

PRELIMINARY REPORT

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Company DAKOTA RESOURCES, INC. Formation Hospah Page 1 of 4
 Well Santa Fe Pacific 28 No.12 Cores Dia. Conv. 4" File RP-3-3131
 Field Wildcat Drilling Fluid W.B. Gel Date Report 9-9-81
 County McKinley State N.M. Elevation 7084 GL Analysts GG:DS
 Location SW, NW Sec. 28-17N-9W Remarks _____

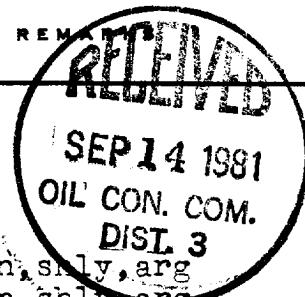
CORE ANALYSIS RESULTS

(Figures in parentheses refer to footnote remarks)

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS		POROSITY PERCENT	RESIDUAL SATURATION		REMARKS
		HORIZONTAL	VERTICAL		OIL % PORE	TOTAL WATER % PORE	

CONVENTIONAL ANALYSIS

1	1461-62	0.01	<0.01	10.9	0.9	86.2	SD-GRY, f grn, shly, arg
2	1462-63	0.03	<0.01	9.9	7.1	77.7	SD-GRY, f grn, shly, arg
3	1463-64	0.34	<0.01	11.4	0.9	85.1	SD-GRY, f grn, shly, arg
4	1464-65	<0.01	<0.01	10.9	6.4	79.8	SD-GRY, f grn, shly, arg
5	1465-66	0.07	0.01	11.9	4.2	78.2	SD-GRY, f grn, shl lam, arg
6	1466-67	6.2	0.23	11.5	4.3	81.7	SD-GRY, f grn, shly, arg
7	1467-68	0.01	<0.01	12.9	3.9	84.5	SD-GRY, f grn, shly, arg
8	1468-69	0.03	0.01	11.7	6.0	80.3	SD-GRY, f grn, shly, arg
9	1469-70	0.05	0.01	13.4	3.7	82.1	SD-GRY, f grn, shly, arg
10	1470-71	0.03	0.01	13.5	5.2	80.0	SD-GRY, f grn, shly, arg
11	1471-72	0.02	0.01	10.2	4.9	85.3	SD-GRY, f grn, shly, arg
12	1472-73	0.75	<0.01	11.9	1.7	84.9	SD-GRY, f grn, shly, arg
13	1473-74	0.01	0.01	13.6	0.7	88.2	SD-GRY, f grn, shly, arg
14	1474-75	0.25	0.39	17.6	1.1	80.7	SD-GRY, f grn, shly, arg
15	1475-76	1.3	0.22	15.9	0.6	84.3	SD-GRY, f grn, shly, arg
16	1476-77	1.7	0.45	15.8	0.6	84.8	SD-LT GRY, f grn, shly, arg
17	1477-78	0.18	0.09	16.2	0.6	84.6	SD-GRY, f grn, shly, arg
18	1478-79	0.71	0.31	13.8	5.1	78.3	SD-GRY, f grn, shly, arg
19	1479-80	0.01	0.01	9.4	1.1	79.8	SD-GRY, f grn, shly, arg
20	1480-81	0.74	0.02	14.0	3.6	72.9	SD-GRY, f grn, shly, arg
21	1481-82	1.8	0.16	13.3	3.8	76.7	SD-GRY, f grn, shly, arg
22	1482-83	1.1	0.08	14.6	0.7	82.2	SD-GRY, f grn, shly, arg
23	1483-84	0.12	0.08	13.6	3.7	80.9	SD-GRY, f grn, shly, arg
24	1484-85	0.02	<0.01	11.5	6.1	76.5	SD-GRY, f grn, shly, arg
25	1485-86	1.9	0.04	8.5	2.4	85.9	SD-GRY, f grn, shl lam, arg
26	1486-87	0.08	0.01	10.3	6.8	81.6	SD-GRY, f grn, sl/shl lam, arg
27	1487-88	0.12	0.04	11.3	0.0	81.4	SD-GRY, f grn, shly, arg
28	1488-89	0.01	<0.01	10.4	0.0	84.6	SD-GRY, f grn, shly, arg
29	1489-90	0.02	0.02	11.2	1.8	83.0	SD-GRY, f grn, shl lam, arg
30	1490-91	0.29	0.01	10.3	1.0	79.6	SD-GRY, f grn, shl lam, arg
31	1491-92	2.0	0.01	8.5	5.9	83.5	SD-GRY, f grn, shl lam, arg
32	1492-93	*	0.01	9.3	7.5	80.6	SD-GRY, f grn, sl/shl lam, arg
33	1493-94	0.08	0.01	9.8	0.0	79.6	SD-GRY, f grn, shly, arg
34	1494-95	0.04	0.02	13.1	0.8	77.9	SD-GRY, f grn, shly, arg
35	1495-96	8.3	0.28	18.2	2.7	79.7	SD-GRY, f grn, shly, arg



NOTE:
 (*) REFER TO ATTACHED LETTER.
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Petroleum Reservoir Engineering

DALLAS, TEXAS

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 County McKinley State N.M. Elevation 7084 GL Analysts GG:DS
 Location SW, NW Sec. 28-17N-9W Remarks

CORE ANALYSIS RESULTS

(Figures in parentheses refer to footnote remarks)

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY		POROSITY PERCENT	RESIDUAL SATURATION		REMARKS
		HORIZONTAL	VERTICAL		OIL % PORE	TOTAL WATER % PORE	
36	1496-97	68	31	18.2	4.4	81.9	SD-GRY,f grn,sl/shl lam,arg
37	1497-98	64	6.2	16.1	0.6	82.6	SD-GRY,f grn,sl/shl lam,arg
38	1498-99	*	13	16.9	7.7	81.1	SD-GRY,f grn,sl/shl lam,arg
39	1499-1500	0.59	0.02	14.9	4.7	75.2	SD-GRY,f grn,sl/shl lam,arg
40	1500-01	0.02	0.03	13.9	5.0	78.4	SD-GRY,f grn,shl lam,arg
41	1501-02	0.61	*	10.2	8.8	83.3	SD-GRY,f grn,shly,arg
42	1502-03	277	235	22.1	32.6	56.6	SD-BRN,m grn,sl/shly,arg
43	1503-04	2.8	0.03	9.0	5.6	85.6	SHL-BLK,vf grn,sd
44	1504-05	*	*	9.3	9.7	85.0	SHL-BLK vf grn,sd
45	1505-06	1.8	1.2	13.7	0.7	84.7	SD-LT GRY,f grn,shl lam,arg
46	1506-07	0.27	0.24	16.9	0.6	84.0	SD-LT GRY,f grn,sl/shl,arg
47	1507-08	0.40	<0.01	11.2	20.5	70.5	SD-GRY,f grn,v/shl w/lam
48	1508-09	0.04	0.02	13.5	1.5	79.3	SD-GRY,f grn,v/shl,arg
49	1509-10	168	163	14.5	1.4	84.1	SD-GRY,m grn,sl/shl,arg
50	1510-11	0.58	0.22	16.4	0.6	79.9	SD-GRY,m grn,sl/shl,arg
51	1511-12	0.12	0.01	10.0	7.0	83.0	SD-GRY,f grn,shl lam,arg
52	1512-13	*	*	8.9	7.9	84.3	SD-GRY,f grn,v/shl
53	1513-14	13**	0.02	9.6	5.2	88.5	SD-GRY,f grn,v/shl
54	1514-15	0.08	0.02	16.3	4.9	81.6	SD-LT GRY,f grn,sl/shl
55	1515-16	2.1	1.3	17.8	6.2	79.8	SD-LT GRY,f grn,sl/shl
56	1516-17	0.11	0.06	15.7	12.1	73.9	SD-GRY,f grn,v/shl lam
57	1517-18	1.3	0.03	17.3	0.6	85.5	SD-GRY,f grn,v/shl lam
58	1518-19	0.25	0.01	14.4	11.8	65.3	SD-GRY,f grn,v/shl lam
59	1519-20	0.08	<0.01	14.6	17.8	70.0	SD-GRY,f grn,v/shl lam
60	1520-21	0.19	0.04	14.6	8.9	78.8	SD-GRY,f grn,v/shl lam
61	1521-22	*	*	21.2	60.4	33.0	SD-DK GRY,f grn,carb,shly
62	1522-23	0.61	0.58	16.7	3.0	85.0	SD-LT GRY,f grn,arg
63	1523-24	0.07	0.01	14.4	4.9	66.7	SD-GRY,f grn,shl lam,arg
64	1524-25	0.01	<0.01	6.4	7.8	75.0	SD-GRY,f grn,sl/shl lam,arg
65	1525-26	*	*	9.1	2.2	89.0	SD-GRY,f grn,v/shl lam
66	1526-27	*	0.01	9.6	1.0	92.7	SD-GRY,f grn,v/shl lam
67	1527-28	*	*	9.4	5.3	87.2	SHL-BLK,vf grn,sd,R
68	1528-29	*	*	9.6	7.3	84.4	SHL-BLK,vf grn,sd,R
69	1529-30	*	*	10.6	6.6	84.0	SHL-BLK,vf grn,sd,R
70	1530-31	0.04	0.04	9.7	7.2	82.5	SD-GRY,f grn,shl lam,arg
71	1531-32	*	*	11.8	8.5	74.6	SD-GRY,f grn,v/shl lam,arg
72	1532-33	0.05	0.01	10.9	6.4	80.7	SD-GRY,f grn,v/shl lam,arg
73	1533-34	0.50	<0.01	10.0	11.9	76.2	SD-GRY,f grn,v/shl lam,arg

NOTE:

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Petroleum Reservoir Engineering

DALLAS, TEXAS

Company DAKOTA RESOURCES, INC. Formation Hospah Page 3 of 4
 Well Santa Fe Pacific 28 No. 12 Cores Dia. Conv. 4" File RP-3-3131
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(Figures in parentheses refer to footnote remarks)

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs		POROSITY PERCENT	RESIDUAL SATURATION		REMARKS
		HORIZONTAL	VERTICAL		OIL % PORE	TOTAL WATER % PORE	
74	1534-35	*	*	15.0	1.3	77.3	SD-DK GRY, f grn, v/shly
75	1535-36	0.24	0.07	15.3	0.7	79.1	SD-GRY, f grn, shly, arg
76	1536-37	*	*	10.0	5.0	89.0	SHL-BLK, vf grn, sd
77	1537-38	6.8	0.05	20.8	3.4	81.7	SD-BLK, f grn, shl, arg
78	1538-39	14	3.2	18.4	2.7	83.7	SD-LT GRY, f grn, sl/shl, arg
79	1539-40	10	7.4	15.7	0.6	82.8	SD-LT GRY, f grn, shl lam, arg
80	1540-41	3.2	<0.01	13.3	5.3	82.0	SD-LT GRY, f grn, shl lam, arg
81	1541-42	*	*	8.2	34.1	57.3	SD-GRY, f grn, shly, arg
82	1542-43	21	17	17.6	0.6	85.8	SD-GRY, f grn, sl/shl lam, arg
83	1543-44	3.2	0.08	15.5	0.0	83.2	SD-GRY, f grn, shl lam, arg
84	1544-45	1.1	0.03	15.6	5.1	80.1	SD-GRY, f grn, shl lam, arg
85	1545-46	0.11	0.02	10.6	10.4	81.1	SD-GRY, f grn, shl lam, arg
86	1546-47	*	0.18	8.5	5.9	84.7	SD-GRY, f grn, v, shly
87	1547-48	0.03	0.04	9.2	7.6	82.6	SD-GRY, f grn, shl lam, arg
88	1548-49	0.23	0.03	13.5	0.7	82.2	SD-GRY, f grn, sl/shl lam, arg
89	1549-50	25	2.1	17.1	2.9	80.7	SD-GRY, f grn, sl/shl lam, arg
90	1550-51	*	<0.01	9.3	9.7	81.7	SD-GRY, f grn, shl lam, arg
91	1551-52	*	*	9.0	1.1	91.1	SHL-BLK, vf grn, sd
92	1552-53	*	*	11.6	7.8	85.3	SHL-BLK, vf grn, sd
93	1553-54	0.54	0.51	17.1	0.6	87.1	SD-GRY, f grn, shly, arg, w/lam
94	1554-55	0.28	0.32	14.1	3.5	78.7	SD-GRY, f grn, shly, arg, w/lam
95	1555-56	0.49	0.08	6.5	10.8	75.4	SD-GRY, f grn, shly, arg, w/lam
96	1556-57	0.52	0.36	18.9	3.7	79.4	SD-GRY, f grn, shly, arg, w/lam
97	1557-58	0.37	0.03	14.4	19.4	66.7	SD-GRY, f grn, shly, arg, w/lam
98	1558-59	0.73	0.08	15.1	23.2	63.6	SD-GRY, f grn, shly, arg, w/lam
99	1559-60	1.8	1.5	17.6	3.4	80.7	SD-GRY, f grn, shly, arg, w/lam
00	1560-61	0.92	0.07	14.0	7.9	80.0	SD-GRY, f grn, shly, arg, w/lam
01	1561-62	0.43	0.39	17.4	3.4	86.2	SD-DK GRY, f grn, v/shly
02	1562-63	0.06	0.18	16.1	3.1	72.0	SD-GRY, f grn, sl/shl lam, arg
03	1563-64	294	57	16.4	0.6	82.9	SD-GRY, m grn, sl/shly, arg
04	1564-65	596	377	15.2	0.7	82.2	SD-GRY, m grn, sl/shly, arg
05	1565-66	280	16	16.9	0.0	83.4	SD-GRY, m grn, sl/shly, arg
06	1566-67	796	426	17.2	0.0	81.3	SD-GRY, m grn, sl/shly, arg
07	1567-68	179	256	17.7	6.8	70.1	SD-GRY, m grn, sl/shly, arg
08	1568-69	13	0.08	11.4	9.6	73.7	SD-GRY, f grn, shl lam, arg
09	1569-70	0.03	<0.01	12.7	5.5	79.5	SD-GRY, f grn, shl lam, arg
10	1570-71	*	0.02	15.8	20.9	47.5	SD-GRY, f grn, v/shly

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OIL CON. COM.

DIST. 3

NOTE:
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Petroleum Reservoir Engineering

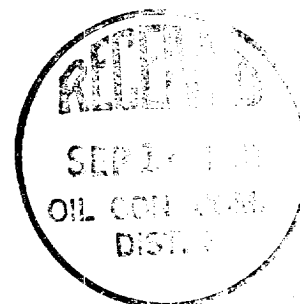
DALLAS, TEXAS

Company <u>DAKOTA RESOURCES, INC.</u>	Formation <u>Hosbah</u>	Page <u>4</u> of <u>4</u>
Well <u>Santa Fe Pacific 28 No. 12</u>	Cores <u>Dia. Conv. 4"</u>	File <u>RP-3-3131</u>
Field <u>Wildcat</u>	Drilling Fluid <u>W.B. Gel</u>	Date Report <u>9-10-81</u>
County <u>McKinley</u> State <u>N.M.</u>	Elevation <u>7084</u> GL	Analysts <u>GG:DS</u>
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		HORIZONTAL	VERTICAL		OIL % PORE	TOTAL WATER % PORE	
111	1571-72	47	6.9	18.1	1.1	77.2	SD-GRY,m grn,sl/shly,arg
112	1572-73	148	52	16.3	0.6	82.8	SD-GRY,m grn,sl/shly,arg
113	1573-74	312	200	17.1	1.2	85.4	SD-GRY,m grn,sl/shly,arg
114	1574-75	260	117	16.8	0.0	85.1	SD-GRY,m grn,sl/shly,arg
115	1575-76	77	23	16.9	0.0	83.4	SD-GRY,m grn,sl/shly,arg
116	1576-77	27	3.2	16.2	0.6	80.9	SD-GRY,f grn,shl lam,arg
117	1577-78	7.2	0.24	14.4	7.6	78.5	SD-GRY,f grn,shl lam,arg
118	1578-79	0.75	0.05	15.2	0.7	84.9	SD-GRY,f grn,shl lam,arg
119	1579-80	0.13	0.01	12.2	5.7	79.5	SD-GRY,f grn,shl lam,arg
120	1580-81	*	*	6.9	10.1	76.8	SD-DK-GRY,f grn,v/shly



* SAMPLE UNSUITABLE FOR ANALYSIS
 ** FRACTURE PERMEABILITY
 arg ARGILLACEOUS
 R RUBBLE
 s/ SLIGHTLY
 w/ WITH
 v/ VERY

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