"Takin' Care of Business"
NATIONAL PETROCHEM

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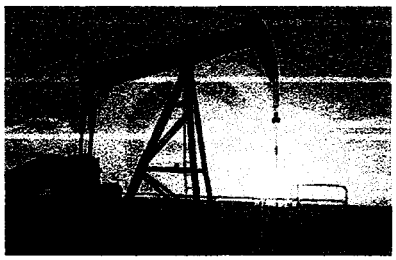
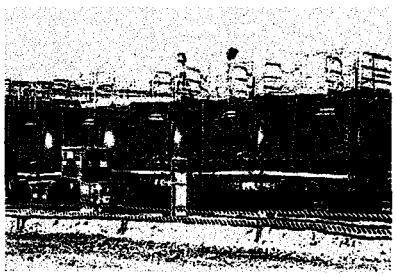
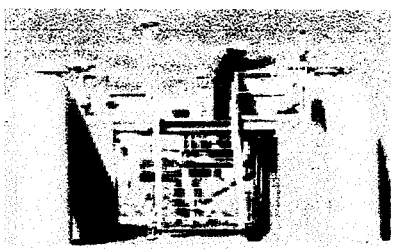
P.O. Box 1602 Ada, Oklahoma 74821-1602 Phone: 580-332-0240 FAX 580-332-8631







Serving Oil and Gas Producers, Transporters, & Processors Since 1975

A X AND P, INC.

WILSON, CASEBEER, & SOUTHERLAND NO. 37N

KANSAS

WATER ANALYSES & RECOMMENDATIONS

Submitted: June 23, 2009

"Takin' Care of Business"
NATIONAL PETROCHEM

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P.O. Box 1602 Ada, Oklahoma 74821-1602 Phone: 580-332-0240 FAX 580-332-8631

A X AND P, INC.

WILSON, CASEBEER, & SOUTHERLAND NO. 37N

WATER ANALYSES & RECOMMENDATIONS

INTRODUCTION:

NATIONAL PETROCHEM has conducted water analyses on produced water samples obtained from the Wilson, Casebeer, and Southerland No. 37N, and we have designed treatment programs for the problems indicated by the analyses. Water Analysis Reports for the water samples submitted are attached for your reference. We appreciate this opportunity to be of service to A X and P, Inc.

PROBLEMS INDICATED:

1. All three produced waters were found to contain high to extremely high levels of total iron. The Wilson produced water was found to contain 143.5 Mg/L of total iron (49 Mg/L ferric or corrosion iron), the Casebeer water contained 85.5 Mg/L of total iron with 58.5 Mg/L ferric iron, and the Southerland water contained an extremely high 617.5 Mg/L total iron with 609 Mg/L ferric iron. The ferric iron levels indicate that corrosion of the subsurface lift equipment is occurring in the producing wells. The high iron levels will result in the formation of insoluble iron sulfide and iron oxide solids that can cause corrosion, black water, and plugging problems in the water systems.

2. The Wilson and Casebeer produced waters exhibit tendencies to precipitate moderate to heavy levels of calcium carbonate mineral scale, while the Southerland water exhibits mild scaling tendencies. (Please refer to Pages 2 and 3 of the Water

Analysis Reports for the Scale Deposition Potential Analysis and Trends for the produced waters.)

3. Scale removed from a tee and nipple submitted to the lab contained 86.3% magnetite, iron sulfide, and iron oxide solids due to the high iron levels of the produced waters. (Please see the accompanying scale analysis and magnetite discussion.)

4. Bacteria cultures taken on the three produced waters are indicating low levels of bacterial activity at this time. Final bacteria culture reports for the waters will be submitted on July 3, 2009.

RECOMMENDATIONS:

1. To prevent plugging and fouling in the water systems due to the high levels of iron contained in the produced waters, we recommend that the present treatments of the waters with our TREAT 9655 Scale Solvent be continued. TREAT 9655 contains organic and inorganic acids, sequestrants, wetting agents, and surfactants that will dissolve and chelate existing iron solids and mineral scales deposits.

2. To control corrosion in the producing wells, the wells should be treated with our GUARD 580 or GUARD 590 Oil Soluble, Water Dispersible Corrosion Inhibitors. Bruce Kiddoo will provide individual well treatment volumes and frequencies

3. The current treatments with the TREAT 9655 Scale Solvent should be sufficient to control the calcium carbonate scaling indicated by the water analyses.

4. No treatments are being recommended for sulfate-reducing bacteria and slime-forming bacteria at this time.

Again, thank you for allowing NATIONAL PETROCHEM and Bruce Kiddoo to be of service to A X and P, Inc. If we may be of further service at any time, please do not hesitate to call on us.

Respectfully,

Mark Southerland
NATIONAL PETROCHEM

National Petrochem
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WATER ANALYSIS REPORT

Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	WILSON	**Date Sampled:**	6-04-09
Sample Point:	WATERLEG DRAIN	**Date Analyzed:**	6-05-09

Production Data:	**BOPD:**	1.5	**BWPD:**	3	**MMCFD:**	0

pH:	6.84	Total Dissolved Solids (mg/L):	60,887
Dissolved H_2S:	0.0	Total Ionic Strength:	1.121
Dissolved CO_2:	372.0	Specific Gravity:	1.053
Resistivity @ 75°F (Ohm-Meters):	0.12450	Density, (lbs/gal):	8.78

Cations	**mg/L**	**Meq/L**	**Anions**	**mg/L**	**Meq/L**
Calcium:	2,320	116	Carbonate:	0	0
Magnesium:	826	68	Bicarbonate:	811	13
Sodium:	19,404	844	Chloride:	36,000	1,014
Barium:	1,525		Sulfate:	0	0
Strontium:	ND		Total Hardness:	9,200	
Ferrous Iron:	94.5				
Total Dissolved Iron:	143.5				

PROBABLE MINERAL COMPOSITION

	mg/L	**Meq/L**
Calcium Bicarbonate:	1,078	13
Calcium Sulfate:	0	0
Calcium Chloride:	5,700	103
Magnesium Bicarbonate:	0	0
Magnesium Sulfate:	0	0
Magnesium Chloride:	3,225	68
Sodium Bicarbonate:	0	0
Sodium Sulfate:	0	0
Sodium Chloride:	49,321	844

Remarks

WL. COUNTY KANSAS
BACTERIA REPORT DUE 7-03-09
REQUESTED BY BRUCE KIDDOO

Hydro Pax

Analyst: _____

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SCALE DEPOSITION POTENTIAL ANALYSIS

Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	WILSON	**Date Sampled:**	6-04-09
Sample Point:	WATERLEG DRAIN	**Date Analyzed:**	6-05-09

Brine Composition

pH:	6.84	Ca, mg/L:	2,320	Total Hardness, mg/L:	9,200
Specific Gravity:	1.053	Mg, mg/L:	826	Total Dissolved Solids, mg/L:	60,887
HCO_3, mg/L:	811	Na, mg/L:	19,404	Total Ionic Strengh:	1.121
Cl, mg/L:	36,000	Ba, mg/L:	1,525		
SO_4, mg/L:	0	Sr, mg/L:	ND	Total Dissoved Iron, mg/L:	143.5

Calcium Carbonate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	60	90
Stiff-Davis Index:	0.26	0.53	0.93	1.40	0.11	0.42
Deposition, lbs/1,000 Bbls:	190.7	311.8	398.0	442.2	97.6	273.8

Calcium Sulfate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	90
Supersaturation Ratio:	0.000	0.000	0.000	0.000	0.000
Deposition, lbs/1,000 Bbls:	-1,191.5	-1,188.3	-1,171.6	-1,146.8	-1,194.9

Barium Sulfate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	60	90
Supersaturation Ratio:	0.000	0.000	0.000	0.000	0.000	0.000
Deposition, lbs/1,000 Bbls:	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1

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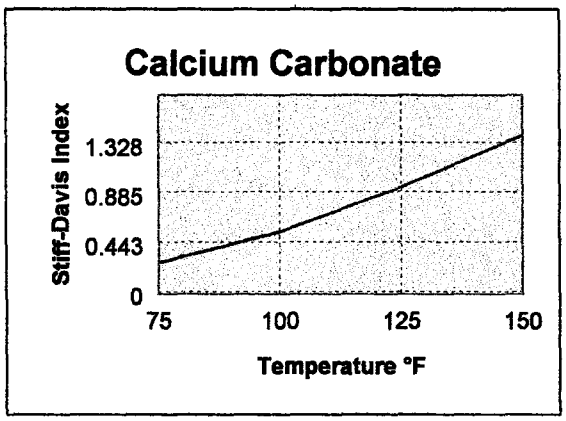
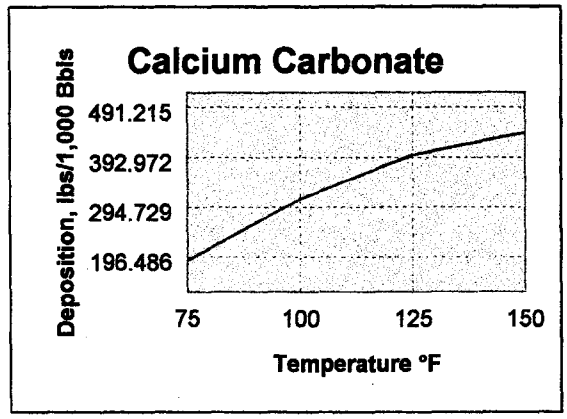
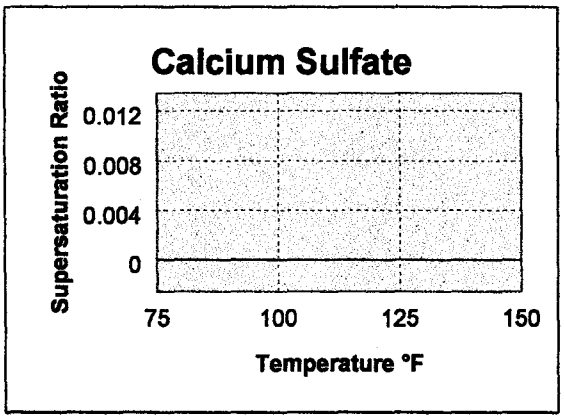
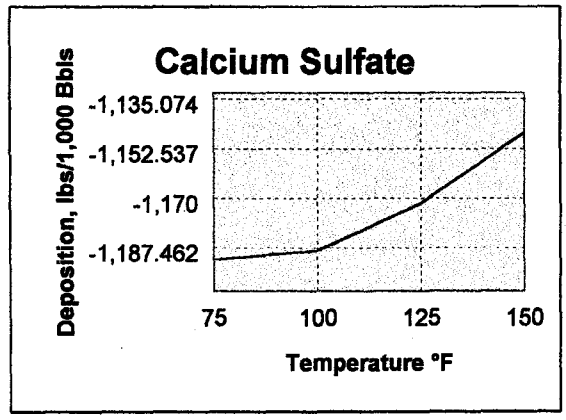
SCALE DEPOSITION POTENTIAL TRENDS

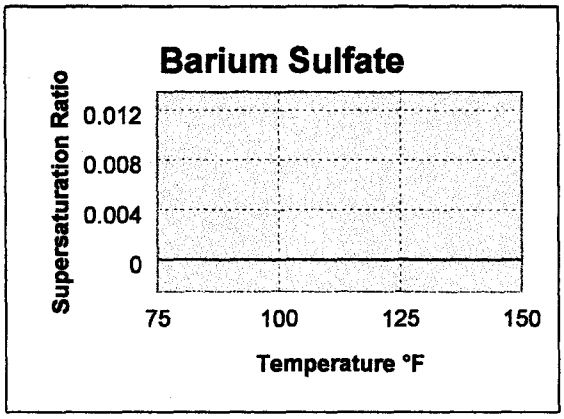
Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	WILSON	**Date Sampled:**	6-04-09
Sample Point:	WATERLEG DRAIN	**Date Analyzed:**	6-05-09

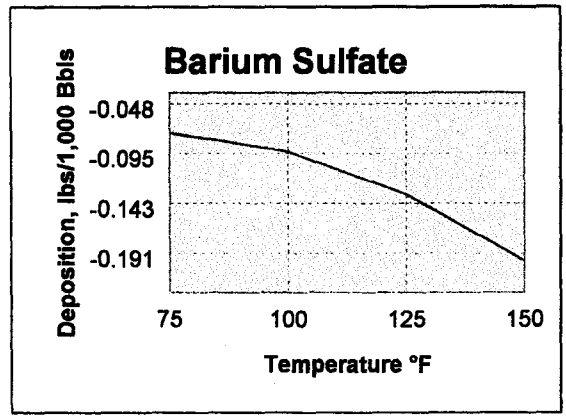












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WATER ANALYSIS REPORT

Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	CASEBEER	**Date Sampled:**	6-04-09
Sample Point:	WATERLEG DRAIN	**Date Analyzed:**	6-05-09

Production Data: **BOPD:** .25 **BWPD:** 2 **MMCFD:** 0

pH:	6.79	Total Dissolved Solids (mg/L):	32,623
Dissolved H_2S:	0.0	Total Ionic Strength:	0.577
Dissolved CO_2:	276.0	Specific Gravity:	1.033
Resistivity @ 75°F (Ohm-Meters):	0.21000	Density, (lbs/gal):	8.62

Cations	mg/L	Meq/L	Anions	mg/L	Meq/L
Calcium:	960	48	Carbonate:	0	0
Magnesium:	49	4	Bicarbonate:	897	15
Sodium:	11,452	498	Chloride:	19,000	535
Barium:	265		Sulfate:	0	0
Strontium:	ND		Total Hardness:	2,600	
Ferrous Iron:	27.0				
Total Dissolved Iron:	85.5				

PROBABLE MINERAL COMPOSITION

	mg/L	Meq/L
Calcium Bicarbonate:	1,191	15
Calcium Sulfate:	0	0
Calcium Chloride:	1,848	33
Magnesium Bicarbonate:	0	0
Magnesium Sulfate:	0	0
Magnesium Chloride:	190	4
Sodium Bicarbonate:	0	0
Sodium Sulfate:	0	0
Sodium Chloride:	29,109	498

Remarks

WL. COUNTY KANSAS
BACTERIA REPORT DUE 7-03-09
REQUESTED BY BRUCE KIDDOO

Hydro Pax

Analyst: _____

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SCALE DEPOSITION POTENTIAL ANALYSIS

Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	CASEBEER	**Date Sampled:**	6-04-09
Sample Point:	WATERLEG DRAIN	**Date Analyzed:**	6-05-09

Brine Composition

pH:	6.79	Ca, mg/L:	960	Total Hardness, mg/L:	2,600
Specific Gravity:	1.033	Mg, mg/L:	49	Total Dissolved Solids, mg/L:	32,623
HCO_3, mg/L:	897	Na, mg/L:	11,452	Total Ionic Strengh:	0.577
Cl, mg/L:	19,000	Ba, mg/L:	265		
SO_4, mg/L:	0	Sr, mg/L:	ND	Total Dissoved Iron, mg/L:	85.5

Calcium Carbonate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	60	90
Stiff-Davis Index:	0.04	0.36	0.68	1.06	-0.10	0.23
Deposition, lbs/1,000 Bbls:	78.3	254.8	365.3	451.3	-12.7	183.4

Calcium Sulfate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	90
Supersaturation Ratio:	0.000	0.000	0.000	0.000	0.000
Deposition, lbs/1,000 Bbls:	-1,188.4	-1,194.2	-1,187.9	-1,161.4	-1,193.3

Barium Sulfate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	60	90
Supersaturation Ratio:	0.000	0.000	0.000	0.000	0.000	0.000
Deposition, lbs/1,000 Bbls:	-0.2	-0.3	-0.5	-0.7	-0.2	-0.3

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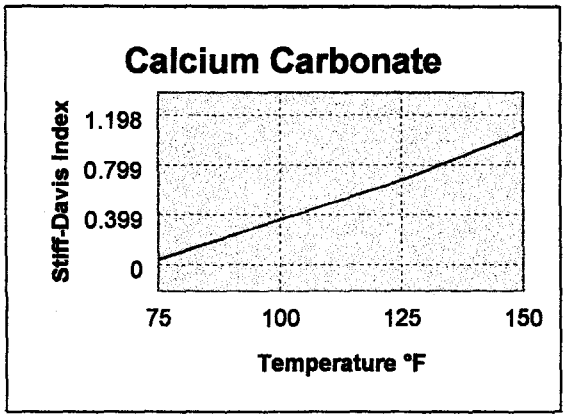
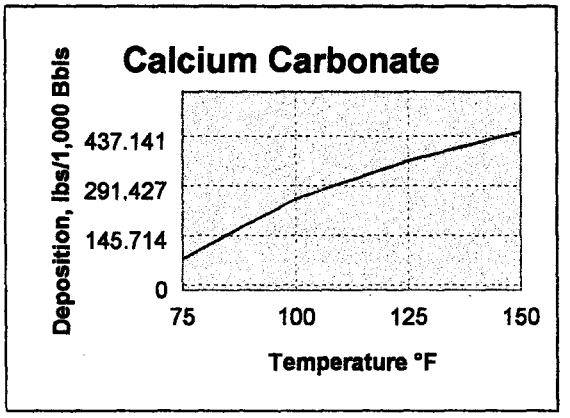
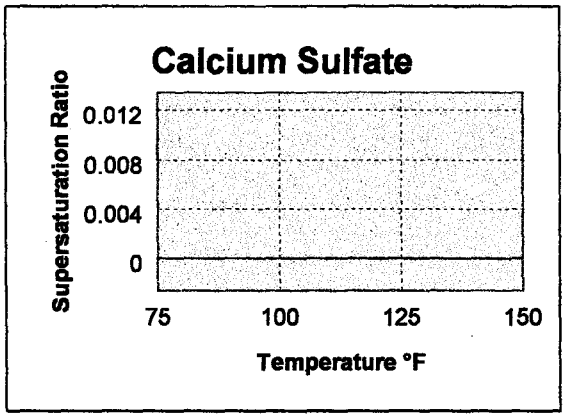
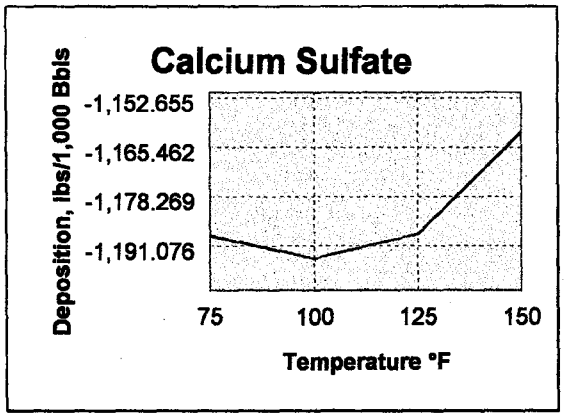
SCALE DEPOSITION POTENTIAL TRENDS

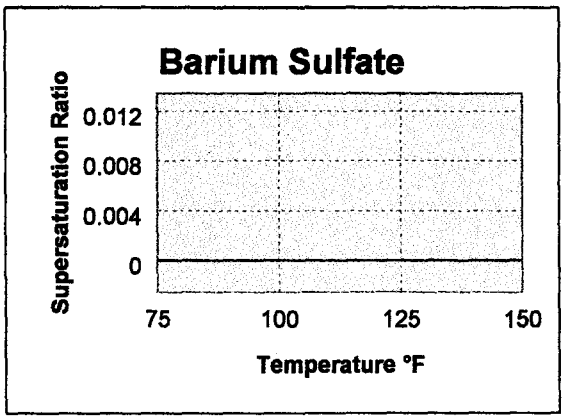
Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	CASEBEER	**Date Sampled:**	6-04-09
Sample Point:	WATERLEG DRAIN	**Date Analyzed:**	6-05-09

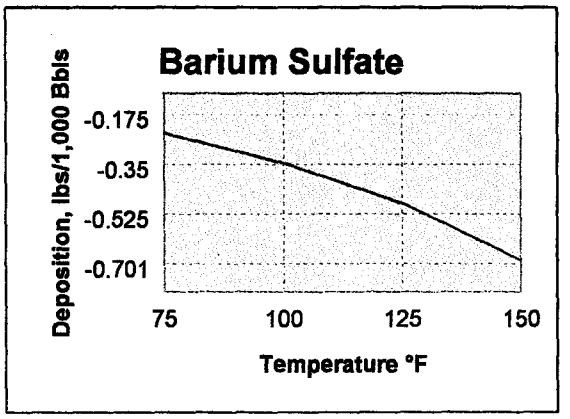












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WATER ANALYSIS REPORT

Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	SOUTHERLAND #37SN	**Date Sampled:**	6-04-09
Sample Point:	BLEEDER	**Date Analyzed:**	6-05-09

Production Data: **BOPD:** 1 **BWPD:** 5 **MMCFD:** 0

pH:	6.44	Total Dissolved Solids (mg/L):	55,390
Dissolved H_2S:	0.0	Total Ionic Strength:	1.008
Dissolved CO_2:	128.0	Specific Gravity:	1.049
Resistivity @ 75°F (Ohm-Meters):	0.13200	Density, (lbs/gal):	8.75

Cations	**mg/L**	**Meq/L**	**Anions**	**mg/L**	**Meq/L**
Calcium:	2,000	100	Carbonate:	0	0
Magnesium:	437	36	Bicarbonate:	506	8
Sodium:	18,447	802	Chloride:	33,000	930
Barium:	1,000		Sulfate:	0	0
Strontium:	ND		Total Hardness:	6,800	
Ferrous Iron:	8.5				
Total Dissolved Iron:	617.5				

PROBABLE MINERAL COMPOSITION

	mg/L	**Meq/L**
Calcium Bicarbonate:	673	8
Calcium Sulfate:	0	0
Calcium Chloride:	5,089	92
Magnesium Bicarbonate:	0	0
Magnesium Sulfate:	0	0
Magnesium Chloride:	1,707	36
Sodium Bicarbonate:	0	0
Sodium Sulfate:	0	0
Sodium Chloride:	46,886	802

Remarks

WL. COUNTY KANSAS
BACTERIA REPORT DUE 7-03-09
REQUESTED BY BRUCE KIDDOO

Hydro Pax

Analyst: _____

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SCALE DEPOSITION POTENTIAL ANALYSIS

Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	SOUTHERLAND #37SN	**Date Sampled:**	6-04-09
Sample Point:	BLEEDER	**Date Analyzed:**	6-05-09

Brine Composition

pH:	6.44	Ca, mg/L:	2,000	Total Hardness, mg/L:	6,800
Specific Gravity:	1.049	Mg, mg/L:	437	Total Dissolved Solids, mg/L:	55,390
HCO_3, mg/L:	506	Na, mg/L:	18,447	Total Ionic Strengh:	1.008
Cl, mg/L:	33,000	Ba, mg/L:	1,000		
SO_4, mg/L:	0	Sr, mg/L:	ND	Total Dissoved Iron, mg/L:	617.5

Calcium Carbonate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	60	90
Stiff-Davis Index:	-0.40	-0.12	0.27	0.74	-0.55	-0.22
Deposition, lbs/1,000 Bbls:	-336.5	-57.1	121.0	228.1	-476.7	-147.9

Calcium Sulfate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	90
Supersaturation Ratio:	0.000	0.000	0.000	0.000	0.000
Deposition, lbs/1,000 Bbls:	-1,223.8	-1,223.1	-1,210.4	-1,182.9	-1,227.5

Barium Sulfate Scale Indices

Specified Temperatures

Temperature, °F:	75	100	125	150	60	90
Supersaturation Ratio:	0.000	0.000	0.000	0.000	0.000	0.000
Deposition, lbs/1,000 Bbls:	-0.1	-0.1	-0.2	-0.3	-0.1	-0.1

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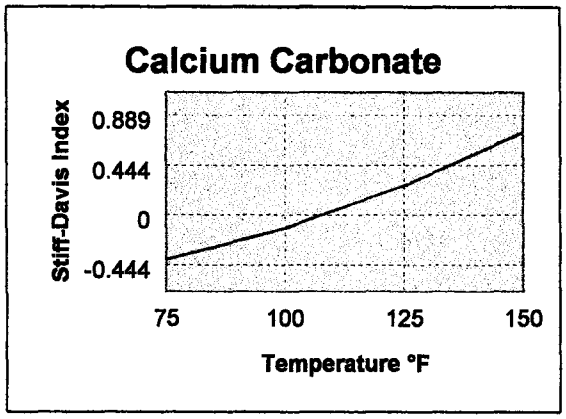
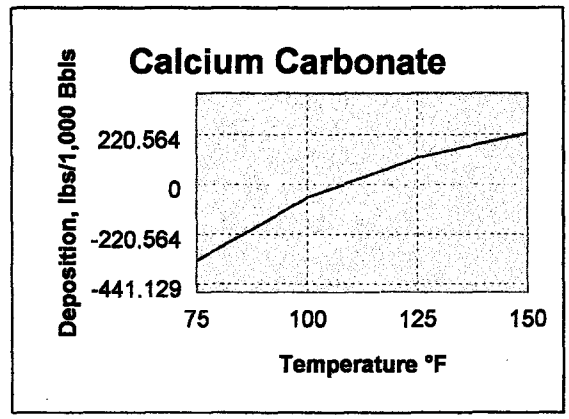
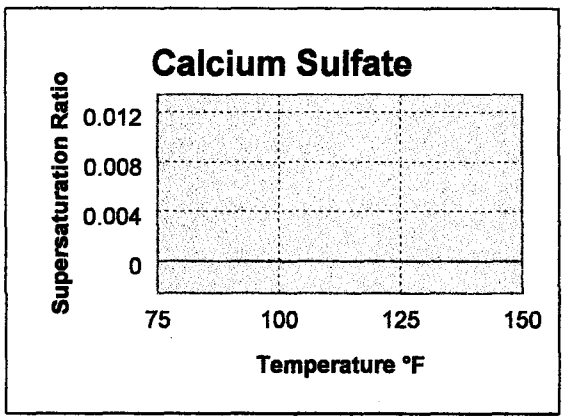
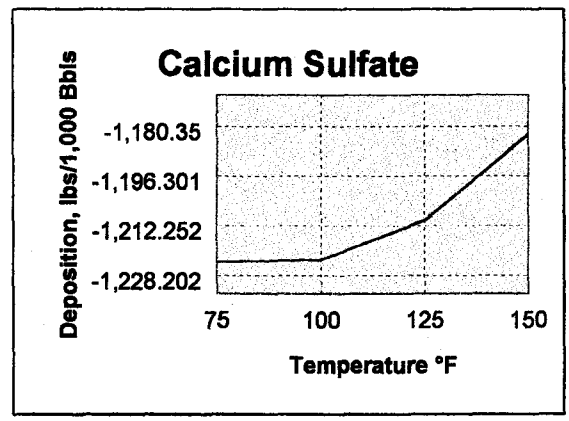
SCALE DEPOSITION POTENTIAL TRENDS

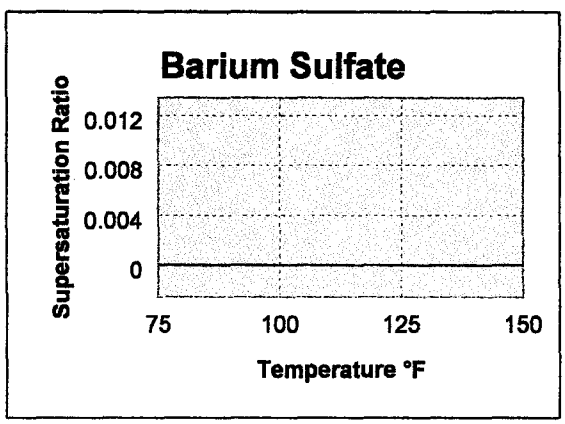
Company:	A X AND P INCORPORATED	**Lab ID Number:**	JDT
Water Source:	SOUTHERLAND #37SN	**Date Sampled:**	6-04-09
Sample Point:	BLEEDER	**Date Analyzed:**	6-05-09

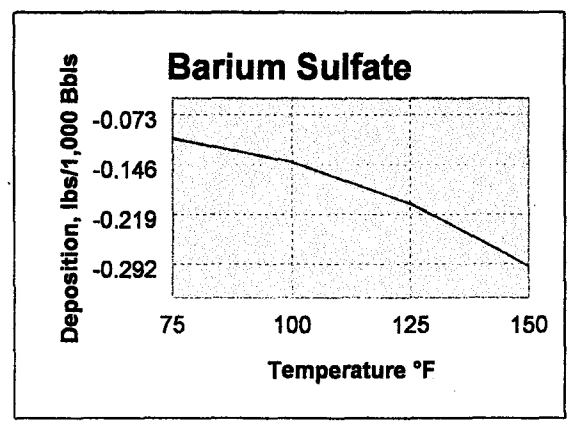












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P.O. Box 1602 Ada, Oklahoma 74821-1602 Phone: 580-332-0240 FAX 580-332-8631

REPORT OF TEST RESULTS

06/09/09

COMPANY AX&P INCORPORATED **LEASE & WELL #** SOUTHERLAND #37SN

SAMPLE DATE 06/04/09 **DATE REC'D** 06/05/09 **ANALYSIS DATE** 06/09/09

COUNTY WI COUNTY **STATE** KS **SAMPLE SOURCE** FLOWLINE

ANALYSIS REQUESTED GUNK PARAFFIN SOLUBILITY

REQUESTED BY BRUCE KIDDOO **ANALYSIS BY** J.D.T.

TEST RESULTS AND DISCUSSION:

A sample was submitted to the Ada, Oklahoma laboratory for testing. We appreciate this opportunity to be of service to AX&P INCORPORATED and we are pleased to present a report of our test results.

The results are as follows:

TESTED = SOLV 1096
SOLV 91000
SOLV 91010
SOLV 91071

RESULTS = RECOMMEND SOLV 91071
SECOND BEST SOLV 1096

Should you have any questions, please do not hesitate to call our Ada office.

Respectfully,

NATIONAL PETROCHEM

"Takin' Care of Business"
NATIONAL PETROCHEM

NATIONAL PETROCHEM

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REPORT OF TEST RESULTS

06/08/09

COMPANY AX&P INCORPORATED **LEASE & WELL #** SOUTHERLAND #37SN

SAMPLE DATE _____ **DATE REC'D** 06/05/09 **ANALYSIS DATE** 06/08/09

COUNTY WI COUNTY **STATE** KS **SAMPLE SOURCE** TEE & NIPPLE

ANALYSIS REQUESTED SCALE ANALYSIS

REQUESTED BY BRUCE KIDDOO **ANALYSIS BY** J.D.T.

TEST RESULTS AND DISCUSSION:

A sample was submitted to the Ada, Oklahoma laboratory for testing. We appreciate this opportunity to be of service to AX&P INCORPORATED and we are pleased to present a report of our test results.

The results are as follows:

MAGNETITE, IRON OXIDE AND/OR IRON SULFIDE = 86.3%

SAND, SILT, OR CLAY = 8.5%

ORGANICS = 5.2%

NOTE: Hydrogen Sulfide was detected when sample was acidized.

Should you have any questions, please do not hesitate to call our Ada office.

Respectfully,

NATIONAL PETROCHEM

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P.O. Box 1602 Ada, Oklahoma 74821-1602 Phone: 580-332-0240 FAX 580-332-8631

DISCUSSION OF THE IRON SCALE, MAGNETITE:

ITS ORIGIN AND METHODS OF DEALING WITH IT

INTRODUCTION & DISCUSSION:

Magnetite (Fe_3O_4) is typically found as an iron ore in subsurface strata. Magnetite is not usually formed in oil and gas production systems, because extreme temperatures and/or pressures are normally required for its formation. Therefore, the presence of magnetite in a production well or system typically indicates that the compound likely originated in the reservoir(s) being produced. Additionally, magnetite deposition is often experienced in waterflooding operations.

Because of its physical appearance (black solid), magnetite is typically mistaken for iron sulfide. The unique identifying characteristic of magnetite is the fact that it is both strongly attracted to a magnet and it attracts iron and iron filings due to its magnetic characteristics. This factor also complicates "treatment" of magnetite deposition since the material is magnetically attracted to the metal surfaces of subsurface production equipment making prevention of magnetite deposition almost impossible to achieve. Although magnetite is soluble in 15% HCl, dissolution of the scale in the acid requires extended contact time.

Magnetite can cause many problems in oil and gas production operations including fouling and plugging of lines and equipment and damage to rod-type pumps, but the biggest problem magnetite causes is corrosion of exposed steel surfaces. In explanation, magnetite is strongly cathodic to steel meaning at any point where magnetite is deposited on the steel surfaces of production equipment, severe pitting of the steel surface will occur underneath the magnetite. The problem is made worse by the fact that the magnetite is extremely difficult to dislodge or remove from the steel due to its magnetic qualities.

RECOMMENDATIONS:

Since prevention of the magnetite cannot realistically be expected, alleviation of the problem must be achieved indirectly. Over the years, many approaches to dealing with

magnetite have been attempted with very limited success. One approach has included treatment of the well with our GUARD 580 or GUARD 590 Oil Soluble, Water Dispersible Corrosion Inhibitors. By providing an oil-wet film for the metal surfaces of the lift equipment, the magnetite is less likely to be attracted to the lift equipment.

We have had the excellent results in dealing with magnetite by treating the well or system in question with our GUARD 92595. The exact mechanism by which the GUARD 92595 prevents magnetite deposit is not fully understood. However, the product does contain a strong reducing agent, and it is believed by some that the reducing agent is effective in converting the insoluble Fe_3 to the more soluble Fe_2. In implementing any of the recommended treatments above, continuous injection of the products is also recommended. If continuous injection is not feasible, limited success may be attained by batch treating the products with a continuous side stream flush of bleeder fluids.

Finally, from a mechanical aspect, it is important that oxygen entry into the well and/or system in question be prevented, because oxygen contamination will result in the formation of iron oxide (Fe_2O_3), which can serve as a nucleus for magnetite deposition.

Thank you for allowing **NATIONAL PETROCHEM** to be of service to you. If you have questions, or if we may be of further assistance, please do not hesitate to call on us.

Respectfully,

Mark Southerland

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NATIONAL PETROCHEM