

**Accutest Mountain States****Apr 15, 2011 13:57 pm****Job Number:****D22280**

Received 01/28/15

**Account:****Patara Oil and Gas**

REM 5731

**Project:****POAGCORV**

Document 2313766

**Project Number:****Wray Mesa 36-34****Legend:** Hit

<b>Client Sample ID:</b>	<b>WRAY MESA 36-34 PERIMETER</b>	<b>WRAY MESA 36-34 PERIMETER</b>	<b>WRAY MESA 36-34 PIT CONTENTS</b>	<b>WRAY MESA 36-34 PIT CONTENTS</b>
<b>Lab Sample ID:</b>	<b>D22280-1</b>	<b>D22280-1A</b>	<b>D22280-2</b>	<b>D22280-2A</b>
<b>Date Sampled:</b>	<b>03/30/2011</b>	<b>03/30/2011</b>	<b>03/30/2011</b>	<b>03/30/2011</b>
<b>Matrix:</b>	<b>Soil</b>	<b>Soil</b>	<b>Soil</b>	<b>Soil</b>

**GC/MS Volatiles (SW846 8260B)**

Benzene	ug/kg	ND (16)	-	31.4 J	-
Toluene	ug/kg	ND (54)	-	175	-
Ethylbenzene	ug/kg	ND (21)	-	193	-
Xylene (total)	ug/kg	ND (38)	-	978	-

**GC/MS Semi-volatiles (SW846 8270C BY SIM)**

Acenaphthene	ug/kg	ND (5.6)	-	ND (13)	-
Acenaphthylene	ug/kg	ND (6.3)	-	ND (15)	-
Anthracene	ug/kg	ND (6.3)	-	ND (15)	-
Benzo(a)anthracene	ug/kg	ND (9.0)	-	ND (21)	-
Benzo(a)pyrene	ug/kg	ND (13)	-	ND (29)	-
Benzo(b)fluoranthene	ug/kg	ND (13)	-	ND (30)	-
Benzo(g,h,i)perylene	ug/kg	ND (11)	-	ND (25)	-
Benzo(k)fluoranthene	ug/kg	ND (7.6)	-	ND (18)	-
Chrysene	ug/kg	ND (7.6)	-	ND (18)	-
Dibenzo(a,h)anthracene	ug/kg	ND (13)	-	ND (30)	-
Fluoranthene	ug/kg	ND (6.9)	-	ND (16)	-
Fluorene	ug/kg	ND (5.9)	-	ND (14)	-
Indeno(1,2,3-cd)pyrene	ug/kg	ND (19)	-	ND (45)	-
1-Methylnaphthalene	ug/kg	ND (5.2)	-	ND (12)	-
2-Methylnaphthalene	ug/kg	ND (5.9)	-	ND (14)	-
Naphthalene	ug/kg	ND (6.6)	-	ND (15)	-
Phenanthrene	ug/kg	ND (4.9)	-	ND (11)	-

Pyrene	ug/kg	ND (6.6)	-	ND (15)	-
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### GC Volatiles (SW846 8015B)

TPH-GRO (C6-C10)	mg/kg	5.55 J	-	12.8 J	-
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### GC Semi-volatiles (SW846-8015B)

TPH-DRO (C10-C28)	mg/kg	21.7	-	317	-
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### Metals Analysis

Arsenic	mg/kg	4.9	-	2.9	-
Barium	mg/kg	59.6	-	2120	-
Cadmium	mg/kg	<1.1	-	<1.2	-
Calcium	mg/l	-	30.1	-	31.0
Chromium	mg/kg	1.2	-	18.4	-
Copper	mg/kg	5.0	-	73.0	-
Lead	mg/kg	12.7	-	119	-
Magnesium	mg/l	-	6.96	-	<1.0
Mercury	mg/kg	<0.091	-	<0.12	-
Nickel	mg/kg	<3.2	-	9.6	-
Selenium	mg/kg	<5.3	-	<6.2	-
Silver	mg/kg	<3.2	-	<3.7	-
Sodium	mg/l	-	141	-	1130
Zinc	mg/kg	18.1	-	64.2	-

### General Chemistry

Chromium, Hexavalent	mg/kg	<0.41 <sup>a</sup>	-	<0.48 <sup>a</sup>	-
Chromium, Trivalent	mg/kg	<1.5 <sup>b</sup>	-	18.0 <sup>b</sup>	-
Redox Potential Vs H2	mv	238	-	237	-
Sodium Adsorption Ratio	ratio	-	6.02 <sup>c</sup>	-	55.0 <sup>c</sup>
Solids, Percent	%	95.9	-	81.9	-
Specific Conductivity	umhos/cm	796	-	4940	-
pH	su	9.00	-	9.40	-

### Footnotes:

<sup>a</sup> Analysis performed at Accutest Laboratories, Marlborough, MA.

<sup>b</sup> Calculated as: (Chromium) - (Chromium, Hexavalent)

<sup>c</sup> Calculated as:  $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$