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State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO.	30-025-42628
5. Indicate Type of Lease STATE ☐ FEE ☐ FEDERAL ☒	
6. State Oil & Gas Lease No.	NMLC029509A
7. Lease Name or Unit Agreement Name	Maljamar AGI
8. Well Number	#2
9. OGRID Number	221115
10. Pool name or Wildcat	AGI: Wolfcamp
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 4,019 (GR)	

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

1. Type of Well: Oil Well ☐ Gas Well ☐ Other: Acid Gas Injection Well ☒

2. Name of Operator
Frontier Field Services LLC

3. Address of Operator
65 Mercado Street, Suite 250, Durango, CO 81301

4. Well Location
Unit Letter O : 400 feet from the SOUTH line and 2,100 feet from the EAST line
Section 21 Township 17S Range 32E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
4,019 (GR)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: Demonstration of No Recoverable Hydrocarbons from the Proposed Injection Zone ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

The Maljamar #2 well was drilled from late January to early March 2016 at the prescribed surface and bottom hole locations pursuant to the approved BLM APD dated December 30, 2015 and NMOCD Order No R-13443. The final perforation and completion of the well is scheduled to be completed by mid to late May 2016. The attached report was prepared and submitted to the BLM to demonstrate that no recoverable hydrocarbons are present based on the drilling data, geophysical logging, and the mud log evaluation. The BLM accepted and approved the demonstration and subsequent completion of the well. All of the geophysical logs used in this evaluation were submitted to the NMOCD with an earlier C-103.

On April 7, 2016 the lowermost zone in the well (Zone 4) was perforated from 10,750 to 10,900 feet (9,977 to 10,100 TVD) with 6 SPF and 60 degree phasing with 0.38-inch holes. A temporary packer was set at 10,715 feet. On April 8, 2016, test tubing was installed and 60 bbls of fresh water was circulated prior to setting down on the packer. An additional 10 bbls of fresh water was pumped into the perforations at 1.8 bbls per minute and 2,200 psi surface pressure.

On April 9, 2016 the well was allowed to flow into tanks while the surrounding area was monitored for potential H2S. A water sample was recovered after 70 bbls of flow-back. At approximately 93 bbls flow-back H2S alarms sounded and a laboratory sample was recovered under SCBA. No hydrocarbons or any sheens were visible in either sample and, as expected, the sample recovered at 93 bbls flow-back was discolored with H2S (see attached photograph). H2S concentrations of 1900 ppm were measured in the frac tank. This demonstrates the direct communication between the injection zone in this well and the Maljamar AGI#1, which is what was planned and anticipated.

The sample was weighed (8.87 lbs per gallon) and preserved in ice until submitted to Cardinal Laboratory on April 12, 2016 for analysis of cations, anions, total dissolved solids, pH, conductivity, and petroleum hydrocarbons. The laboratory results are provided as an attachment and they are consistent with formation water. The only detected hydrocarbon was 1.72 mg/L (ppm) gasoline range organics (GRO), the source of which is not crude oil, but most likely from impurities within the injection stream of the Maljamar AGI No. 1 well. This information, in support of the analysis based on the drilling data, geophysical logging, and the mud log evaluation, clearly confirms that no recoverable hydrocarbons are present in the injection zone.

MAY 06 2016

The flow-back operation was terminated due to safety issues associated with H₂S (1900 ppm). Zone 4 was acidized using a rock salt blocker so that further flow-back was not required. On April 14, 2016 a Step-Rate Test was conducted in Zone 4, the results of which were provided in a separate C-103. Zones 1, 2, and 3 were perforated on April 20, 2016 from 10,268 to 10,678 feet (9,609 to 9,920 TVD). Due to the known presence of H₂S in the injection zone as demonstrated by the flow-back sample from Zone 4, and the fact that we already obtained a valid formation fluid sample from the injection zone, flow-back from these zones was not allowed.

In summary, based on the information provided, Geolex is confident that the pore space in the Wolfcamp Formation at this location contains formation water and acid gas, is completely devoid of recoverable hydrocarbons, and hereby certifies that the NMOCD-approved zone is appropriate for acid gas injection which will commence after the well is completed and a successful MIT is completed.

Spud Date:

January 25, 2016

Rig Release Date:

March 12, 2016

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

SIGNATURE

Dale T Littlejohn

TITLE Consultant to Frontier Energy LLC

DATE 5-6-16

Type or print name

Dale T Littlejohn

E-mail address: dale@geolex.com

PHONE: 505-842-8000

For State Use Only

APPROVED BY:

[Signature]

TITLE

Petroleum Engineer

DATE

05/06/16

Conditions of Approval (if any):

ATTACHMENT A

EVALUATION OF GEOPHYSICAL LOGS HYDROCARBON AND INJECTION POTENTIALS: AKA ENERGY FRONTIER MALJAMAR AGI #2

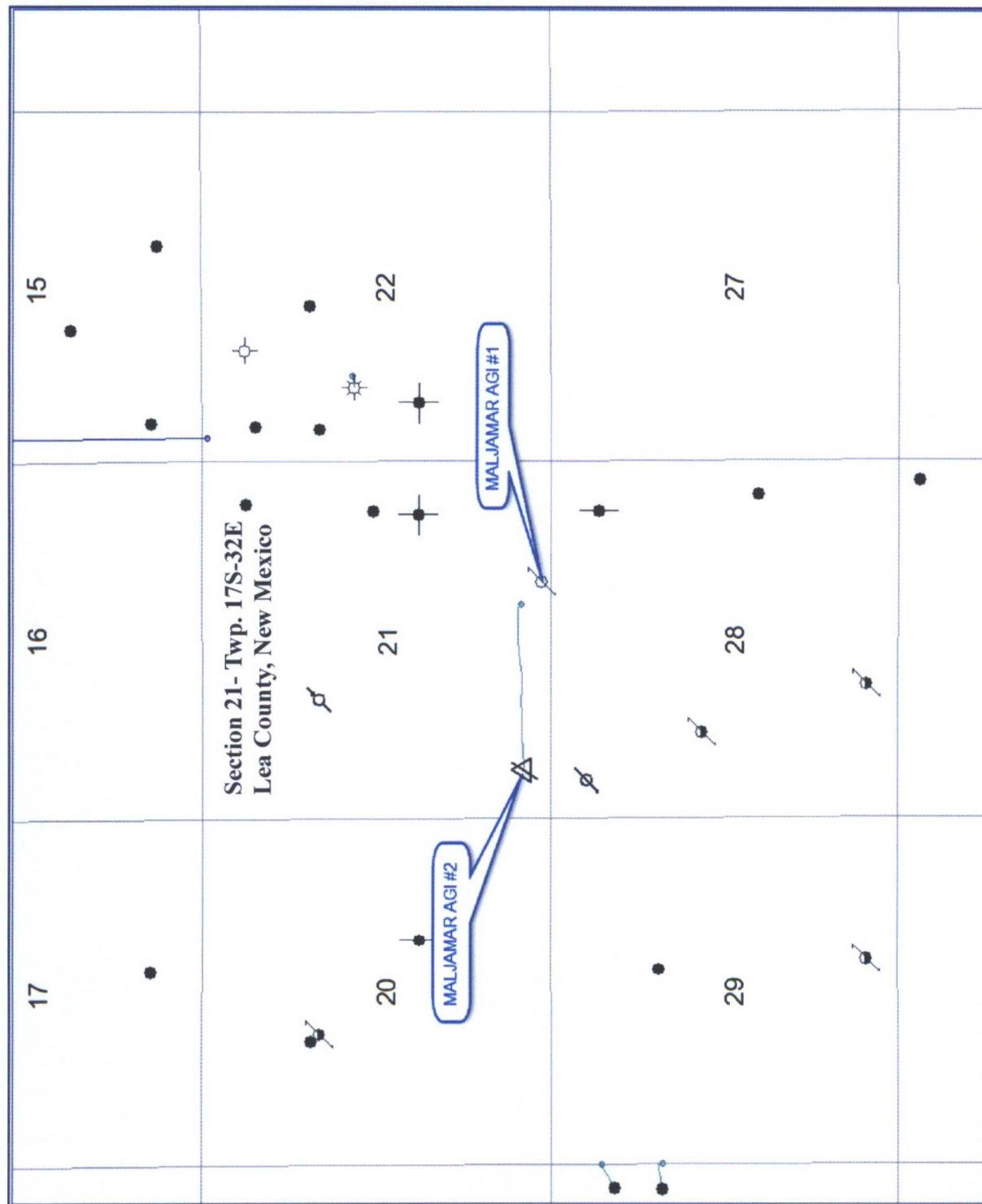
**Sec. 21- Twp. 17S-32E
Lea County, New Mexico**

Prepared for
AKA Energy Group
Frontier Field Services, LLC

By
Geolex, Inc.
500 Marquette NW, Suite 1350
Albuquerque, NM 87102

March 23, 2016

LOCATION OF THE MALJAMAR AGI #2 (DEVIATED WELL)

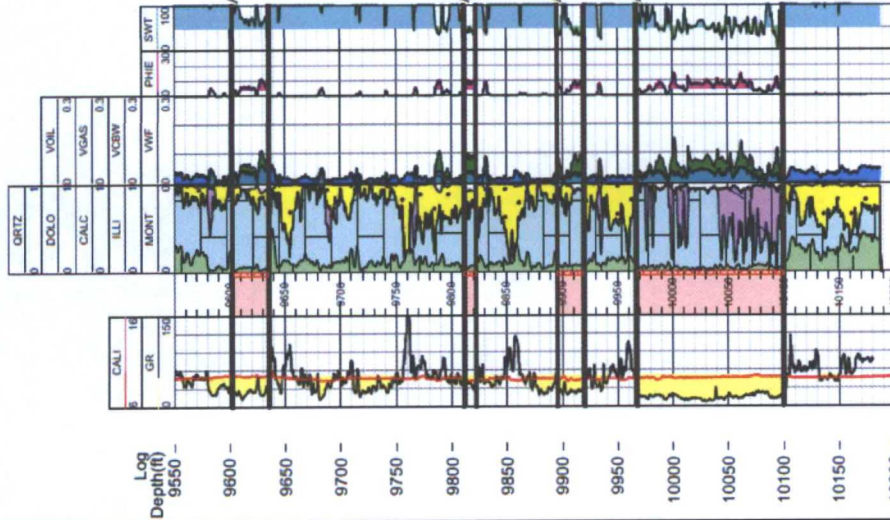


SUMMARY OF FACTORS TO CONSIDER IN RESERVOIR AND CAP ROCK EVALUATION

- The successful evaluation of reservoir and cap rock characteristics requires the simultaneous consideration of various data types and sources in order to arrive at a reasonable conceptual model of predicted injection performance. The data types used for the Maljamar AGI #2 included the complete geophysical log suite for the well, which included the density/neutron and sonic porosity logs, resistivity logs, and mud log, in addition to drilling condition reports and on-site observations. The geophysical logs were used by an independent contractor (Halliburton) to run petrophysical analysis of the proposed injection zones, to demonstrate expected fluid content, porosity, and permeability of those zones.
- The Wolfcamp Formation is dominated by shelf-margin detrital carbonates, which are variously composed of lithoclasts and bioclasts in either a carbonate or shaly-silty matrix. The approved and currently-used injection zone for the Maljamar AGI#1 is the same connected injection zone in the Maljamar AGI #2 and includes the more porous portions of these facies. The facies here are expected to be identical to those encountered previously in the nearby Maljamar AGI #1 well because the Maljamar #2 well was drilled along depositional strike with the Maljamar AGI #1. We previously verified the depositional facies of the Wolfcamp in the Maljamar AGI #1 with sidewall core data collected in that well. These facies appear more permeable in the Maljamar AGI#2 and are transitional to those observed in the Cimarex produced water injection well located over 1/2 mile to the southwest.
- Log-indicated porosity may be influenced by the directional nature of some porosity, like isolated or poorly-connected vugs or fractures, and may not always read true on a single logging pass.
- In the following slides, Geolex reviewed the results of logging and petrophysical analysis of the Maljamar AGI #2, and present log sections to document analytical conclusions.

RUNNING MALJAMAR AGI #2

11,065



AGI #2 Totals - Halliburton Petrophysics
 4 Zone Gross TVD Thickness = 196'
 4 Zone Gross MD Thickness = 245'
 Net Porosity > 4% TVD Thickness = 135'
 Net Porosity > 4% MD Thickness = 168'
 GR<50 api units & Porosity > 4%
 Average Porosity = 6.7%
 Ave Water Saturation = 49.3 %
 RW = 0.05, M=2.5, N=2

AGI2_ZONE1_TOP

Item Name	Sec	Units	ZValue	Qual	Test Item	ChgDate	Description
GROSS			31.368			03/14/2015	Gross
NET			21.913			03/14/2015	Net
NGR			0.589			03/14/2015	NetGross
PHIA			6.119			03/14/2015	Avg Porosity
SWA			66.520			03/14/2015	Avg Water Saturation

Zone 1 MD Summary

Item Name	ZValue	Description
GROSS	31.368	Gross
NET	21.913	Net
NGR	0.589	NetGross
PHIA	6.119	Avg Porosity
SWA	66.520	Avg Water Saturation

AGI2_ZONE2_TOP

Item Name	Sec	Units	ZValue	Qual	Test Item	ChgDate	Description
GROSS			8.915			03/14/2015	Gross
NET			7.859			03/14/2015	Net
NGR			1.056			03/14/2015	NetGross
PHIA			7.659			03/14/2015	Avg Porosity
SWA			42.780			03/14/2015	Avg Water Saturation

Zone 2 MD Summary

Item Name	ZValue	Description
GROSS	8.915	Gross
NET	7.859	Net
NGR	1.056	NetGross
PHIA	7.659	Avg Porosity
SWA	42.780	Avg Water Saturation

AGI2_ZONE3_TOP

Item Name	Sec	Units	ZValue	Qual	Test Item	ChgDate	Description
GROSS			24.230			03/14/2015	Gross
NET			14.911			03/14/2015	Net
NGR			0.615			03/14/2015	NetGross
PHIA			6.657			03/14/2015	Avg Porosity
SWA			38.589			03/14/2015	Avg Water Saturation

Zone 3 MD Summary

Item Name	ZValue	Description
GROSS	24.230	Gross
NET	14.911	Net
NGR	0.615	NetGross
PHIA	6.657	Avg Porosity
SWA	38.589	Avg Water Saturation

AGI2_ZONE4_TOP

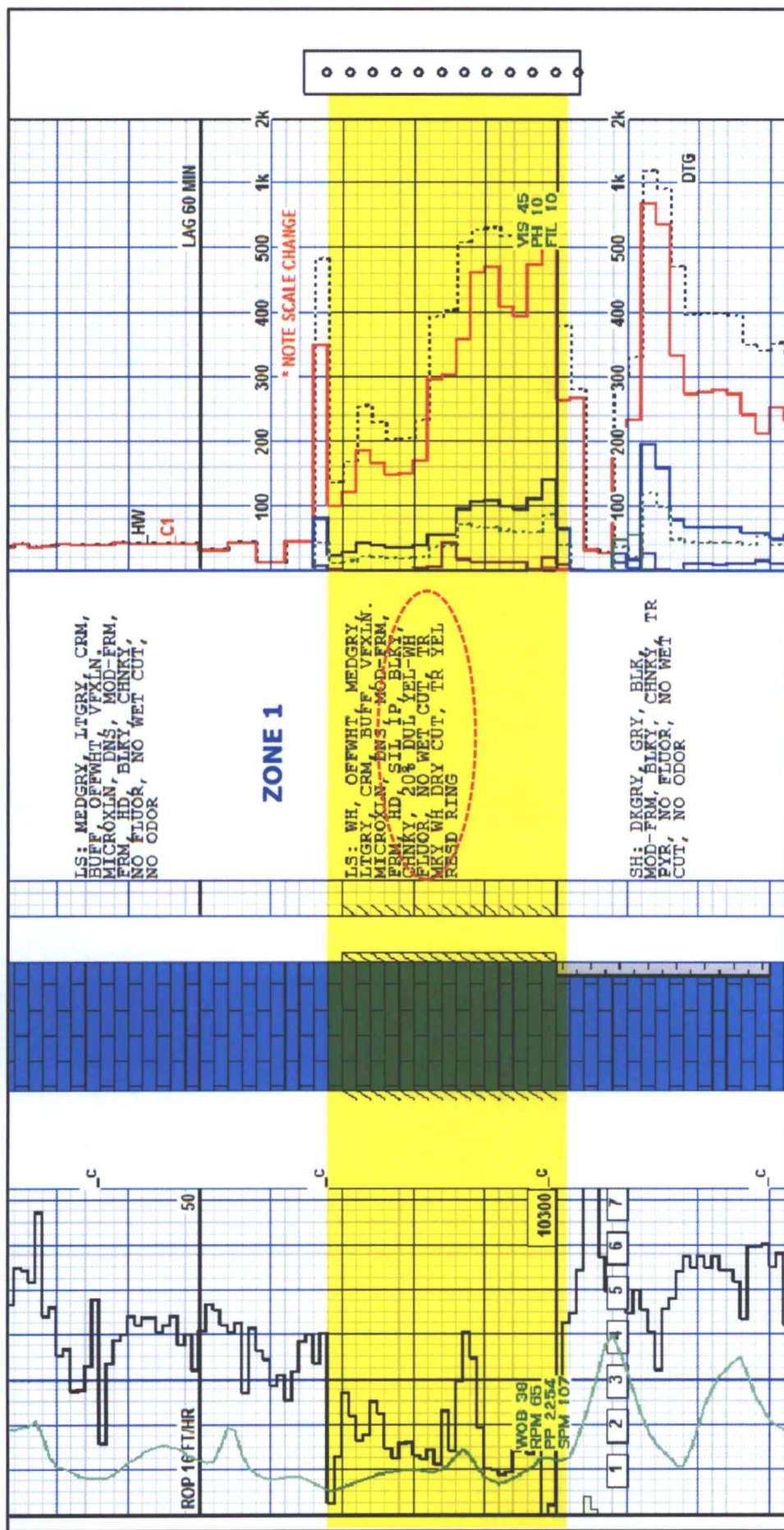
Item Name	Sec	Units	ZValue	Qual	Test Item	ChgDate	Description
GROSS			132.787			03/14/2015	Gross
NET			90.245			03/14/2015	Net
NGR			0.480			03/14/2015	NetGross
PHIA			8.991			03/14/2015	Avg Porosity
SWA			49.954			03/14/2015	Avg Water Saturation

Zone 4 MD Summary

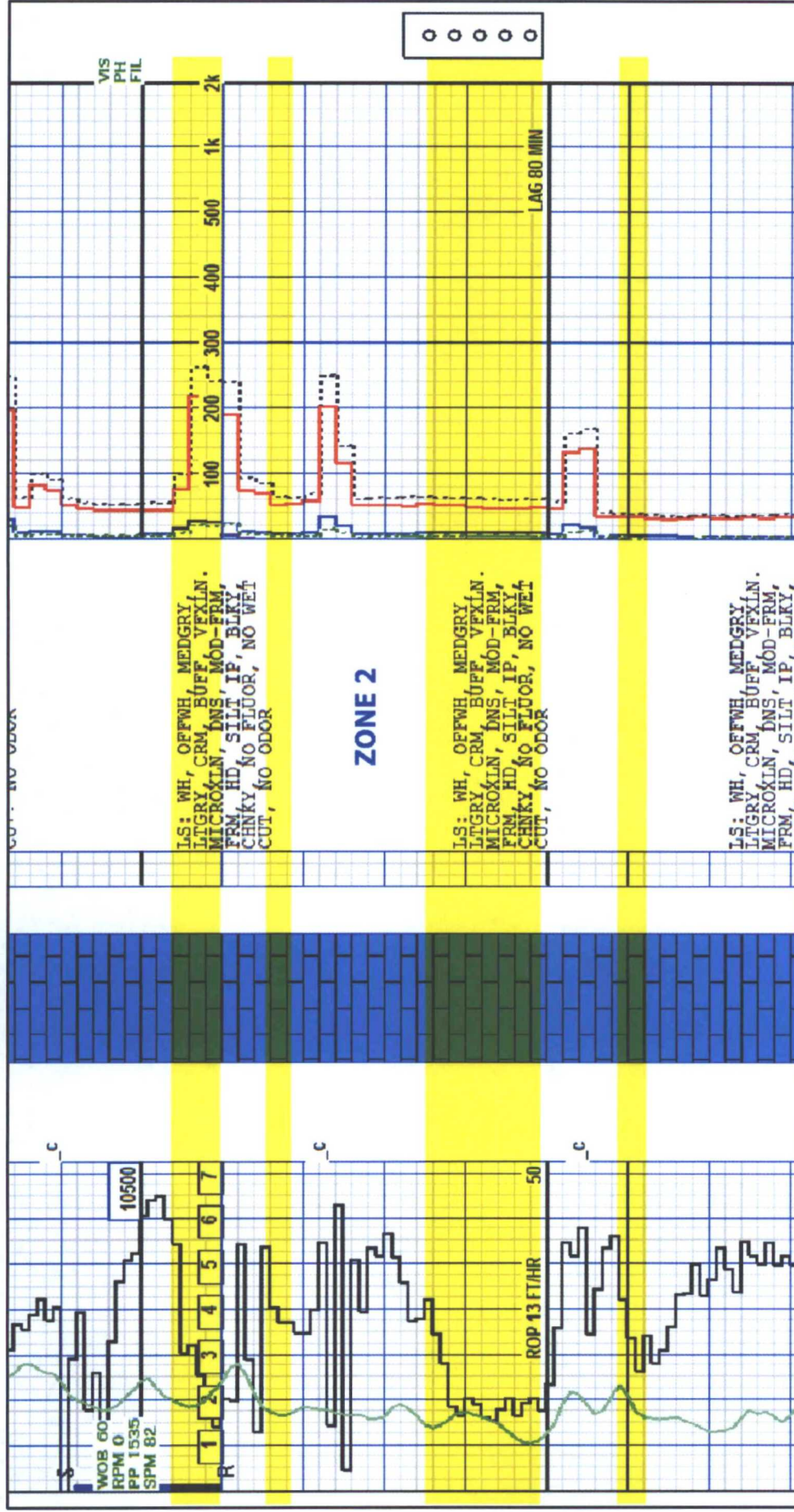
Item Name	ZValue	Description
GROSS	132.787	Gross
NET	90.245	Net
NGR	0.480	NetGross
PHIA	8.991	Avg Porosity
SWA	49.954	Avg Water Saturation

Comments:
 Water Saturations values are preliminary due to the nature of the carbonate pore systems, natural fracturing and formation water resistivity.
 Carbonate vug pores are assumed to be dominate affecting Archie equation M variable assumptions. Formation image log will help characterize pore systems and natural fractures.
 Formation water resistivity is assumed to be 80-100k TDS based on offset water injection well data.

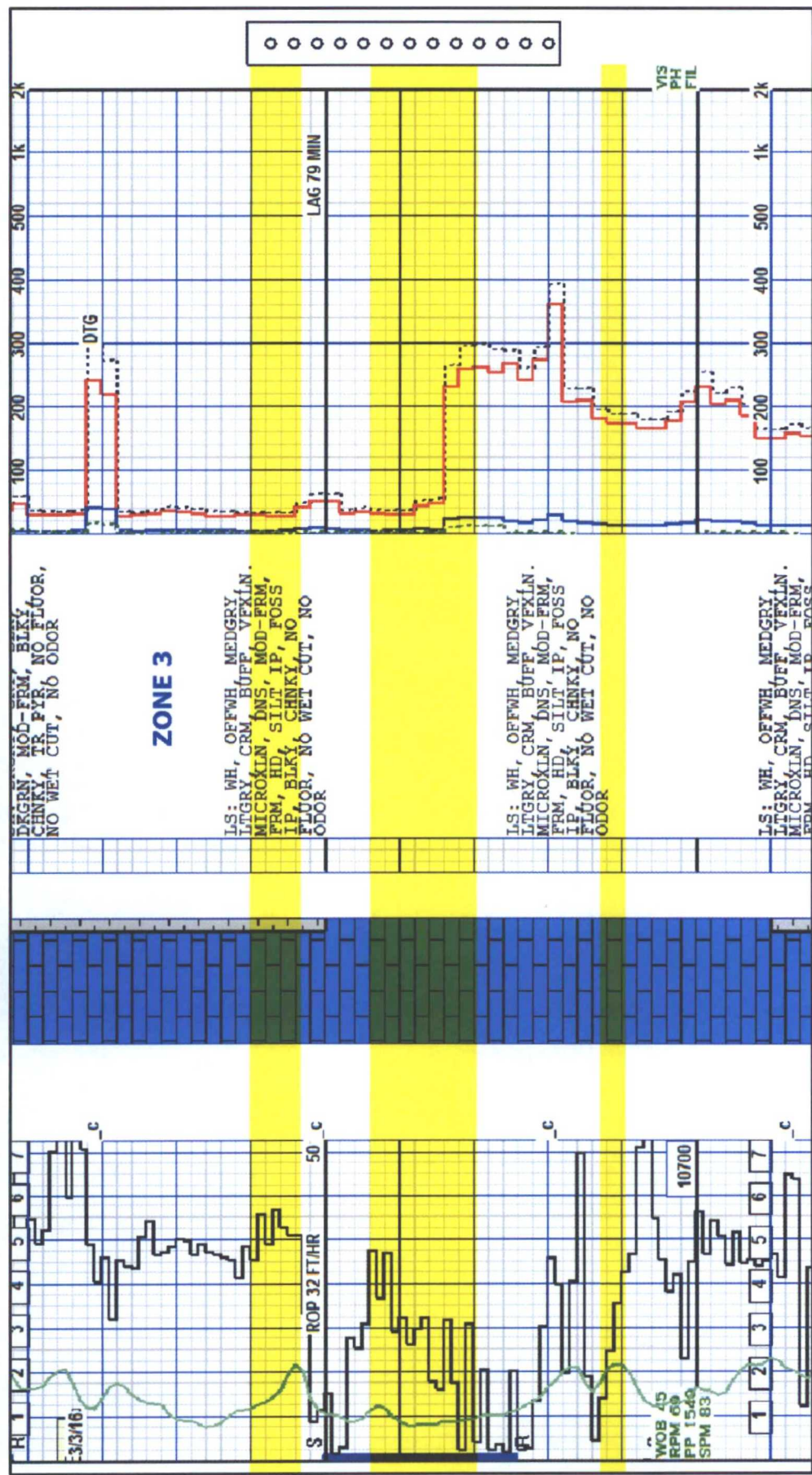
Halliburton's petrophysical calculations over the four gross zones (shown here in true vertical depth view) that are going to be perforated for the purpose of injection all show high water saturations, indicating no presence of movable hydrocarbons. The next four slides will show the mudlog section of each of the four gross perforation zones, in order from top to bottom.



Porous carbonate in this and subsequent slides is indicated by the yellow shading. The logs sections shown are measured depth logs; perforations (far right) are adjusted to measured depths. Gas readings over background are due to dissolved, residual and shale gas in the formation. There are no bright sample shows of oil in this zone, only dull yellow (wet) fluorescence.



Zone 2 is devoid of any sample shows of any kind, and only minor residual gas shows.



Zone 3 is devoid of any sample shows or cuts, and has shows of shale gas and residual gas.

ZONE 4

ROP 35 FT/HR

ROP 45 FT/HR

SHUT WELL IN

LAG 80 MIN

LAG 81 MIN

BYPASS SHALE SHIMMERS

CSD 3 5:15 T4K

LSI WH, OFFWH, MELGRY, LIGRY, CSN, BUFF, VEXAN, VAL, CHAN, SLS, HOP, FIA, NO FLOOR, NO WET CUT, NO GLOSS

LSI WH, OFFWH, MELGRY, LIGRY, CSN, BUFF, VEXAN, VAL, CHAN, SLS, HOP, FIA, NO FLOOR, NO WET CUT, NO GLOSS

LSI WH, OFFWH, MELGRY, LIGRY, CSN, BUFF, VEXAN, VAL, CHAN, SLS, HOP, FIA, NO FLOOR, NO WET CUT, NO GLOSS

LSI WH, OFFWH, MELGRY, LIGRY, CSN, BUFF, VEXAN, VAL, CHAN, SLS, HOP, FIA, NO FLOOR, NO WET CUT, NO GLOSS

ROP 35 FT/HR

ROP 45 FT/HR

SHUT WELL IN

LAG 80 MIN

LAG 81 MIN

BYPASS SHALE SHIMMERS

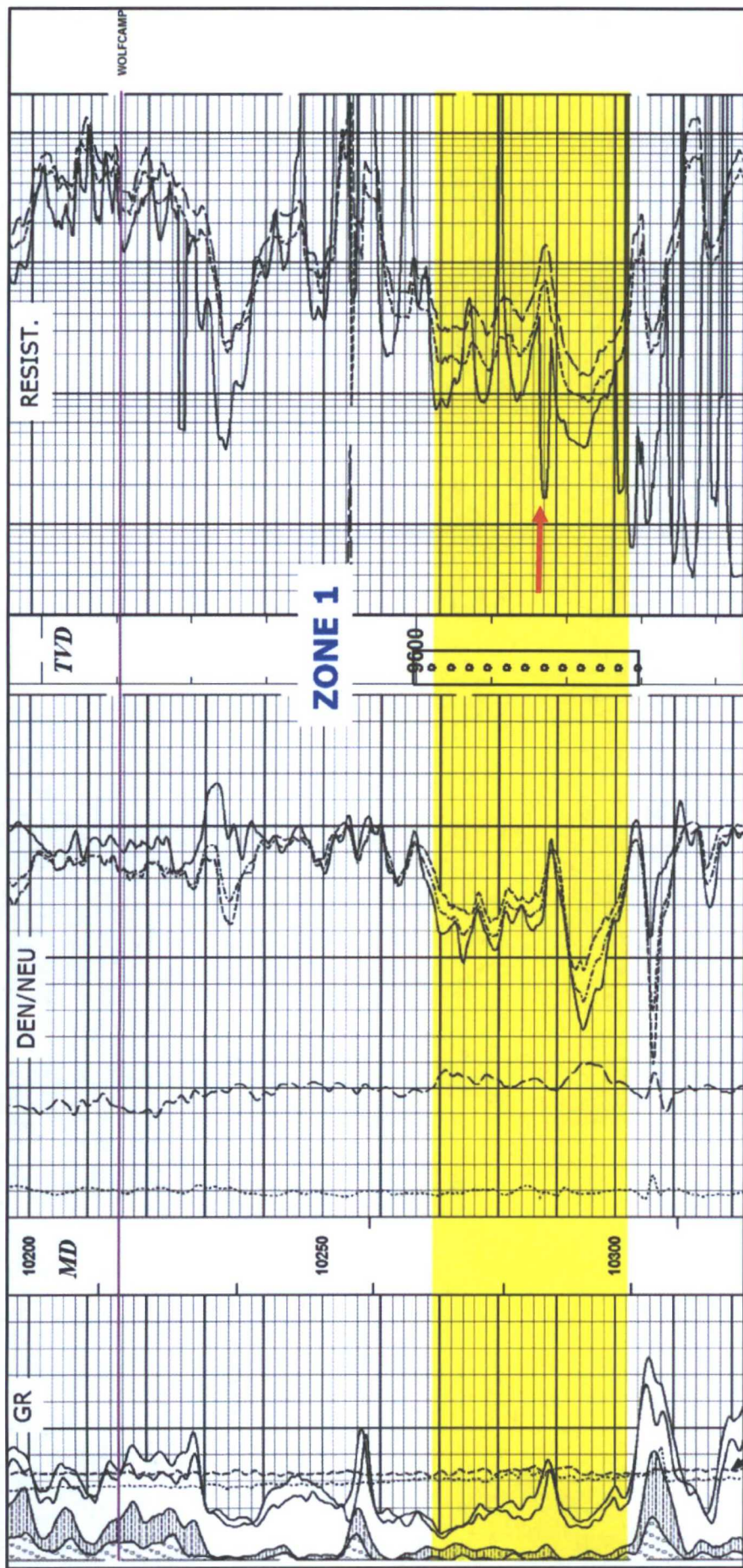
CSD 3 5:15 T4K

LSI WH, OFFWH, MELGRY, LIGRY, CSN, BUFF, VEXAN, VAL, CHAN, SLS, HOP, FIA, NO FLOOR, NO WET CUT, NO GLOSS

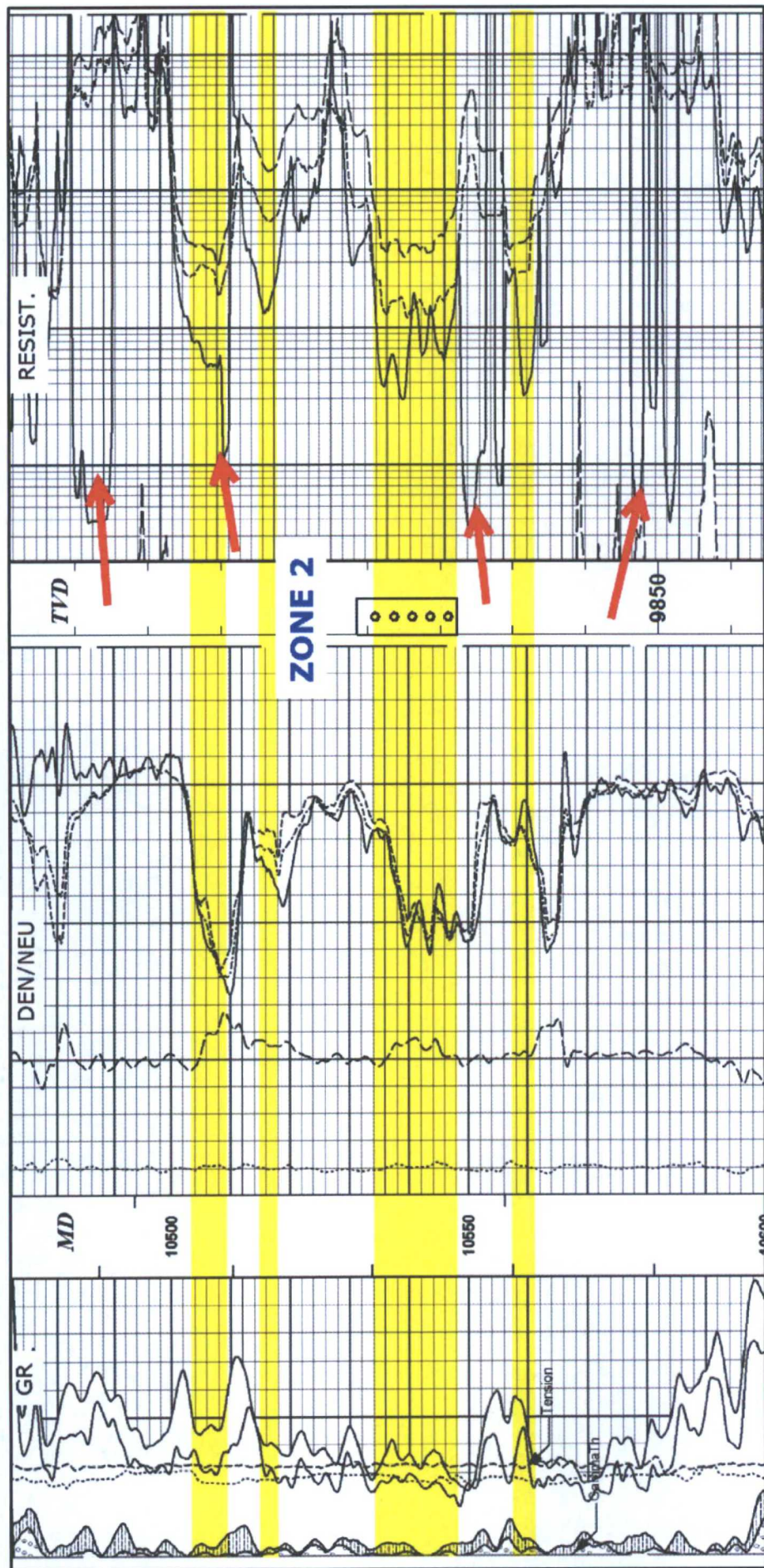
LSI WH, OFFWH, MELGRY, LIGRY, CSN, BUFF, VEXAN, VAL, CHAN, SLS, HOP, FIA, NO FLOOR, NO WET CUT, NO GLOSS

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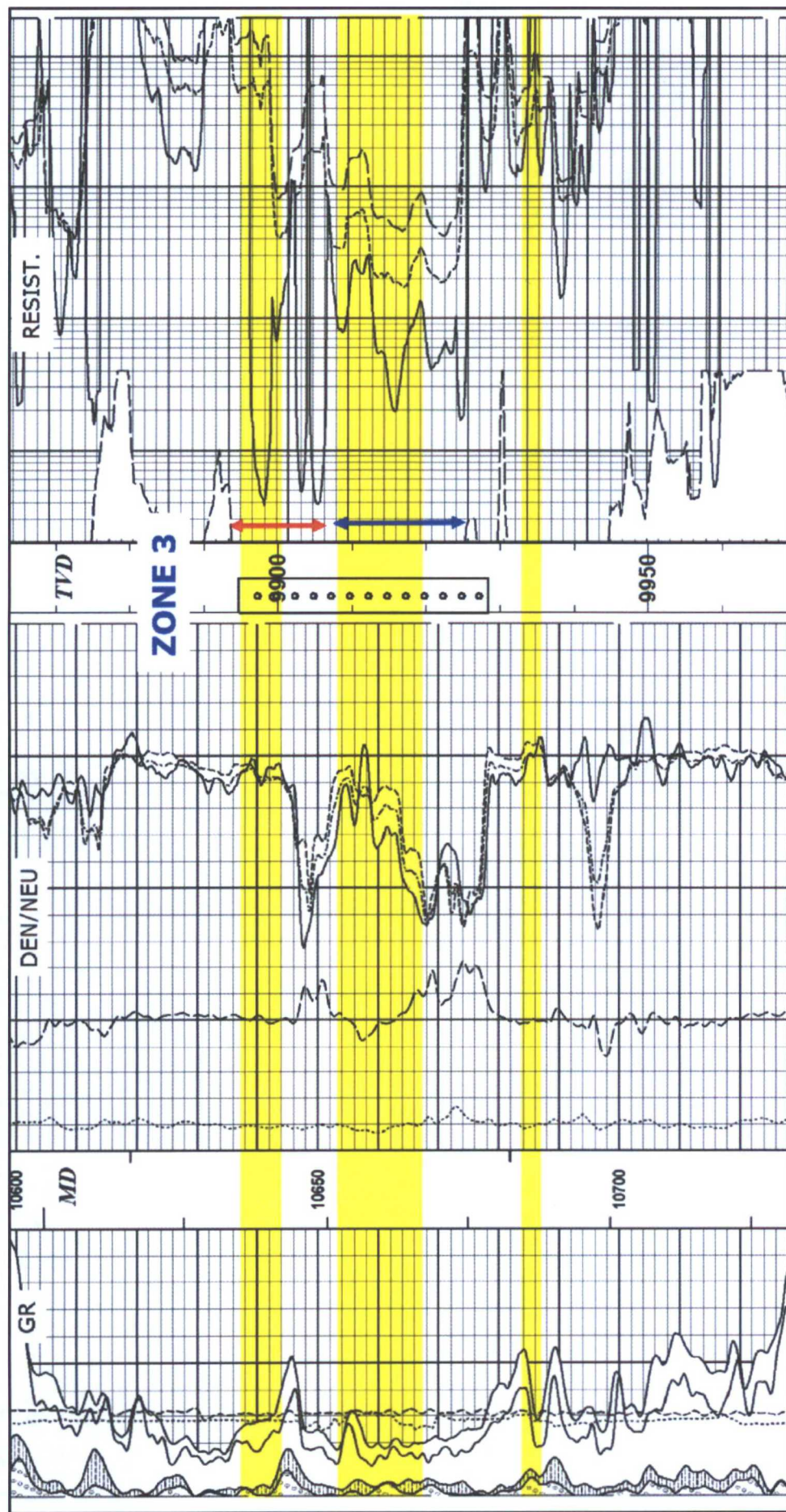
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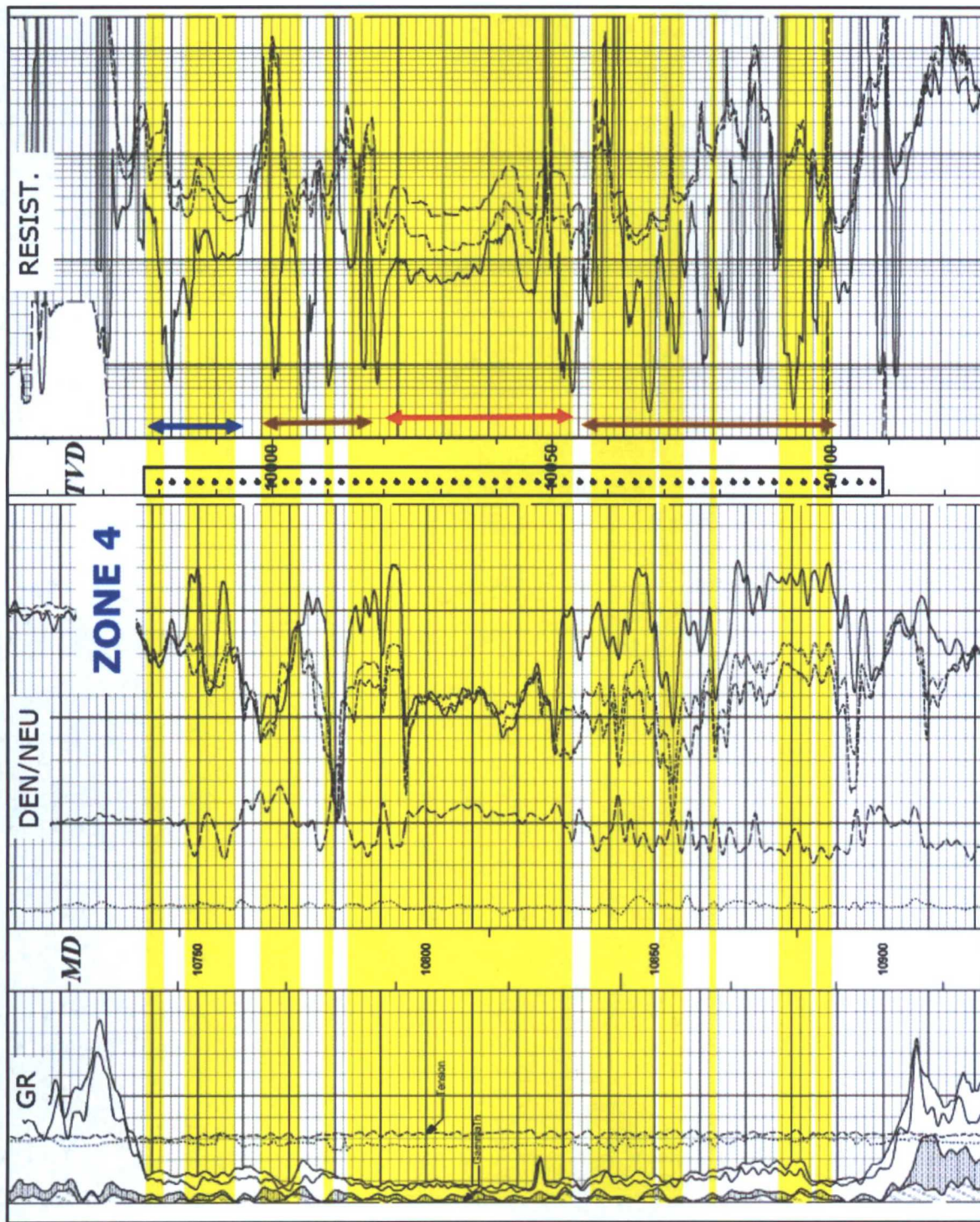
The triple combo log composite through Zone 1 indicates primarily matrix-dominated (connected vugs, intercrystalline) porosity in dolomitic limestone, with only one fracture indicated on the shallow resistivity log (red arrow). The proposed perforations encompass this entire porosity section. Permeability across this zone, as indicated by separation on the resistivity logs, is good to moderate.



Perforations across zone 2 will be across primary porosity in dolomitic limestone, with no fracture porosity directly across fractures. Resistivity separation indicates excellent permeability. Fractures are prevalent elsewhere in this general interval (red arrows), but in tighter or shalier facies where some of the fractures are probably healed. The perforations will be limited to the cleaner (i.e., less shaly) facies, as recommended by the Halliburton petrophysical evaluation.



Zone 3 perforations are proposed across fractured limestones with lower permeability (red arrow), and fracture-enhanced primary porosity in dolomitic limestones and dolomites with excellent permeability (blue arrows), which should provide good transmissivity across the zone.

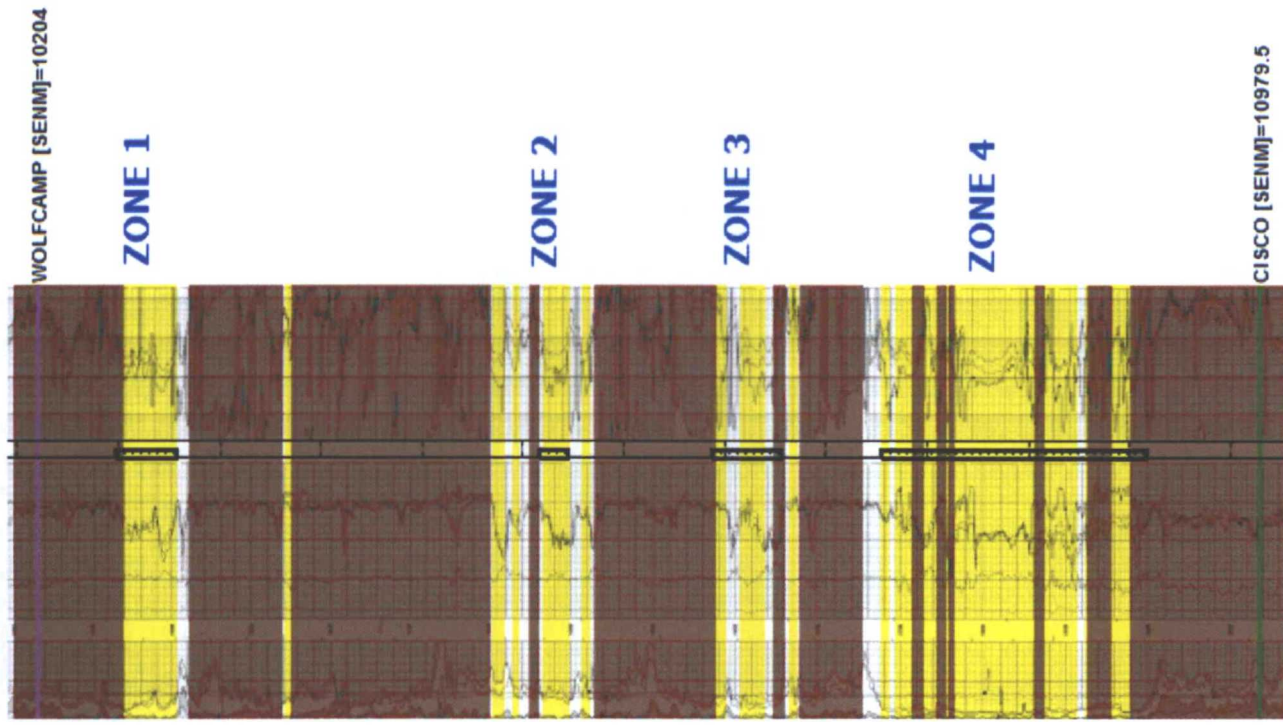


Zone 4 will be perforated across a variety of facies types with variable permeability, ranging from primarily matrix-porosity-dominated limestones (red arrow), fractured-enhanced dolomites (blue arrow), and fractured dolomites (brown arrows).

SUMMARY OF RECOMMENDED PERFS AND CAP ROCK

COMPOSITE LOG SECTION OVER THE ENTIRE WOLFCAMP INTERVAL

Porous facies are highlighted in yellow; tight carbonates and silty-shaly facies (Cap rock) are highlighted in brown. Formation tops are in measured depths. Cap rock is pervasive both between the perforated zones, and above and below the gross interval.



CONCLUSIONS AND RECOMMENDATIONS

- The approved injection zone currently in use in the Maljamar AGI#1 is the same zone evaluated herein and approved for injection in the Maljamar AGI#2. This zone has been demonstrated to be devoid of any recoverable hydrocarbons. Upon perforation of the Maljamar AGI#2, the operator will swab the well to obtain a sample for confirmation considering safe practices since this zone is the active AGI#1 reservoir. The data presented herein confirm that in the Maljamar AGI#2 within the zone approved for injection. This same zone is used by Cimarex for produced water injection over ½ mile to the southwest and these two wells are situated to mitigate any pressure effects within the zone.
- Well log evaluation and petrophysical analysis indicate that the dominant facies types over the proposed injection intervals are detrital carbonates and associated silty carbonates and shales, where the carbonates have locally high matrix porosity and permeability, and significant to minor fracture porosity and permeability.
- Good, log-indicated (resistivity profiles) permeability is generally pervasive in the porous carbonates, so that every proposed perforation zone should provide some measure of injection potential.
- The best overall zone is Zone 4, lowest in the section, and should be perforated and tested first, followed in sequence by zones 3, 2, and 1. No perforations are proposed by Geolex above the top of the Wolfcamp.
- All zones are capped and straddled by tight carbonate and clastic rocks, which provide good inter-zone barriers and a competent caprock to contain the overall injection interval.

Maljamar AGI #2

Photograph of Zone 4 Flow-Back Samples Indicating
No Visible Hydrocarbons Present





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 21, 2016

DALE LITTLEJOHN

GEOLEX INC.

500 MARQUETTE AVE, STE. 1350

ALBUQUERQUE, NM 87102

RE: MALJAMAR AGI #2

Enclosed are the results of analyses for samples received by the laboratory on 04/12/16 8:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

GEOLEX INC.
500 MARQUETTE AVE, STE. 1350
ALBUQUERQUE NM, 87102

Project: MALJAMAR AGI #2
Project Number: 15-022
Project Manager: DALE LITTLEJOHN
Fax To:

Reported:
21-Apr-16 08:28

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FORMATION WATER ZONE 4	H600789-01	Wastewater	09-Apr-16 11:42	12-Apr-16 08:30

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

GEOLEX INC.
500 MARQUETTE AVE, STE. 1350
ALBUQUERQUE NM, 87102

Project: MALJAMAR AGI #2
Project Number: 15-022
Project Manager: DALE LITTLEJOHN
Fax To:

Reported:
21-Apr-16 08:28

FORMATION WATER ZONE 4

H600789-01 (Wastewater)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Alkalinity, Bicarbonate	2020		5.00	mg/L	1	6041808	AP	18-Apr-16	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	6041808	AP	18-Apr-16	310.1	
Chloride*	43000		4.00	mg/L	1	6041301	AP	13-Apr-16	4500-Cl-B	
Conductivity*	136000		1.00	uS/cm	1	6041305	AP	13-Apr-16	120.1	
pH*	6.53		0.100	pH Units	1	6041407	AP	14-Apr-16	150.1	
Sulfate*	4000		1250	mg/L	125	6041402	AP	14-Apr-16	375.4	
TDS*	80500		5.00	mg/L	1	6040508	AP	18-Apr-16	160.1	
Alkalinity, Total*	1660		4.00	mg/L	1	6041808	AP	18-Apr-16	310.1	

Petroleum Hydrocarbons by GC FID

A-01

GRO C6-C10	1.72		1.00	mg/L	0.1	6041901	MS	19-Apr-16	8015B	
DRO >C10-C28	<1.00		1.00	mg/L	0.1	6041901	MS	19-Apr-16	8015B	
EXT DRO >C28-C35	<1.00		1.00	mg/L	0.1	6041901	MS	19-Apr-16	8015B	
Surrogate: 1-Chlorooctane			93.6 %	34.8-131		6041901	MS	19-Apr-16	8015B	
Surrogate: 1-Chlorooctadecane			118 %	30.4-167		6041901	MS	19-Apr-16	8015B	

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Calcium*	2730		1.00	mg/L	50	B604152	JLM	15-Apr-16	EPA200.7	
Magnesium*	1730		5.00	mg/L	50	B604152	JLM	15-Apr-16	EPA200.7	
Potassium*	3210		50.0	mg/L	50	B604152	JLM	15-Apr-16	EPA200.7	
Sodium*	23300		500	mg/L	500	B604152	JLM	18-Apr-16	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

GEOLEX INC.
500 MARQUETTE AVE, STE. 1350
ALBUQUERQUE NM, 87102

Project: MALJAMAR AGI #2
Project Number: 15-022
Project Manager: DALE LITTLEJOHN
Fax To:

Reported:
21-Apr-16 08:28

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 6040508 - Filtration

Blank (6040508-BLK1)

Prepared: 07-Apr-16 Analyzed: 08-Apr-16

TDS ND 5.00 mg/L

LCS (6040508-BS1)

Prepared: 07-Apr-16 Analyzed: 08-Apr-16

TDS 536 5.00 mg/L 527 102 80-120

Duplicate (6040508-DUP1)

Source: H600702-01

Prepared: 07-Apr-16 Analyzed: 08-Apr-16

TDS 608 5.00 mg/L 652 6.98 20

Batch 6041301 - General Prep - Wet Chem

Blank (6041301-BLK1)

Prepared & Analyzed: 13-Apr-16

Chloride ND 4.00 mg/L

LCS (6041301-BS1)

Prepared & Analyzed: 13-Apr-16

Chloride 100 4.00 mg/L 100 100 80-120

LCS Dup (6041301-BSD1)

Prepared & Analyzed: 13-Apr-16

Chloride 104 4.00 mg/L 100 104 80-120 3.92 20

Batch 6041305 - General Prep - Wet Chem

LCS (6041305-BS1)

Prepared & Analyzed: 13-Apr-16

Conductivity 489 uS/cm 500 97.8 80-120

Duplicate (6041305-DUP1)

Source: H600740-02

Prepared & Analyzed: 13-Apr-16

Conductivity 14000 1.00 uS/cm 13900 0.429 20

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

GEOLEX INC.
500 MARQUETTE AVE, STE. 1350
ALBUQUERQUE NM, 87102

Project: MALJAMAR AGI #2
Project Number: 15-022
Project Manager: DALE LITTLEJOHN
Fax To:

Reported:
21-Apr-16 08:28

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 6041402 - General Prep - Wet Chem
Blank (6041402-BLK1)

Prepared & Analyzed: 14-Apr-16

Sulfate ND 10.0 mg/L

LCS (6041402-BS1)

Prepared & Analyzed: 14-Apr-16

Sulfate 18.2 10.0 mg/L 20.0 90.8 80-120

LCS Dup (6041402-BSD1)

Prepared & Analyzed: 14-Apr-16

Sulfate 19.8 10.0 mg/L 20.0 99.0 80-120 8.75 20

Batch 6041407 - General Prep - Wet Chem
LCS (6041407-BS1)

Prepared & Analyzed: 14-Apr-16

pH 7.11 pH Units 7.00 102 90-110

Duplicate (6041407-DUP1)

Source: H600789-01

Prepared & Analyzed: 14-Apr-16

pH 6.53 0.100 pH Units 6.53 0.00 20

Batch 6041808 - General Prep - Wet Chem
Blank (6041808-BLK1)

Prepared & Analyzed: 18-Apr-16

Alkalinity, Carbonate ND 0.00 mg/L

Alkalinity, Bicarbonate ND 5.00 mg/L

Alkalinity, Total ND 4.00 mg/L

LCS (6041808-BS1)

Prepared & Analyzed: 18-Apr-16

Alkalinity, Carbonate ND 0.00 mg/L 80-120

Alkalinity, Bicarbonate 126 5.00 mg/L 80-120

Alkalinity, Total 104 4.00 mg/L 100 104 80-120

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:GEOLEX INC.
500 MARQUETTE AVE, STE. 1350
ALBUQUERQUE NM, 87102Project: MALJAMAR AGI #2
Project Number: 15-022
Project Manager: DALE LITTLEJOHN
Fax To:Reported:
21-Apr-16 08:28**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 6041808 - General Prep - Wet Chem**LCS Dup (6041808-BSD1)**

Prepared & Analyzed: 18-Apr-16

Alkalinity, Carbonate	ND	0.00	mg/L				80-120		20	
Alkalinity, Bicarbonate	126	5.00	mg/L				80-120	0.00	20	
Alkalinity, Total	104	4.00	mg/L	100		104	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

GEOLEX INC.
500 MARQUETTE AVE, STE. 1350
ALBUQUERQUE NM, 87102

Project: MALJAMAR AGI #2
Project Number: 15-022
Project Manager: DALE LITTLEJOHN
Fax To:

Reported:
21-Apr-16 08:28

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 6041901 - General Prep - Organics

Blank (6041901-BLK1)

Prepared & Analyzed: 19-Apr-16

GRO C6-C10	ND	1.00	mg/L							
DRO >C10-C28	ND	1.00	mg/L							
EXT DRO >C28-C35	ND	1.00	mg/L							
Surrogate: 1-Chlorooctane	3.66		mg/L	5.00		73.2	34.8-131			
Surrogate: 1-Chlorooctadecane	5.30		mg/L	5.00		106	30.4-167			

LCS (6041901-BS1)

Prepared & Analyzed: 19-Apr-16

GRO C6-C10	44.5	1.00	mg/L	50.0		89.0	77.1-111			
DRO >C10-C28	50.0	1.00	mg/L	50.0		100	84.8-116			
EXT DRO >C28-C35	ND	1.00	mg/L	0.00			0-0			
Surrogate: 1-Chlorooctane	4.65		mg/L	5.00		93.0	34.8-131			
Surrogate: 1-Chlorooctadecane	5.21		mg/L	5.00		104	30.4-167			

LCS Dup (6041901-BSD1)

Prepared & Analyzed: 19-Apr-16

GRO C6-C10	43.2	1.00	mg/L	50.0		86.4	77.1-111	2.98	8.98	
DRO >C10-C28	47.1	1.00	mg/L	50.0		94.2	84.8-116	6.00	9.66	
EXT DRO >C28-C35	ND	1.00	mg/L	0.00			0-0		20	
Surrogate: 1-Chlorooctane	4.53		mg/L	5.00		90.6	34.8-131			
Surrogate: 1-Chlorooctadecane	5.16		mg/L	5.00		103	30.4-167			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

GEOLEX INC.
500 MARQUETTE AVE, STE. 1350
ALBUQUERQUE NM, 87102

Project: MALJAMAR AGI #2
Project Number: 15-022
Project Manager: DALE LITTLEJOHN
Fax To:

Reported:
21-Apr-16 08:28

Total Recoverable Metals by ICP (E200.7) - Quality Control

Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B604152 - EPA 200.2 Total Rec.

Blank (B604152-BLK1)

Prepared & Analyzed: 15-Apr-16

Calcium	0.022	0.020	mg/L							B1
Magnesium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							
Sodium	ND	1.00	mg/L							

LCS (B604152-BS1)

Prepared & Analyzed: 15-Apr-16

Potassium	8.21	1.00	mg/L	8.00		103	85-115			
Magnesium	20.4	0.100	mg/L	20.0		102	85-115			
Sodium	6.65	1.00	mg/L	6.48		103	85-115			
Calcium	4.13	0.020	mg/L	4.00		103	85-115			

LCS Dup (B604152-BS1)

Prepared & Analyzed: 15-Apr-16

Magnesium	20.5	0.100	mg/L	20.0		102	85-115	0.623	20	
Calcium	4.14	0.020	mg/L	4.00		103	85-115	0.105	20	
Potassium	8.31	1.00	mg/L	8.00		104	85-115	1.21	20	
Sodium	6.67	1.00	mg/L	6.48		103	85-115	0.357	20	

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

B1	Target analyte detected in method blank at or above method reporting limit. Sample concentration found to be 10 times above the concentration found in the method blank or less than the reporting limit.
A-01	Sample collected in plastic container with headspace. Results could be biased low.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

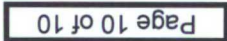
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