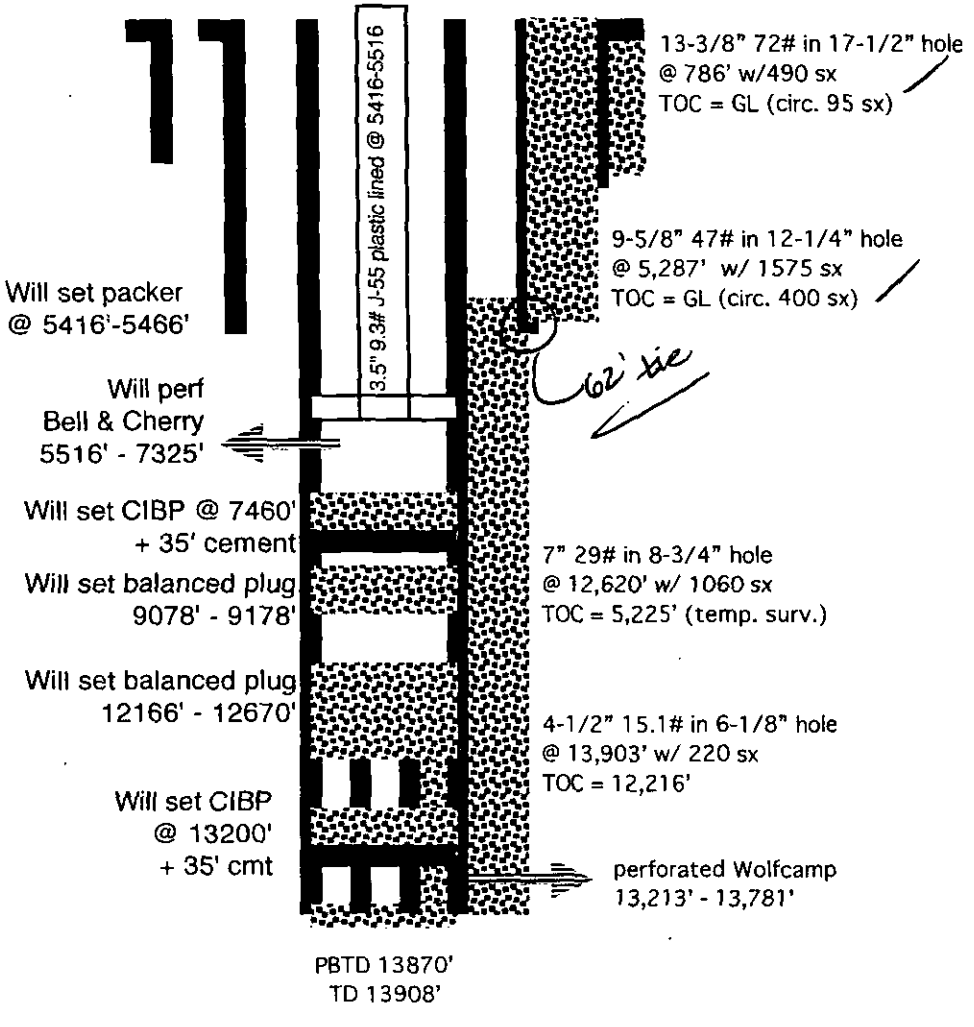
INJECTION WELL DATA SHEET

OPERATOR: MURCHISON OIL & GAS, INC.

WELL NAME & NUMBER: JACKSON UNIT 5

WELL LOCATION:	1980 FNL & 660 FEL	H	16	24 S	33 E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC



(not to scale)

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 490 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 95 SX

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 9-5/8"

Cemented with: 1,575 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 400 SX

Production Casing

Hole Size: 8-3/4" Casing Size: 7"

Cemented with: 1,060 sx. *or* _____ ft³

Top of Cement: 5,225' Method Determined: TEMP. SURV.

Total Depth: 13,908'

Injection Interval

5,516' feet to 7,325'

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

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" Lining Material: PLASTIC

Type of Packer: NICKEL FLOW WETTED 7"

Packer Setting Depth: 5,416' - 5,466'

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? GAS WELL (WOLFCAMP)

2. Name of the Injection Formation: BELL CANYON & CHERRY CANYON

3. Name of Field or Pool (if applicable): SWD; BELL CANYON - CHERRY CANYON (96802)

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.
   WOLFCAMP PERFORATED IN 1997: 13,213'-13,781'
   4 PLUGS TO BE SET - SEE SIDE 1

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

   OVER: NONE

   UNDER: BONE SPRING (9,128') & WOLFCAMP (12,296')

I. Goal is to plug back a 13,908' deep shut-in Johnson Ranch; Wolfcamp (Gas) (79335) well and convert it to a saltwater disposal well. Disposal interval will be 5,516' – 7,325' in the SWD; Bell Canyon – Cherry Canyon (96802). Last oil or gas production was 6 bopd in June 2014. Last gas sale grossed $60/month. Well must be SI for 7-10 days for pressure to build above line pressure of 60-170 psi. Well produces 10 Mcf before dying. Sixteen days of pumping in February 2015 yielded only 63 barrels of water.

II. Operator: Murchison Oil & Gas, Inc. (OGRID #15363)
Operator phone number: (972) 931-0700
Operator address: 1100 Mira Vista Blvd.
Plano, TX 75093
Contact for Application: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

III. A. (1) Lease: New Mexico State Land Office lease L0-5167-0001
Lease Size: 240.00 acres (see Exhibit A for map and C-102)
Closest Lease Line: 660'
Lease Area: E2, S2NW4, & S2SW4 Section 16, T. 24 S., R. 33 E.
Closest Unit Line: 1980'
Unit operator: Murchison Oil & Gas, Inc.
Unit Number: 300033 (includes all zones)
Unit Size: 2,480 acres
Unit Area: E2, S2NW4, & S2SW4 Section 16
All Sections 15, 21, & 22

A. (2) Surface casing (13-3/8", 72#, C-95, B T & C) was set in 1997 at 786' in a 17-1/2" hole and cemented to the surface with 490 sacks. Circulated 95 sacks.

Intermediate casing (9-5/8", 47#, N-80, L T & C) was set at 5,287' in a 12-1/4" hole and cemented with 1,575 sacks to the surface. Circulated 400 sacks to the pit.

Production casing (7", 29#, S-95-N-80, L T & C) was set at 12,620' in an 8-3/4" hole and cemented to 5,225' (temperature survey) with 1,060 sacks.

A liner (4-1/2", 15.1#, P-110, FL 45) was run from 12,216' to 13,908' and cemented to 12,216' with 220 sacks.

Well was perforated in the Wolfcamp from 13,213' to 13,781' in August 1997.

A. (3) Tubing will be 3-1/2", 9.3#, J-55, plastic lined. Setting depth will be between 5,416' and 5,516'. (Disposal interval will be 5,516' to 7,325'.)

A. (4) A 7" nickel flow wetted packer will be set between 5,416' and 5,466' (50' to 100' above the highest proposed perforation of 5,516').

B. (1) Disposal zone will be the SWD; Bell Canyon - Cherry Canyon (96802).

B. (2) Disposal interval will be perforated from 5,516' to 7,325' with 2 shots per foot.

B. (3) Well was drilled as a Wolfcamp gas well. Cumulative production to date is 38,635 barrels of oil, 824,057 Mcf of gas, and 3,270 barrels of water. Average production has been 8 bopd and 172 Mcfd.

B. (4) Well was perforated in the Wolfcamp from 13,213' to 13,781'. Wolfcamp perforations will be isolated with:

CIBP @ 13,200' + 35' cement
Balanced cement plug 12,166' - 12,670' across Wolfcamp
Balanced cement plug 9078' - 9178' across Bone Spring
CIBP @ 7460' + 35' cement above Brushy Canyon

B. (5) Closest Bell Canyon production (30-025-33639) is over 5 miles SSE in K-10-25s-33e. Closest Cherry Canyon production (30-025-24335) is over 4 miles northeast in J-31-23s-34e. Closest Brushy Canyon production (30-025-32937) is over 9 miles northeast in H-1023s-34e. Closest Delaware production (30-025-25181) is 3 miles west in B-13-24s-32e. This well produces from the Ramsey sandstone member of the Bell. There are no producing zones above the Bell Canyon within a mile radius. There are two producing zones below the Cherry Canyon within a mile radius - Bone Spring (9,128') and Wolfcamp (12,296').

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

V. Exhibit B shows the 9 existing wells (8 oil + 1 P & A) and 3 proposed wells within a half-mile radius. Exhibit C shows all 113 existing wells (98 oil or gas wells + 8 P & A wells + 5 water wells or windmills + 2 SWD wells) within a two-mile radius.

Exhibit D shows all leases and lessors (only State) within a half-mile radius. Exhibit E shows all leases and lessors (only State, fee, and BLM) within a two-mile radius. Details on the leases within a half-mile radius are:

Aliquot Parts in Area of Review (T 24 S, R 33 E)	Lessor	Lease	Lessee(s) of Record	Bell Canyon or Cherry Canyon operator, if any	in Jackson Unit
S2SW4 Sec. 9	NMSLO	V0-4096-0001	EOG & Santa Fe	none	no
SWSW Sec. 10		V0-4397-0002	EOG & Santa Fe		no
NW4 Sec. 15		LG-3176-0007	Chaparral & Murchison		no
N2SW4 & SWSW Sec. 15		LG-6337-0000	EOG		no
NENW & NESW Sec. 16		VB-1859-0000	Yates		no
E2 & SENW Sec. 16		L0-5167-0001	EOG		yes

VI. Nine existing (8 producers + 1 P&A) and 3 proposed wells are within a 2,640' radius. All have or will penetrate the Bell Canyon. A summary of the penetrators is attached as Exhibit F. Wells in or near the area of review are:

API	WHO	UL	T24S, R33E, SECTION	SPUD	DEPTH	WELL	TYPE WELL	FEET FROM JACKSON UNIT 5 (SHL to SHL)	ZONE
3002541227	Murchison	A	16	8/18/13	11220 TVD	Jackson Unit 012H	O	1806	Bone Spring
3002541789	Murchison	P	9	not yet	15700 MD	Jackson Unit 034H	O	2072	
3002542076	Murchison	B	16	11/27/14	15754 MD	Jackson Unit 033H	O	2075	
3002541072	Murchison	D	15	11/3/13	11187 TVD	Jackson Unit 014H	O	2135	
3002541973	Murchison	O	9	9/27/14	10993 TVD	Mogi 9 State Com 010H	O	2183	
3002541787	Murchison	P	9	10/26/14	11003 TVD	Mogi 9 State Com 011H	O	2202	
3002541122	Murchison	B	16	7/12/13	11176 TVD	Jackson Unit 011H	O	2222	
3002541071	Murchison	P	9	10/13/13	11254 TVD	Mogi 9 State Com 004H	O	2320	
3002541790	Murchison	D	15	not yet	15700 MD	Jackson Unit 035H	O	2418	

3002540976	Murchison	O	9	7/10/13	11203 TVD	Mogi 9 State Com 002H	O	2554	
3002541785	Murchison	O	9	not yet	15300 MD	Mogi 9 State Com 007H	O	2578	
3002528992	Harper	P	9	11/3/84	5400 TVD	Jackson 9 001	P & A	2640	Ramsey

VII. 1. Average disposal rate will be ≈7,500 bwpd.
Maximum disposal rate will be 10,000 bwpd.

2. System will be open and closed. Water will be trucked and piped to the well.

3. Average disposal pressure will be ≈1,000 psi
Maximum disposal pressure will be 1,103 psi (= 0.2 psi/foot x 5,516' (highest perforation)).

4. There have been no reports of problems disposing into the closest (9,061' northwest) active SWD; Bell Canyon-Cherry Canyon well (30-025-40845). At least 1,969,416 barrels have been disposed in the last 19 months. Murchison has not experienced any problems disposing of water into the Delaware its Jackson Unit 6. That well is 4,949' south. At least 1,655,192 barrels have been disposed in the last 18 months.

Source of the disposal water will be produced water from Murchison's Wolfcamp and Bone Spring wells. Well will take only Murchison water, though some may be from outside the unit. Murchison has 8 existing Wolfcamp gas wells, 28 existing Bone Spring oil wells, and 21 approved Bone Spring oil wells in T. 24 S., R. 33 E. A summary of water analyses from the closest relevant wells in the WAIDS database follows.

Well	Bell Lake Unit 7	Bell Lake Unit 3	Bell Lake Unit 3	Laguna Plata Unit 1	Zinnia BKC Federal 1
API #	30-025-08367	30-025-08490	30-025-20261	30-025-01678	30-015-27939
Location	1-1-24s-33e	C-6-24s-34e	K-18-23s-34e	I-22-19s-33e	E-27-20s-29e
Formation	Delaware	Bone Spring	Bone Spring	Wolfcamp	Delaware & Wolfcamp
Parameter mg/l					
barium					0
bicarbonate	391	427	512	714	427
calcium		10000			23920
chloride	53920	112000	130000	27270	116724
iron		288			
H2S					30
magnesium		3808			963
sodium		54603			
strontium					
sulfate	749	1050	260	1116	750
TDS	87686		204652	46915	189739

5. Closest Bell Canyon production (30-025-33639) is over 5 miles SSE in K-10-25s-33e. Closest Cherry Canyon production (30-025-24335) is over 4 miles northeast in J-31-23s-34e. Closest Brushy Canyon production (30-025-32937) is over 9 miles northeast in H-1023s-34e. Closest Delaware production (30-025-25181) is 3 miles west in B-13-24s-32e.

VIII. The Delaware (5,214' - 9,128') is fine-grained sandstone with some anhydrite, limestone, and shale. Murchison proposes to develop the Bell Canyon and Cherry Canyon portions from 5,516' to 7,297'.

Closest possible underground source of drinking water above the proposed disposal interval is the Quaternary at the surface. One water well (C 02430) is within a mile (1610 meters) radius according to the Office of the State Engineer (Exhibit G). That water well is ≈5,244' southwest. Deepest water well (C 03565

POD 3) within 2 miles (3220 meters) is 1,533' deep and 6,917' northwest. No underground source of drinking water is below the proposed disposal interval.

Formation tops are:

Quaternary = 0'
Anhydrite = 1,270'
Delaware = 5,214'
Ramsey = 5,259'
Ford = 5,285'
Disposal interval = 5,516' - 7,325'.
(Bell Canyon perfs = 5,516' - 6,199'
Cherry Canyon perfs = 6,218' - 7,325')
Brushy Canyon = 7589'
Bone Spring = 9,128'
Wolfcamp = 12,296'
PBTD = 13,870'
Total Depth: 13,908'

There will be ≥4,246' of vertical separation and the anhydrite interval between the bottom of the only likely underground water source (Quaternary) and the highest perforation. The Ogallala is not present. It is more than 25 miles northeast (Exhibit G).

A minimum of 3,624,608 barrels of produced water has been disposed into the Delaware at two saltwater disposal wells within a 2-mile radius.

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

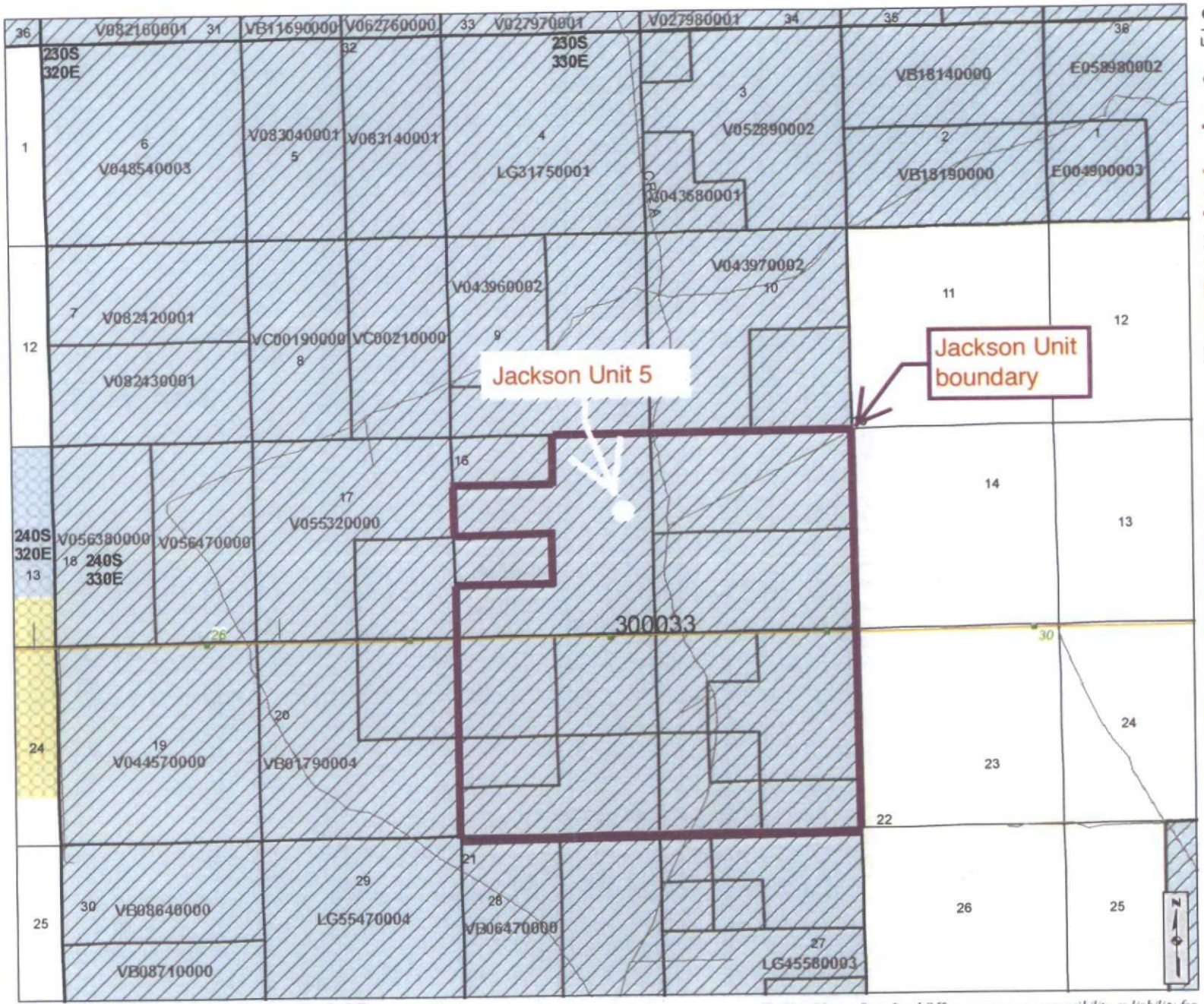
X. Compensated neutron density, dual laterolog, micro SFL/GR, and litho density logs have been run and are on file with NMOCD.

XI. Based on May 13, 2014 and April 9, 2015 field inspections and a review of the State Engineer's records, one-water well (C 02430) is within a one-mile radius. It could not be sampled because it was locked. The next closest (5,674' northeast) water well (C 02308) was sampled. The analysis is in Exhibit H.

XII. Murchison Oil & Gas, Inc. is not aware of any geologic or engineering data which ~~may indicate the~~ Delaware is in hydrologic connection with any underground sources of water. There are 44 active SWD; Bell Canyon-Cherry Canyon (96802), 12 active SWD; Bell Canyon (96769), and 15 active SWD; Cherry Canyon (97003) wells in New Mexico. Closest fault (Guadalupe) is more than 50 miles southwest (Exhibit I).

talked with Cal Ward, Murchison got Verbal affirm 09/16/15 JAD

XIII. A legal ad (see Exhibit J) was published on April 8, 2015. Notice (this application) has been sent (Exhibit K) to the surface owner (NM State Land Office), lessor (NM State Land Office), and all leasehold operators or other affected persons (Chaparral, Devon, EOG, Yates) within a half-mile.



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 Subsuface 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

- CO^2
- 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

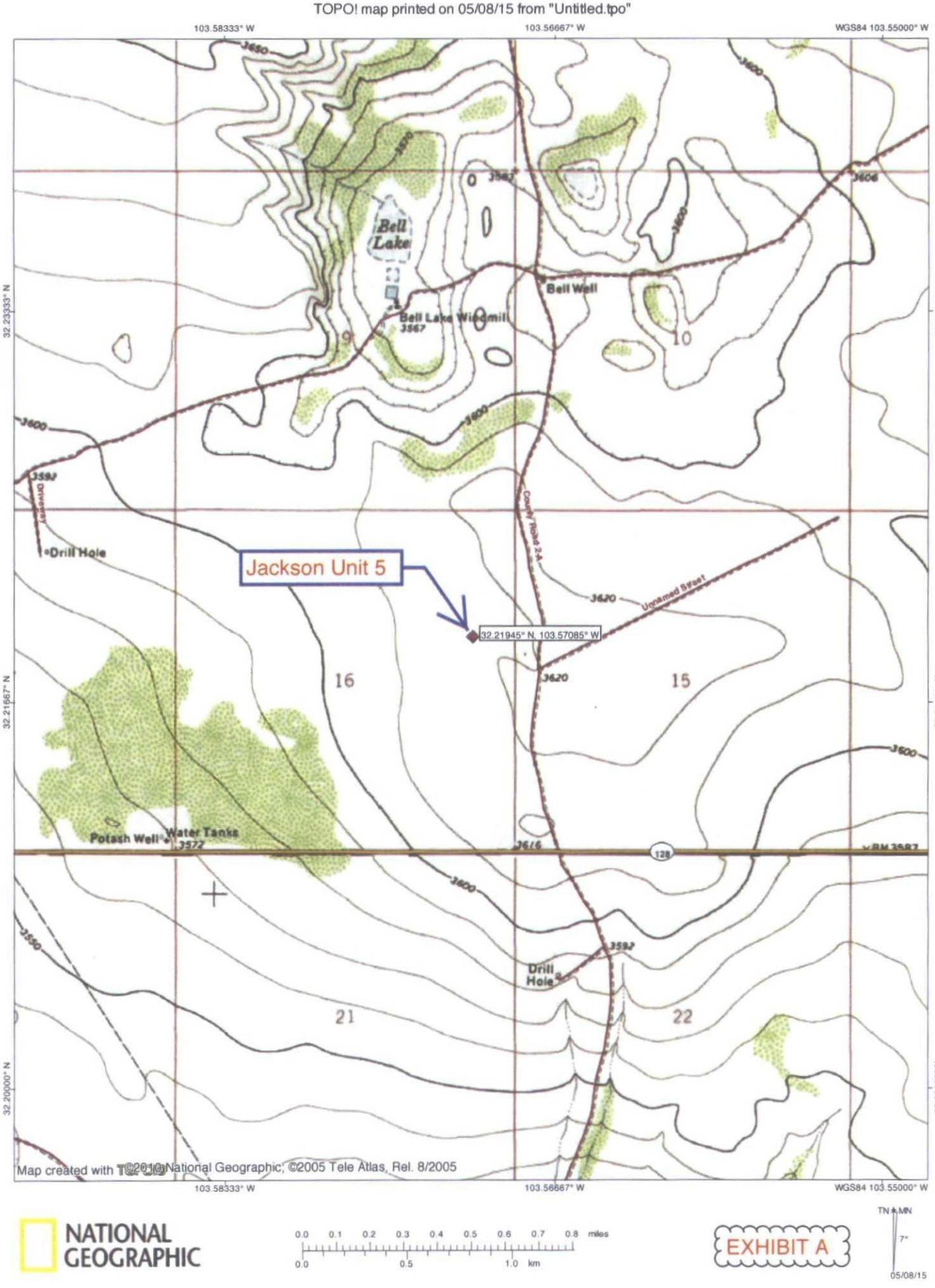
Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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

Created On: 5/8/2015 2:15:51 PM

EXHIBIT A

www.nmstatelands.org


TOPO! map printed on 05/08/15 from "Untitled.tpo"
103.58333° W
103.56667° W
WGS84 103.55000° W
32.23333° N
32.21667° N
32.20000° N
Bell Lake
Bell Well
Bell Lake Windmill
3567
Driveway
Drill Hole
Jackson Unit 5
32.21945° N, 103.57085° W
County Road 2-A
Unnamed Street
3620
3600
3592
16
15
21
22
Potash Well
Water Tanks
3572
3616
128
Drill Hole
Map created with TOPO!
©2010 National Geographic, ©2005 Tele Atlas, Rel. 8/2005
NATIONAL GEOGRAPHIC
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 miles
0.0 0.5 1.0 km
EXHIBIT A
TN + MN
7°
05/08/15

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-33873	79335	Johnson Ranch Wolfcamp

Property Code	Property Name	Well Number
8127	JACKSON UNIT	5

OGRID No.	Operator Name	Elevation
15363	MURCHISON OIL & GAS INC.	3616'

Surface Location

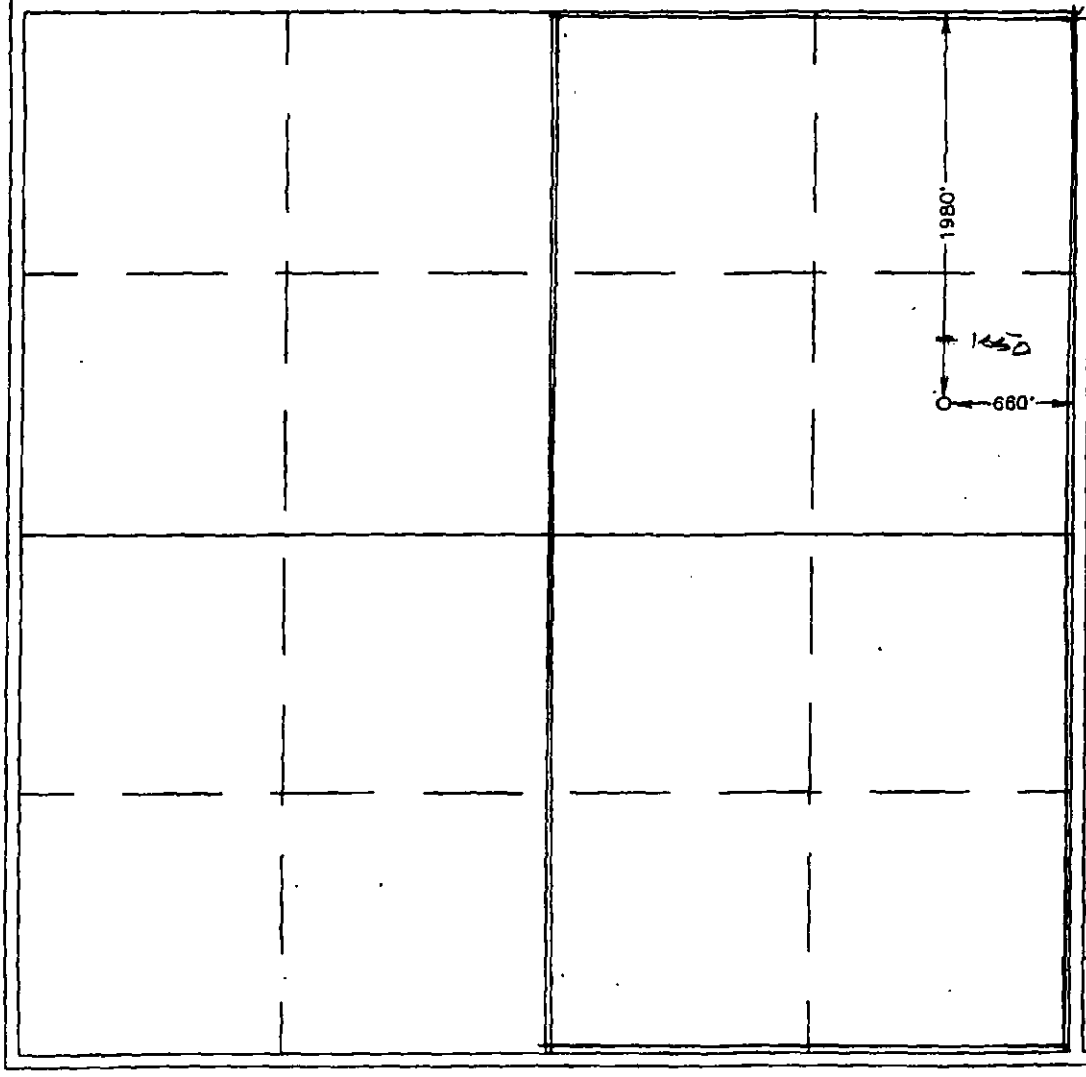
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	16	24 S	33 E		1980	NORTH	660	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Michael S. Daugherty
Signature

Michael S. Daugherty
Printed Name

Vice President - Operations
Title

03/03/97
Date

SURVEYOR CERTIFICATION

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 supervison, and that the same is true and correct to the best of my belief.

FEBRUARY 21, 1997

Date Surveyed CDG

Signature & Seal of Professional Surveyor

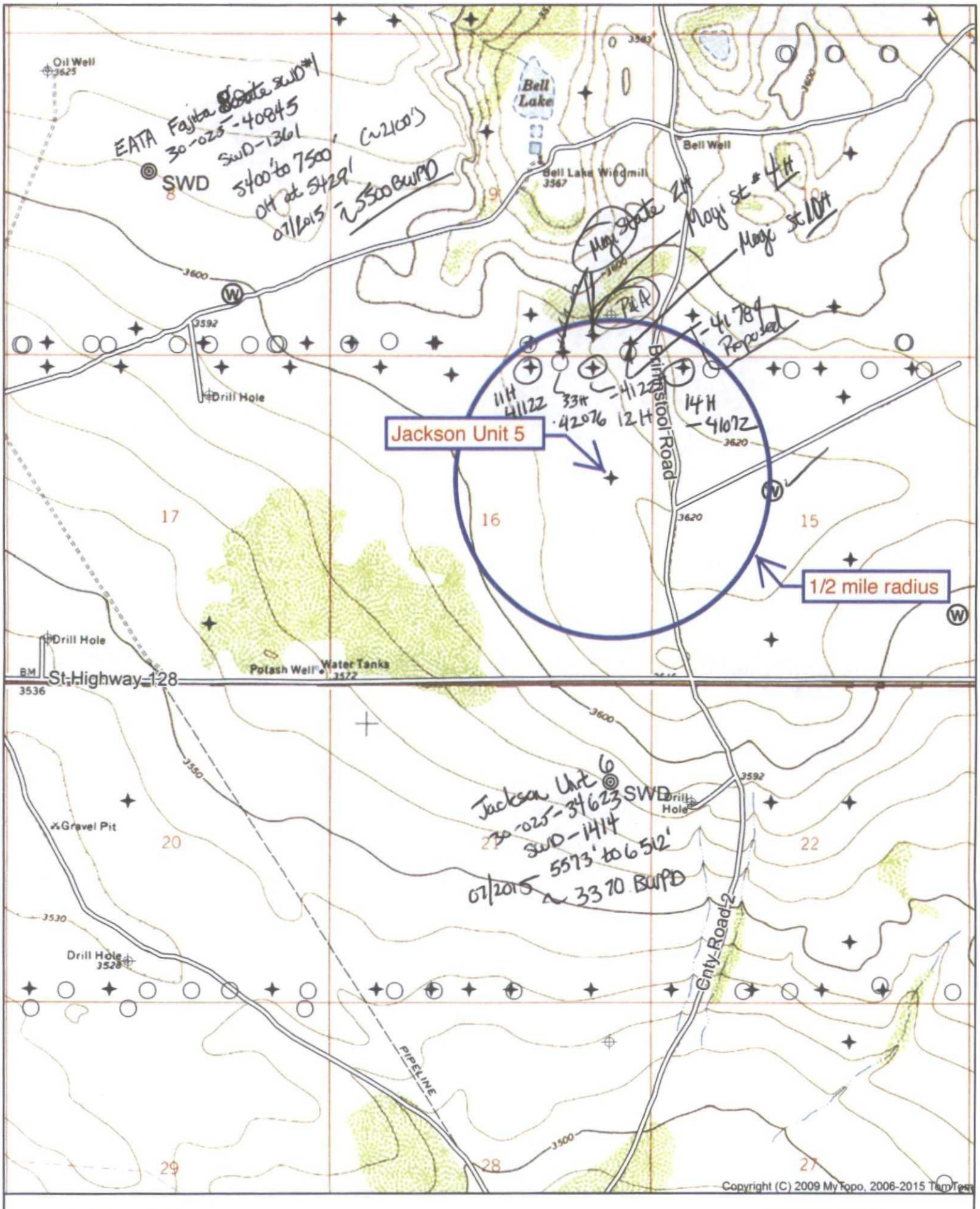
RONALD J. EIDSON
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR

EXHIBIT A

2-25-97

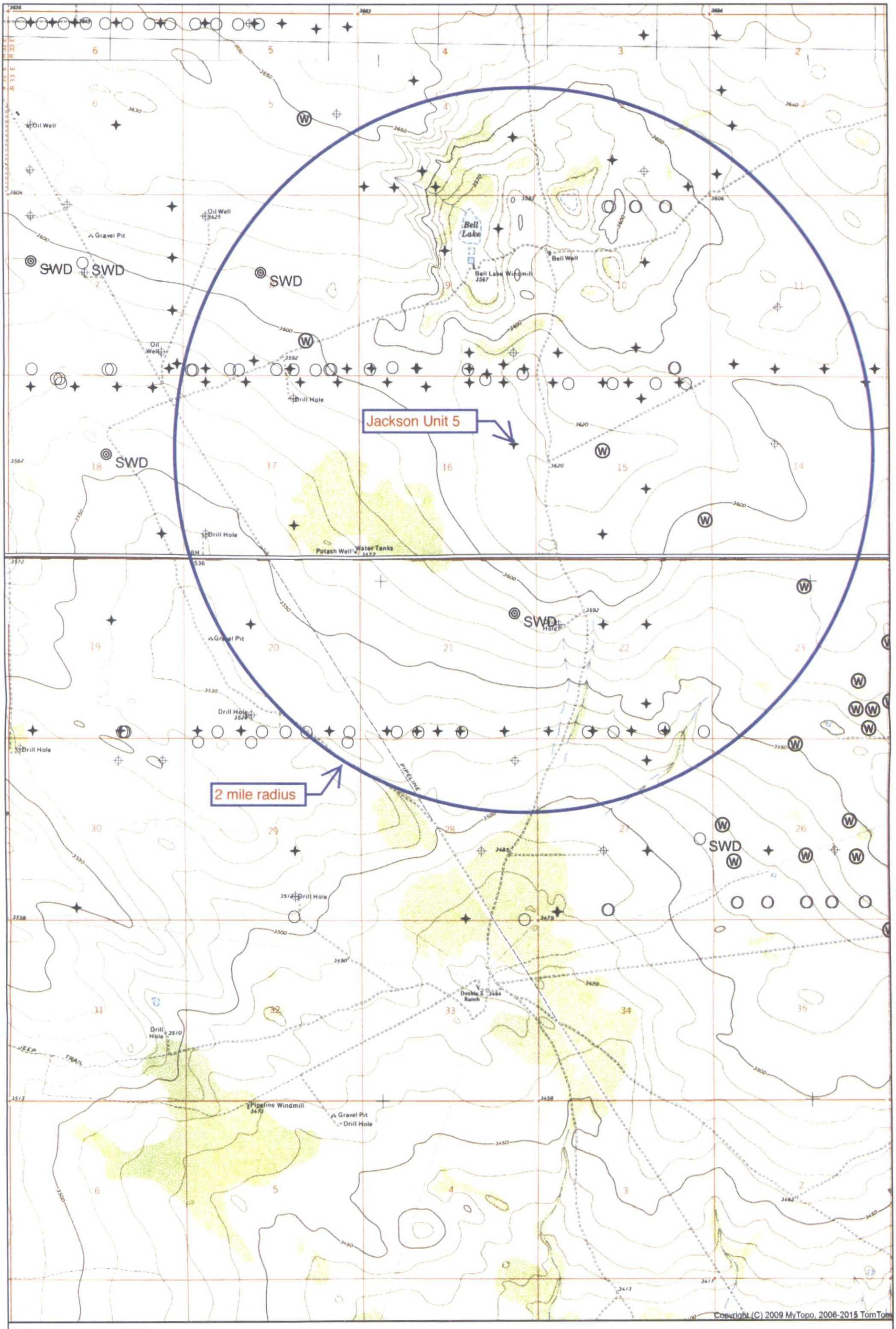
097-11-0339

Certificate No. JOHN W. WEST 676
RONALD J. EIDSON 3239
GARY L. EIDSON 12641



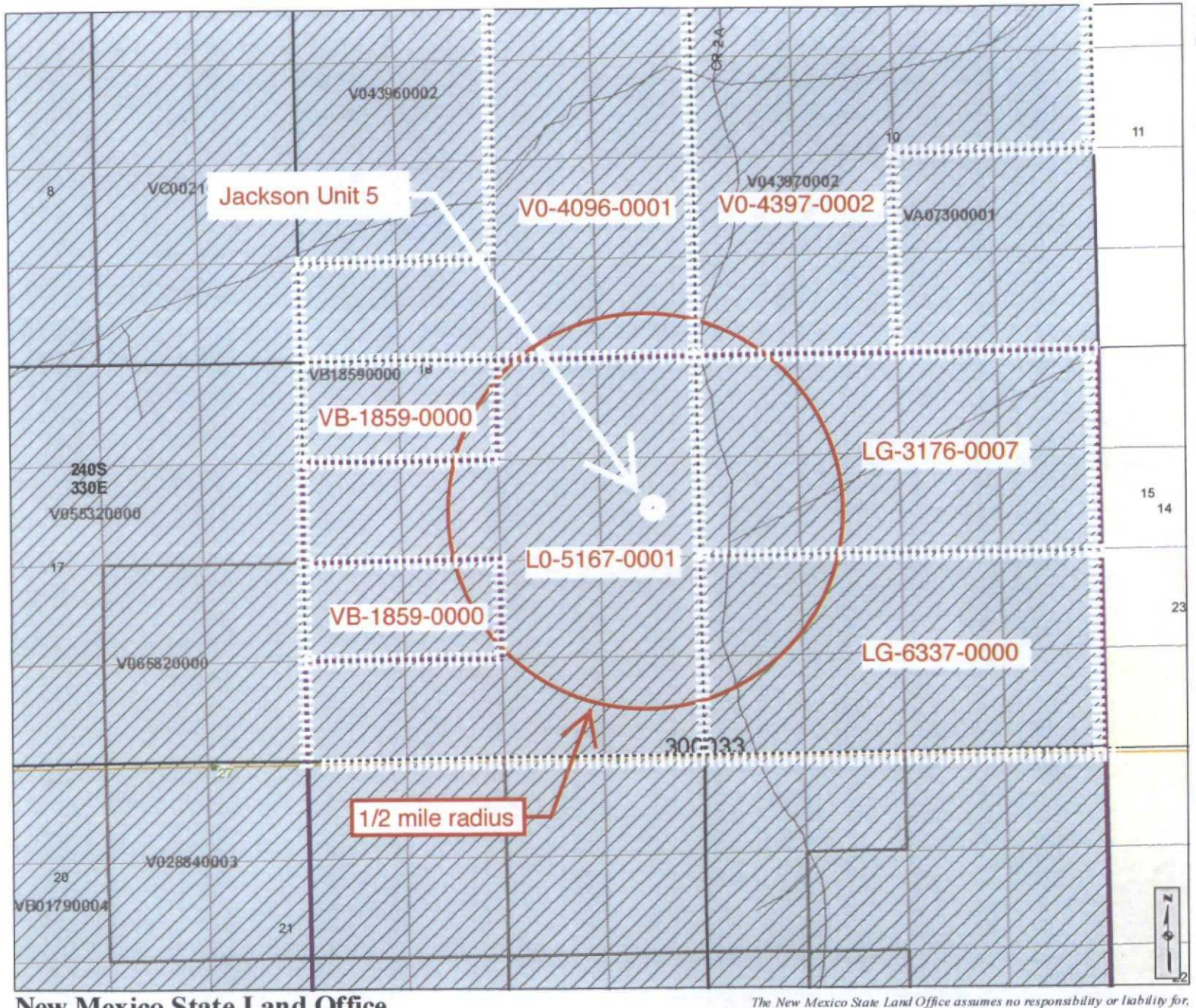
Quad: BELL LAKE
Scale: 1 inch = 2,000 ft.

EXHIBIT B



Quad: BELL LAKE
Scale: 1 inch = 2,564 ft.

EXHIBIT C



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 Subsuface 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

- CO^2
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

New Mexico State Land Office

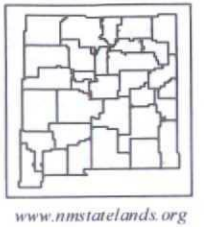
Oil, Gas and Minerals

0 0.05 0.1 0.2 0.3 0.4 Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

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

Created On: 5/8/2015 2:16:55 PM



www.nmstatelands.org

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 Subsuface 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
- CO^2
- 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

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

Created On: 5/9/2015 10:14:35 AM

EXHIBIT E

www.nmstatelands.org

Sorted by distance from Jackson Unit 5

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
Jackson Unit 12H	8/18/13	11220	Triple X; Bone Spring, West	Oil	16	13.375	1295	642 sx	GL	circ 109 sx to surf
30-025-41227		TVD			12.25	9.625	5223	1473 sx	GL	circ 28 sx to surf
A-16-24s-33e					8.5	7	10628	990 sx	4495	calculated
					8.5	4.5	15709	420	10497	
Jackson Unit 34H	not yet	15700	Triple X; Bone Spring, West	Oil	16	13.375	1200	700 sx	GL	no report
30-025-41789		MD			12.25	9.625	5200	1400 sx	GL	no report
P-9-24s-33e					8.5	5.5	15700	1700 sx	3000	no report
Jackson Unit 33H	11/27/14	15754	Triple X; Bone Spring, West	Oil	16	13.375	1288	560 sx	GL	circ 95 sx to surf
30-025-42076		MD			12.25	9.625	5104	1460 sx	GL	circ 84 sx to surf
B-16-24s-33e					8.5	7	10459	2176 sx	1150	no report
					8.5	4.5	15743			
Jackson Unit 14H	11/3/13	11244	Triple X; Bone Spring, West	Oil	16	13.375	1302	848 sx	GL	circ 209 sx to surf
30-025-41072		TVD			12.25	9.625	5252	1920 sx	GL	circ 160 sx to surf
D-15-24s-33e					8.5	7	10805	972 sx	1871	no report
					8.5	4.5	15779	410	10656	
Mogi 9 State Com 10H	9/27/14	11037	Triple X; Bone Spring, West	Oil	16	13.375	1303	715 sx	GL	circ 218 sx to surf
30-025-41973		TVD			12.25	9.625	5176	1770 sx	GL	circ 87 sx to surf
O-9-24s-33e					8.5	7	10536	2191 sx	2200	no report
					8.5	4.5	15933			
Mogi 9 State Com 11H	10/26/14	11039	Triple X; Bone Spring, West	Oil	16	13.375	1303	558 sx	GL	circ 168 sx to surf
30-025-41787		TVD			12.25	9.625	5191	1634 sx	GL	circ 255 sx to surf
P-9-24s-33e					8.5	7	10192	2113 sx	4610	no report
					8.5	4.5	15643		4000	

EXHIBIT F

Sorted by distance from Jackson Unit 5

WELL	SPUD	TD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	TOC	HOW DETERMINED
Jackson Unit 11H	7/12/13	11209	Triple X; Bone Spring, West	Oil	16	13.375	1284	696 sx	GL	circ 112 sx to surf
30-025-41122		TVD			12.25	9.625	5206	2288 sx	GL	circ 517 sx to surf
B-16-24s-33e					8.5	7	10715	925 sx	4000	no report
					8.5	4.5	15717	496	10565	
Mogi 9 State Com 4H	10/13/13	11265	Triple X; Bone Spring, West	Oil	16	13.375	1340	576 sx	GL	circ 188 sx to surf
30-025-41071		TVD			12.25	9.625	5254	1400 sx	2800	temp survey
P-9-24s-33e					8.5	7	10733	1310 sx	1200	calculated
					8.5	4.5	15695	525 sx	10626	
Jackson Unit 35H	not yet	15700	Triple X; Bone Spring, West	Oil	16	13.375	1200	700 sx	GL	no report
30-025-41790		MD			12.25	9.625	5200	1400 sx	GL	no report
D-15-24s-33e					8.5	5.5	15700	1700 sx	3000	no report
Mogi 9 State Com 2H	7/10/13	11214	Triple X; Bone Spring, West	Oil	16	13.375	1300	728 sx	GL	circ 160 sx to surf
30-025-40976		TVD			12.25	9.625	5216	2528 sx	GL	circ 578 sx to surf.
O-9-24s-33e					8.5	7	10765	1222 sx	9600	CBL
					8.5	4.5	15766	434 sx	10529	
Mogi 9 State Com 7H	not yet	15300	Triple X; Bone Spring, West	Oil	16	13.375	1200	700 sx	GL	no report
30-025-41785		MD			12.25	9.625	5200	1400 sx	GL	no report
O-9-24s-33e					8.5	5.5	15300	1700 sx	3000	no report
Jackson 9 1	11/3/84	5400	wildcat Ramsey	P&A	11	8.625	762	165 sx	GL	circ 75 sx to surf
30-025-28992		TVD			7.875	5.5	5399	700 sx	2995	no report
P-9-24s-33e										

(6) (7) (8) (9)

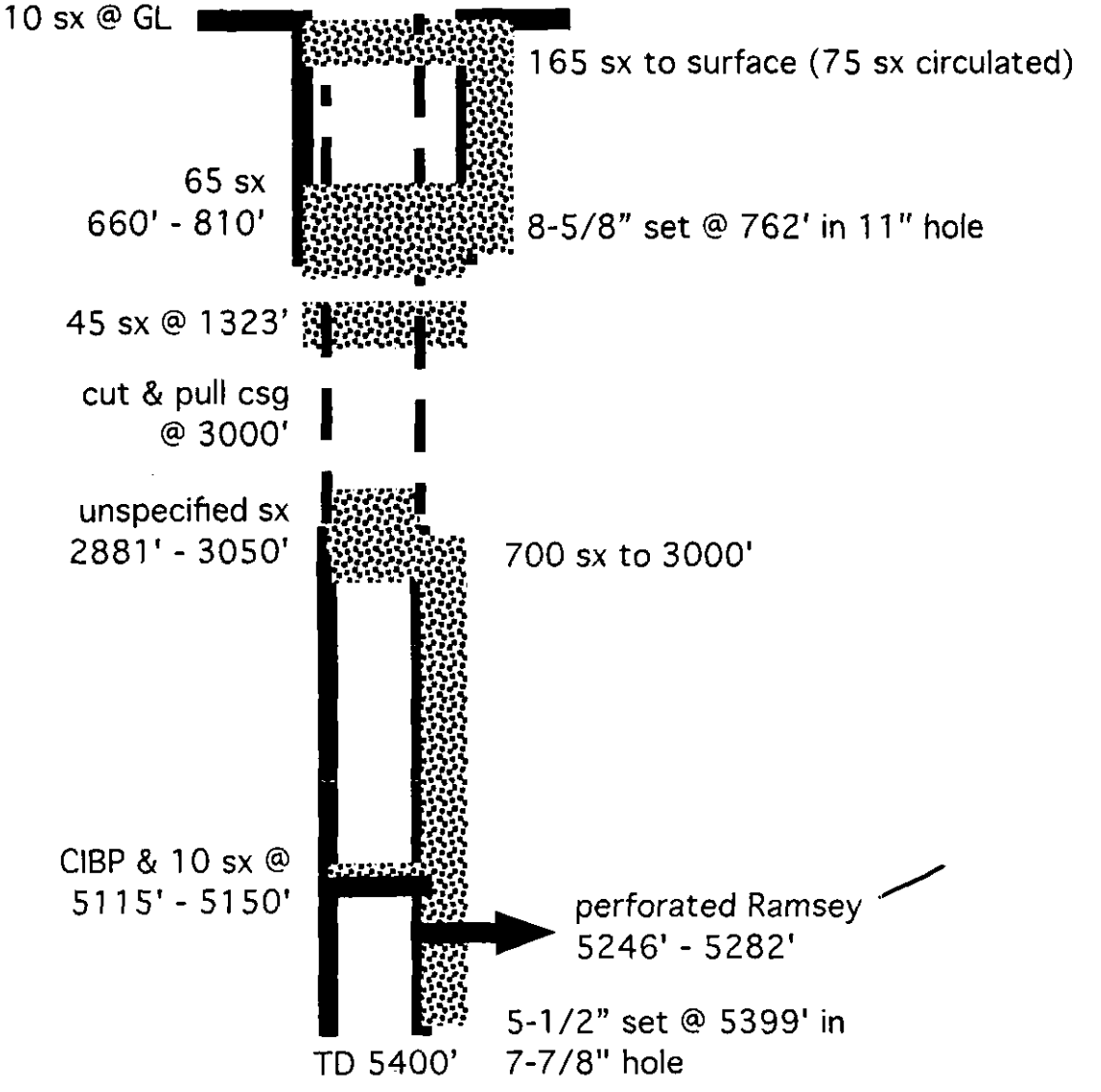
at. 50 miles

8 - active/Hz

1 - P&A

EXHIBIT F

Harper's Jackson 9 #1
API 30-025-28992
P-9-24s-33e
Spud: 11-3-84
P&A: 12-29-84



(not to scale)

EXHIBIT F

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Twws	Rng	X	Y	meters Distance	Depth Well	Depth Water	Water Column
C 02430			LE	3	3	3	16	24S	33E	633377	3564732*	1593	643	415	228
C 02308			LE	1	3	1	10	24S	33E	634953	3567364*	1730	40	20	20
C 02431			LE	4	4	4	17	24S	33E	633175	3564728*	1763	525	415	110
C 02432			LE	4	4	4	17	24S	33E	633175	3564728*	1763	640	415	225
C 03565 POD3			LE		3	4	08	24S	33E	632763	3566546	2109		1533	
C 03662 POD1	C		LE	3	1	2	23	24S	33E	637342	3564428	2936	550	110	440

1610 meters
= 5,280 feet

Average Depth to Water: **484 feet**

Minimum Depth: **20 feet**

Maximum Depth: **1533 feet**

Record Count: 6

UTMNAD83 Radius Search (in meters):

Easting (X): 634675 **Northing (Y):** 3565656 **Radius:** 3220

EXHIBIT G

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Twn	Rng	X	Y	Distance
C 03585		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD1				3 4 1	15	24S	33E	635368	3565544	702
C 03565		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD6				3 3	10	24S	33E	635022	3566373	797
C 03585		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD2				1 2 3	15	24S	33E	635418	3565363	798
C 03565		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD8				4 1	15	24S	33E	635484	3565610	810
C 03585		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD4				4 4 1	15	24S	33E	635485	3565610	811
					LE	C 03585 POD3				1 2 3	15	24S	33E	635393	3565270	815
C 03565		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD5				3 4	09	24S	33E	634135	3566496	998
C 03585		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD5				1 2 4	15	24S	33E	636245	3565387	1593
C 02430		COM	64	MARK T. AND ANNETTE E. MCCLOY	LE	C 02430			Shallow	3 3 3	16	24S	33E	633377	3564732*	1593
C 03565		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD4				4 1	09	24S	33E	633672	3567057	1723
C 02308		STK	3	MARK T. AND ANNETTE E. MCCLOY	LE	C 02308				1 3 1	10	24S	33E	634953	3567364*	1730
C 02431		COM	15	PLAINS FEDERAL LAND BANK ASSOC	LE	C 02431			Shallow	4 4 4	17	24S	33E	633175	3564728*	1763
C 02432		COM	128	MARK T. AND ANNETTE E. MCCLOY	LE	C 02432			Shallow	4 4 4	17	24S	33E	633175	3564728*	1763
C 03565		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD9				4 4	15	24S	33E	636429	3565005	1871
C 03585		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD6				2 4 4	15	24S	33E	636431	3565007	1872
C 03565		EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD3				3 4	08	24S	33E	632763	3566546	2109
C 03662	C	DOL	3	MARK MCCLOY (M&M RANCH)	LE	C 03662 POD1			Shallow	3 1 2	23	24S	33E	637342	3564428	2936
C 03727	C	PRO	0	MARK MCCLOY	LE	C 03662 POD1			Shallow	3 1 2	23	24S	33E	637342	3564428	2936

UTM location was derived from PLSS - see Help

EXHIBIT G

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Twn	Rng	X	Y	Distance
C 03728	C	PRO	0	ANNETTE MCCLOY	LE	C 03662 POD1			Shallow	3 1 2	23	24S	33E	637342	3564428	2936
C 03729	C	PRO	0	MARK MCCLOY	LE	C 03662 POD1			Shallow	3 1 2	23	24S	33E	637342	3564428	2936

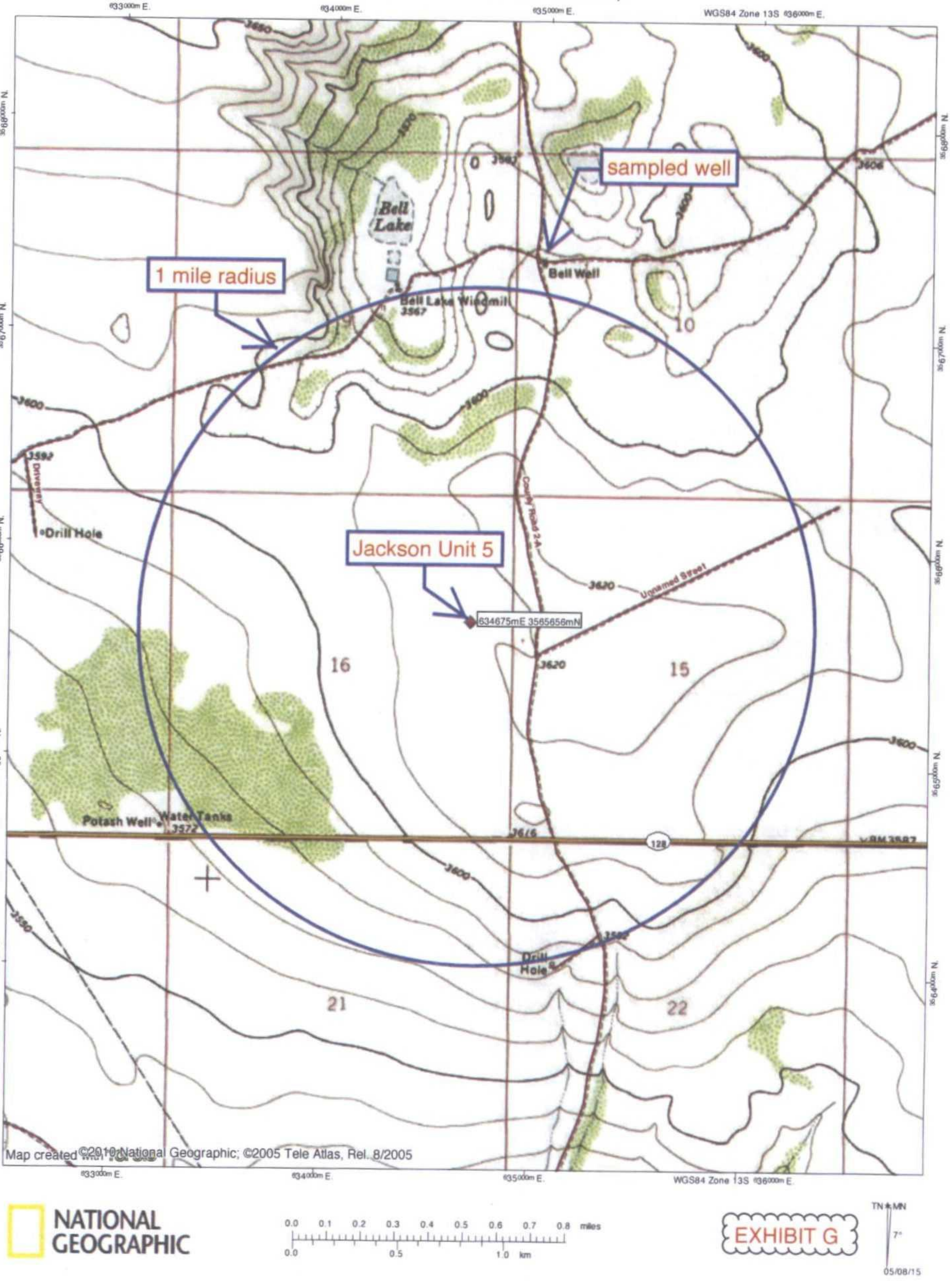
Record Count: 20

UTMNAD83 Radius Search (in meters):

Easting (X): 634675 ***Northing (Y):*** 3565656 ***Radius:*** 3220

Sorted by: Distance

TOPO! map printed on 05/08/15 from "Untitled.tpo"



NATIONAL GEOGRAPHIC

EXHIBIT G

05/08/15

Ogallala

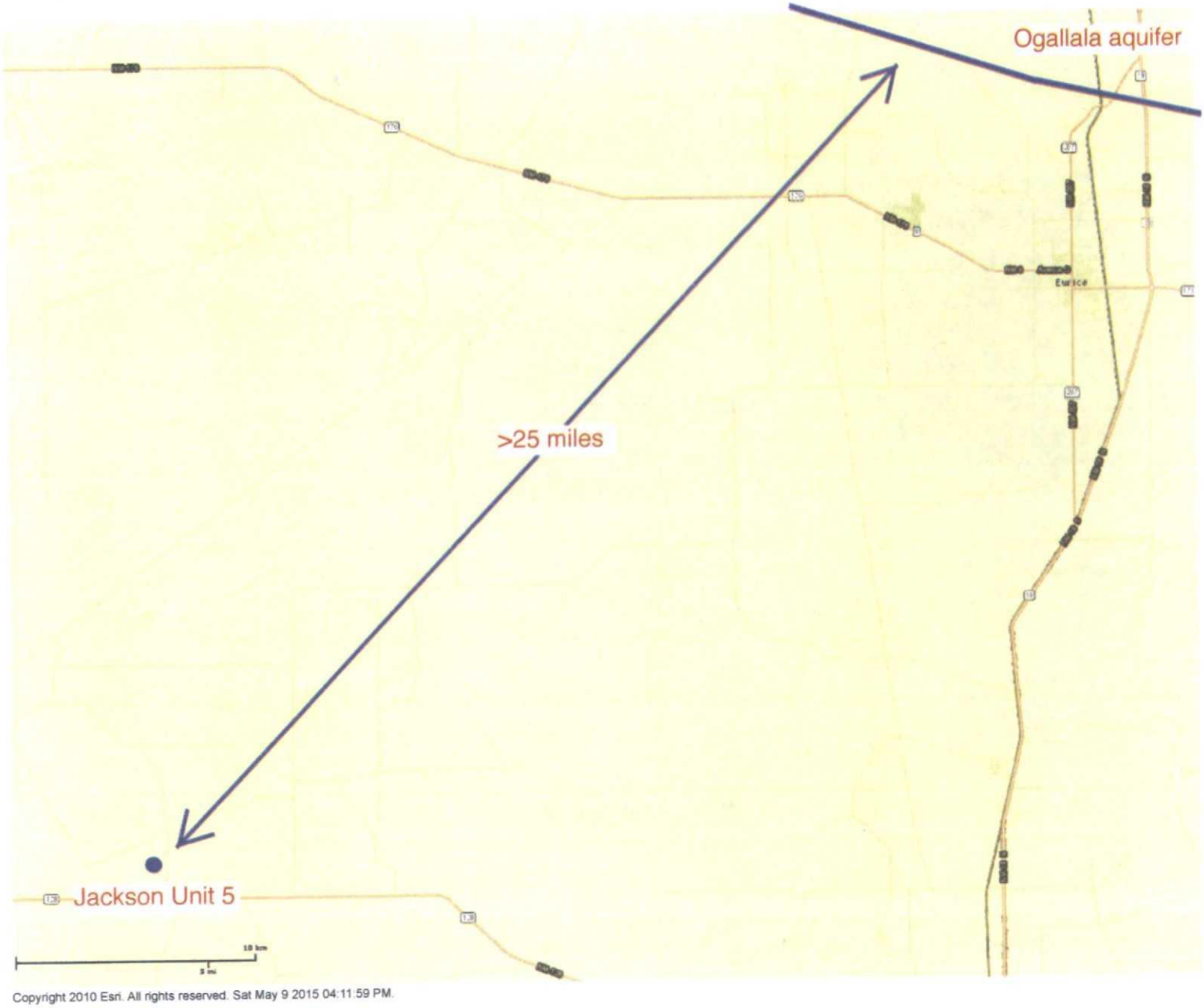


EXHIBIT G

Analytical Report
Lab Order **1504776**
Date Reported: **4/24/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Murchison- Jackson SWD
Lab ID: 1504776-001 **Matrix:** AQUEOUS

Client Sample ID: Murch-Bell Lake
Collection Date: 4/9/2015 10:15:00 AM
Received Date: 4/15/2015 3:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	58	10		mg/L	20	4/17/2015 4:28:31 PM	R25619
EPA METHOD 1664A						Analyst: **MRA**	
N-Hexane Extractable Material	ND	9.7		mg/L	1	4/20/2015 2:00:00 PM	18765
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JML**	
Total Dissolved Solids	653	20.0	*H	mg/L	1	4/19/2015 11:51:00 AM	18759

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

EXHIBIT H

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504776**

24-Apr-15

Client: Permits West

Project: Murchison- Jackson SWD

Sample ID	MB-18765	SampType:	MBLK	TestCode:	EPA Method 1664A					
Client ID:	PBW	Batch ID:	18765	RunNo:	25661					
Prep Date:	4/20/2015	Analysis Date:	4/20/2015	SeqNo:	760520	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	5.0								
Silica Gel Treated N-Hexane Extrac	ND	5.0								

Sample ID	LCS-18765	SampType:	LCS	TestCode:	EPA Method 1664A					
Client ID:	LCSW	Batch ID:	18765	RunNo:	25661					
Prep Date:	4/20/2015	Analysis Date:	4/20/2015	SeqNo:	760521	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	33	5.0	40.00	0	83.0	78	114			
Silica Gel Treated N-Hexane Extrac	17	5.0	20.00	0	83.5	64	132			

Sample ID	1504776-001BMS	SampType:	MS	TestCode:	EPA Method 1664A					
Client ID:	Murch-Bell Lake	Batch ID:	18765	RunNo:	25661					
Prep Date:	4/20/2015	Analysis Date:	4/20/2015	SeqNo:	760530	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	62	9.8	156.0	0	39.5	78	114			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

EXHIBIT H

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504776**

24-Apr-15

Client: Permits West

Project: Murchison- Jackson SWD

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBW**	Batch ID:	**R25619**	RunNo:	**25619**					
Prep Date:		Analysis Date:	**4/17/2015**	SeqNo:	**759073**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSW**	Batch ID:	**R25619**	RunNo:	**25619**					
Prep Date:		Analysis Date:	**4/17/2015**	SeqNo:	**759074**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.8	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

EXHIBIT H

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504776

24-Apr-15

Client: Permits West

Project: Murchison- Jackson SWD

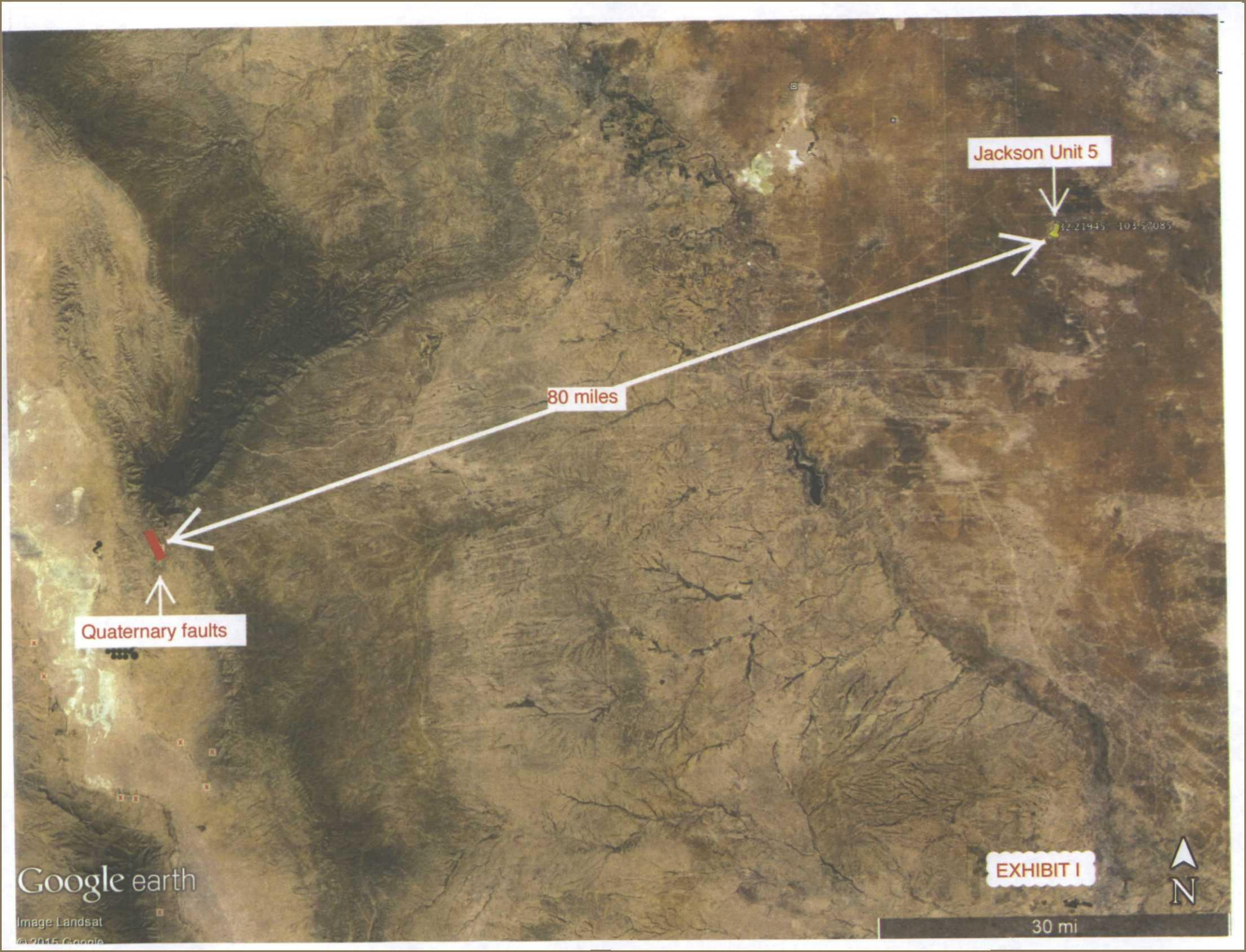
Sample ID	MB-18759	SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW	Batch ID:	18759		RunNo:	25598				
Prep Date:	4/17/2015	Analysis Date:	4/19/2015		SeqNo:	758471	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-18759	SampType:	LCS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	LCSW	Batch ID:	18759		RunNo:	25598				
Prep Date:	4/17/2015	Analysis Date:	4/19/2015		SeqNo:	758472	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	103	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

EXHIBIT H


Jackson Unit 5
80 miles
Quaternary faults
EXHIBIT I
N
30 mi
Google earth
Image Landsat

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
April 08, 2015
and ending with the issue dated
April 08, 2015.

Daniel Russell
Publisher

Sworn and subscribed to before me this
8th day of April 2015.

Gussie Black
Business Manager

My commission expires
January 29, 2019
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-19

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGALS

LEGAL NOTICE
April 8, 2015

Murchison Oil & Gas, Inc. will apply to convert its Jackson Unit 5 well to a saltwater disposal well. The well is at 1980 FNL & 660 FEL Sec. 16, T-24 S, R-33 E, Lea County and is 23 miles northwest of Jal. Disposal will be into the Bell Canyon and Cherry Canyon from 5516 to 7325. Maximum injection pressure will be 1,103 psi. Maximum disposal rate will be 10,000 bwpd. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr. Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting: Brian Wood, Permits West, Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120. #29915

02108485 00154537

BRIAN WOOD
PERMITS WEST
37 VERANO LOOP
SANTA FE, NM 87508

EXHIBIT J

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

May 11, 2015

Nick Jaramillo
New Mexico State Land Office
P. O. Box 1148
Santa Fe, NM 87504-1148

Dear Nick,

Murchison Oil & Gas, Inc. is applying (see attached application) to re-enter and convert its Jackson Unit 5 well to a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposed saltwater disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Jackson Unit 5 (state lease) TD = 13,908'
Proposed Injection Zone: Bell Canyon & Cherry Canyon (from 5,516' to 7,325')
Location: 1980' FNL & 660' FEL Sec. 16, T. 24 S., R. 33 E., Lea County, NM
Approximate Location: ≈23 air miles northwest of Jal, NM
Applicant Name: Murchison Oil & Gas, Inc. (972) 931-0700
Applicant's Address: 1100 Mira Vista Blvd., Plano TX 75093

Submittal Information: Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Brian Wood

EXHIBIT K

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Restricted Delivery Fee (Endorsement Required)	87552
Total Postage & Fees	$

Sent To: NM SLO
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City, State, ZIP+4: SF

PS Form 3800, July 2014 See Reverse for Instructions

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

May 11, 2015

Chaparral Energy, LLC
701 Cedar Lake Blvd.
Oklahoma City, OK 73114

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7014 2870 0001 8950 7915

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

May 11, 2015

EOG Resources Inc.
P. O. Box 4362
Houston TX 77210-4362

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City, State, ZIP+4 HOUSTON
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7014 2870 0001 8950 7922

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

May 11, 2015

Yates Petroleum Corp.
105 South 4th St.
Artesia NM 88210

Murchison Oil & Gas, Inc. is applying (see attached application) to re-enter and convert its Jackson Unit 5 well to a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposed saltwater disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Brian Wood

EXHIBIT K

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Certified Fee	MAY 11 2015
Return Receipt Fee (Endorsement Required)	Here
Restricted Delivery Fee (Endorsement Required)	87552
Total Postage & Fees	$

Sent To: YATES
Street & Apt. No., or PO Box No.:
City, State, ZIP+4: ARTESIA

7014 2870 0001 8950 7892

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

May 11, 2015

Santa Fe Energy Resources
c/o Devon Energy
333 West Sheridan Ave.
Oklahoma City, OK 73102

Murchison Oil & Gas, Inc. is applying (see attached application) to re-enter and convert its Jackson Unit 5 well to a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposed saltwater disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Brian Wood

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 7.61

MAY 11 2015
87552

Sent To: SANTA FE ENERGY
Street & Apt. No., or PO Box No.:
City, State, ZIP+4: OK. OK

7014 2870 0001 8950 7908

C-108 Review Checklist: Received 05/12/2015 Add. Request: — Reply Date: — Suspended: — [Ver 16]

DMG application; TOC requested

ORDER TYPE: WFX / PMX / SWD Number: 1580 Order Date: 09/16/15 Legacy Permits/Orders: NA

Well No. 5 Well Name(s): Jackson Unit

API : 30-0 25-33873 Spud Date: 05/17/1997 New or Old: New (*UIC Class II Primacy 03/07/1982*)

Footages 1980 FNL/660 FEL Lot — or Unit H Sec 16 Tsp 24S Rge 33E County Lea

General Location: ~20 mi W of Jal / N of State 128 Pool: Johnson Ranch; Wolfcamp Bell Canyon/Cherry Canyon Pool No.: 96802

BLM 100K Map: Jal Operator: Murchison Oil & Gas Inc OGRID: 15363 Contact: B. Woods / Permits West

COMPLIANCE RULE 5.9: Total Wells: 165 Inactive: 2 Fincl Assur: Yes Compl. Order? No IS 5.9 OK? Yes Date: 09/16/15

WELL FILE REVIEWED ✓ Current Status: WC gas well - Production dropped / require disposal for BS production

WELL DIAGRAMS: NEW: Proposed ○ or **RE-ENTER:** Before Conv. ✓ After Conv. ✓ Logs in Imaging: Microlog & GR/CND

Planned Rehab Work to Well: CIBP/w cmt cap at 13,200'; balance plug at 12166'; balanced plug at 9078'; CIBP/w cmt cap at 7460'

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned __or Existing ✓ Surface	17 1/2 / 13 3/8	0 to 786'		490	Cir. to surface
Planned __or Existing ✓ Interm/Prod	12 1/4 / 9 5/8	0 to 5,287'	None	1575	Cir. to surface
Planned __or Existing ✓ Interm/Prod	8 3/4 / 7	0 to 12620'	None	1060	5225 ft by Temp Surv
Planned __or Existing ✓ Prod/Liner	4 1/2 inch liner	12,216 to 13,908	—	220	Calc. — ?
Planned __or Existing __ Liner		—	—	—	—
Planned ✓ or Existing ✓ OH PERF	7 inch WC Disposal	Existing: 13213-13716 Planned: 5516-7325	Inj Length	1809	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		Anhydrite	
Confining Unit: Litho. Struc. Por.	+257	Lamar / Del	5214
Proposed Inj Interval TOP:	5516	Bell Canyon	5259
Proposed Inj Interval BOTTOM:	7325	Cherry Canyon	6200
Confining Unit: Litho. Struc. Por.	+269	Brushy Canyon	7589
Adjacent Unit: Litho. Struc. Por.		Bone Spring	9128

Completion/Operation Details:

Drilled TD 13908 PBTD 13870

NEW TD — NEW PBTD 7460

NEW Open Hole ○ or NEW Perfs ✓

Tubing Size 3 1/2 in. Inter Coated? Yes

Proposed Packer Depth 5416 ft

Min. Packer Depth 5416 (100-ft limit)

Proposed Max. Surface Press. 1000 psi

Admin. Inj. Press. 1103 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P NA Noticed? NA BLM Sec Ord No WIPP No Noticed? NA Salt/Salado T: — B: — **NW:** Cliff House fm NA Called E-Word

FRESH WATER: Aquifer Alluvial / possible Rustler Max Depth <900' **HYDRO AFFIRM STATEMENT By Qualified Person** ✓

NMOSE Basin: Carlsbad **CAPITAN REEF:** thru — adj — NA ✓ **No. GW Wells in 1-Mile Radius?** 1 **FW Analysis?** Yes

Disposal Fluid: Formation Source(s) Bone Spring Analysis? Yes On Lease ○ Operator Only ✓ or Commercial ○

Disposal Interval: Inject Rate (Avg/Max BWPD): 7500/10,000 Protectable Waters? No Source: Historical System: Closed or Open Both

HC Potential: Producing Interval? No Formerly Producing? P&A Method: Logs/DST/P&A/Other — 2-Mile Radius Pool Map ○

Ramsey → Vertical

AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 9 (2 at 0.5mi) Horizontals? 8

Penetrating Wells: No. Active Wells 8 Num Repairs? 0 on which well(s)? MOG 9 State Com #2H has cmt top open between 9 & 7 in casing but at 0.5mi Diagrams? No

Penetrating Wells: No. P&A Wells 1 Num Repairs? 0 on which well(s)? — Diagrams? Yes

NOTICE: Newspaper Date 04/08/15 Mineral Owner SLO Surface Owner SLO N. Date 05/11/15

RULE 26.7(A): Identified Tracts? Yes Affected Persons: Chaparral / Devon / EOG / Yates N. Date 05/11/15

Order Conditions: Issues: None - will not require injection survey

Add Order Cond: No Special Requirements

Goetze, Phillip, EMNRD

From: Rusty Cooper <rcooper@jdmii.com>
Sent: Wednesday, September 16, 2015 8:20 AM
To: Cindy Cottrell; Goetze, Phillip, EMNRD
Cc: Brian Wood; Cal Ward
Subject: RE: Request for Info: Jackson Unit 5 SWD Application (30-025-33873)

Additional info:
Before completions started, all wells are pressure tested down the 7" X 9 5/8" annulus and cement squeezed as necessary. The standard squeeze job is 650 sx Class "C" which is the annular volume to the 9 5/8" shoe. results for the four wells in question are as follows:

1. Jackson Unit No. 11H; API 30-025-41122 Annulus squeezed to 500 psi with 500 sx pumped. Cleared surface equipment and shut down
2. Jackson Unit No. 12H; API 30-025-41227 Squeezed with 650 sx and clear surface equipment with 3 Bbls fresh water
3. Jackson Unit No. 14H; API 30-025-41072 Annulus pressure tested 1500 psi, no squeeze
4. Jackson Unit No. 33H; API 30-025-42076 Squeezed with 650 sx and clear surface with 1.5 Bbls fresh water

---

From: Cindy Cottrell
Sent: Wednesday, September 16, 2015 8:54 AM
To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Cc: Brian Wood <brian@permitswest.com>; Rusty Cooper <rcooper@jdmii.com>; Cal Ward <cward@jdmii.com>
Subject: RE: Request for Info: Jackson Unit 5 SWD Application (30-025-33873)

Good morning,

The calculated cement tops for the 7" casing are listed below and also included on the attached sundries. Thanks so much for your quick response and hope you have a great day!

Cindy Cottrell
Regulatory Coordinator
Murchison Oil & Gas, Inc.
Legacy Tower One
7250 Dallas Parkway, Suite 1400
Plano, TX 75024
Direct Line: 469-573-6413
www.murchisonoil.com

From: Goetze, Phillip, EMNRD [mailto:Phillip.Goetze@state.nm.us]
Sent: Tuesday, September 15, 2015 5:43 PM
To: Cindy Cottrell <ccottrell@jdmii.com>
Cc: Brian Wood <brian@permitswest.com>; Rusty Cooper <rcooper@jdmii.com>; Cal Ward <cward@jdmii.com>
Subject: Request for Info: Jackson Unit 5 SWD Application (30-025-33873)

Cindy:
Seems I do need one more item. Murchison appears to have not included some of the usual information on the C-105s for horizontals in the Area of Review.

Please see if there is additional information on cement tops for intermediate 7-inch casing for the following four wells:

1. Jackson Unit No. 11H; API 30-025-41122 calculated TOC 4000'
2. Jackson Unit No. 12H; API 30-025-41227 calculated TOC 4495'
3. Jackson Unit No. 14H; API 30-025-41072 calculated TOC 1871'
4. Jackson Unit No. 33H; API 30-025-42076 calculated TOC 1150'

If there are no logs or surveys, please provide a calculated top. Contact with any questions regarding this request. Thank you. PRG

From: Cindy Cottrell [mailto:ccottrell@jdmii.com]
Sent: Tuesday, September 15, 2015 12:33 PM
To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Cc: Brian Wood <brian@permitswest.com>; Rusty Cooper <rcooper@jdmii.com>; Cal Ward <cward@jdmii.com>
Subject: Jackson Unit 5 SWD Application (30-025-33873)

Phil,

I spoke briefly with our geologist, Cal Ward, and he provided the following comments regarding the injection zone for the proposed Jackson Unit 5 SWD:

- No perforations in the Brushy Canyon
- Historic production from the Bell Canyon and Cherry Canyon in the local area is extremely low
- Jackson Unit SWD 6 (30-025-34623) currently injecting in this zone about 1 mile away
- The working interest owners in the Jackson Unit want this well to be converted to SWD
- The volume of water injected will not have a negative effect on adjacent operators

If you have questions regarding the above, please contact Cal at cward@jdmii.com or 972-931-0700 ext. 134.

We need the additional disposal capacity this well can provide for the Jackson Unit and are ready to begin the conversion upon approval.

Best regards,

Cindy Cottrell
Regulatory Coordinator
Murchison Oil & Gas, Inc.
Legacy Tower One
7250 Dallas Parkway, Suite 1400
Plano, TX 75024
Direct Line: 469-573-6413
www.murchisonoil.com

Goetze, Phillip, EMNRD

From: Cindy Cottrell <ccottrell@jdmii.com>
Sent: Wednesday, September 16, 2015 7:54 AM
To: Goetze, Phillip, EMNRD
Cc: Brian Wood; Rusty Cooper; Cal Ward
Subject: RE: Request for Info: Jackson Unit 5 SWD Application (30-025-33873)
Attachments: Jackson 11H - Sundry - 7 csg - apprvd.pdf; Jackson 12H - C103 - 7 csg - apprvd.pdf; Jackson 14H - 7 csg sundry - apprvd.pdf; Jackson 33H - 7 & 4.5 csg - apprvd.pdf

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