

15-151-22105

36-29s-14w

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BIG J CONSULTING

JEROLD E. JESPERSEN

PETROLEUM GEOLOGIST

P.O. Box 16418

WICHITA, KS 67216

Bus: (316) 267-6248

Res: (316) 684-5074

Mob: (316) 264-7772

GEOLOGICAL REPORT

Olympic PETROLEUM COMPANY

#1 TAYLOR INVESTMENTS

N/2 SW/4 SW/4 SW/4

SECTION 36-T29S-R14W

PRATT COUNTY, KANSAS

API#15-151-22105

Olympic Petroleum Company
Taylor Investments #1

J.E. Jespersen
Page 1

September 27, 1993

Olympic Petroleum Company

Taylor Investments #1
330' FWL and 500' FSL
Section 36-T29S-R14W
Pratt County, Kansas

Field:	Clara
Elevations:	1965 Kelly Bushing 1962 Derrick Floor 1960 Ground Level
Wellsite Geologist:	J.E. Jespersen
Contractor:	Allen Drilling Rig #1
Commenced:	September 10, 1993
Completed:	September 21, 1993
Rotary Total Depth:	4530 Feet
Log Total Depth:	4532 Feet
Surface Casing:	10 3/4 @ 278' - 8 5/8" @ 1050'
Production Casing:	5 1/2" @ 4529'
Electrical Surveys:	Wire Tech: Guard Log w/Compensated Density Neutron
Hole Size:	14 3/4", surface to 280' - 9 7/8", 280 to 1054' 7 7/8" from 1054 to 4530' (RTD)
General Information:	Samples saved from 3600 to 4530' (RTD). Drilling time kept from 700 to 785' and 3600 to 4530' (RTD). Samples examined from 3600 to 4530' (RTD). Drilling supervised from 3685 feet to RTD. Mud up at 3600'. Mud type, Chemical.

Formation	LOG TOPS	SAMPLE TOPS	Structural Comparison
	Top / Datum	Top / Datum	
T/Anhydrite	778 + 1187	774 + 1191	
Heebner	3782 - 1817	3785 - 1820	5' Low
Douglas Shale	3826 - 1861	3828 - 1863	13' Low
Brown Lime	3960 - 1995	3963 - 1998	5' Low
Lansing	3976 - 2011	3979 - 2014	5' Low
B/Kansas City	4345 - 2380	4347 - 2381	6' Low
Kinderhook	4378 - 2413	4385 - 2420	2' Low
Viola	4408 - 2443	4414 - 2449	15' High
Simpson Shale	4446 - 2481	4446 - 2481	11' High
Simpson Sand	4457 - 2492	4461 - 2496	10' High
Arbuckle	NOT REACHED		
Total Depth	4532 - 2567	4530 - 2565	

Reference Well or Structural Comparison: Rine Drilling Company #1 Earlywine,
NW/4 SW/4 SW/4, Section 36-T29S-R14W.

Note: Pipe strap at 4145 feet was 1.11' short to the board.

Chronological History

DAILY PENETRATION

<u>Date</u>	<u>Depth</u>	<u>R e m a r k s</u>
9/10/93	0	Spud 11:45. Drilled 14 3/4" surface hole. Set 10 3/4" casing at 278' with 220 sacks. Plug down 4:00 PM. Drilled plug 12:00 AM, drilling 9 3/4" hole under surface. Anyydrite 774 to 779. Lost circulation at 785 feet. Mud check at 784 feet. Viscosity 33, Mud Weight 9.1, 1# LCM 12#/bbl.
9/11/93	785	Trip out of hole 8 1/2 stands. Mix mud in Premix tank. 45 hulls, 6 mud seal, 10 gel, 1 lime. Pumped Premix downhole 80 bbls in 60 min. No returns. Fill and mix Premix tank as before. Shut down for 8 hours. 9:45 AM to 5:45 PM. Go to bottom with bit. Drill with reduced weight and pump pressure while pumping in Premix tank, 6:00 PM to 6:30 PM. Drilled 18' (785 to 803'). Pumped in 280 bbls drilling mud (Vis 33, MW 9.1, LCM 15#/bbl. No returns.

Chronological History (Cont'd)

Fluid reached 4 stands from surface.
6:30 to 7:00 PM pull bit out of hole.
Soak hole 10 hours (7:00 PM to 5:00 AM).
Mixed 240 bbls mud (Vis 33, MW 8.8, LCM
30#/bbl). Premix tank 80 bbls fluid.
Each tank consisted of 45 hulls, 5 mud
seal, 20 gel. 4:30 AM to 5:15 AM go in
hole with bit (13 stands). 5:15 AM to
5:50 AM drilled 31 feet (803 to 835').
Pumped in hole 240 bbls drilling fluid.
No returns. Come out of hole with bit.
Fluid 40 feet from surface.

9/12/93	835	Soak hole from 7:00 AM to 4:30 PM. Mixed 3 Premix tanks of mud (45 hulls, 5 mud seal, 20 gel). Drilled 4:35 to 5:05 PM. Drilled 30 feet (835 to 865'). Pumped down 240 bbls drilling fluid (Vis 33, MW 8.8, LCM 24#/bbl). No returns. Trip out of hole with bit. Fluid down 195 feet from surface.
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Chronological History (Cont'd)

Dry-drilled from 5:50 PM to 7:00 PM;
drilled 175 feet from 865 to 1040 feet.
Shut down 10 hours to soak hole. Mixed 3
Premix tanks 240 bbls drilling fluid (Vis
33, MW 8.8, LCM 24#/bbl). Trip in hole
4:00 AM to 4:45 AM - 9/13/93 on bottom -
started drilling at 4:45 AM. Drilled 14
feet 4:45 to 5:10 AM

Pumped downhole 240 bbls drilling fluid.
(Vis 33, MW 8.8, LCM 24#/Bbl) No returns.
Fluid down 150 feet from surface at 6:00
AM. TD 1054'. Ordered 8 5/8" casing.

Chronological History (Cont'd)

9/13/93	1040'	7:00 AM Waiting on casing.
	1054'	Total depth @ 8:45 AM - Casing on location. 8:45-9:45 unloaded casing and tally. 9:45-11:00 Run 25 joints of 8 5/8" casing (1043 feet) set at 1050 feet. Hit bridge with casing 834 to 925 feet. 11:00-11:30 Cementing casing with 150 sacks Class "A" and 3% cc. Plug down 11:30 AM. 11:30-7:30 Waiting on cement. 7:30 PM drilled out plug.
9/14	1847'	Drilling
9/15	2697	Drilling
9/16	3381	Drilling
9/17	3977	<u>DRILLSTEM TEST #1 4105-4145</u>
9/18	4145	<u>DRILLSTEM TEST #2 4155-4175</u>
9/19	4264	Drilling
9/20	4485	<u>DRILLSTEM TEST #3 4450-4485</u>
9/21	4530	<u>RTD 6:00 PM 9/20/93</u> - Ran Wiretech Gamma Ray - Neutron - Guard Log with Compensated Density-Neutron Log. Ran 5 1/2" production casing set at 4529 feet. Plug down 2:00 PM 9/21/93.

Chronological History (Cont'd)

 B I T R E C O R D

No.	Size	Make	Type	Depth Out	Feet	Hours
1	14 3/4	---	RT	280	280	3/4
2	9 7/8	---	RR	1054	774	8
3	7 7/8	Reed	HP52	4530	3476	102 1/4

 M U D R E C O R D

(Mud-Co)

Chk.	Depth	WT	Vis	Fil	Ph	PV	YP	Gels	Chl	Solids	#/BBL	LCM
1	280	-----W A T E R-----										
2	785	9.0	33									12#
3	835	8.8	33	Dry-Drilled								24#
4	1040	8.8	33	Dry-Drilled								24#
5	1054	-----WAITING ON CEMENT-----										
6	2890	9.6	28	nc	7.0	-/-	-/-	-/-	8,000	4.5		
7	3610	8.7	43	10.4	11.0	12	16	8/28	6,000	2.5		1/2#
8	4015	9.0	47	12.0	10.0	13	19	10/30	7,000	4.5		1#
9	4145	9.1	43	12.0	10.0	10	15	12/28	6,000	5.4		1/2#
10	4315	9.2	46	10.4	10.0	12	20	15/34	9,000	5.9		1#
11	4485	9.3	47	12.0	10.0	12	20	14/32	9,000	6.5		1#

Chronological History (Cont'd)

D R I L L S T E M T E S T S
(Ricketts Testing)

No.	Interval	IFP	ISIP	FFP	FSIP	HH-FHH
1	4105-4145 Recovered:	54-54/15 405' Gas in pipe 75' Oil & Gas Cut Watery Mud 60' Slightly Oil & Gas Cut Water 360' Saltwater (80,000 ppm chlorides)	1421/45	119-227/60	1397/45	1944-1933
2	4155-4175 Recovered:	21-21/15 1980' Gas in pipe 25' Clean gassy oil 20' Oil & Gas Cut Watery Mud 55' Slightly Oil Cut Saltwater	1336/45	27-32/60	1188/45	1955-1944
3	4450-4485 Recovered:	346-367/15 Gas to surface in 14 minutes (TSTM) 960' Muddy Gassy Oil and Gassy Oil 1080' Saltwater Deviation Surveys: 280 1/4 degree 772 1/2 degree 1054 3/4 degree 1549 3/4 degree 2048 3/4 degree 2543 3/4 degree 3075 3/4 degree 3574 1/2 degree 4041 1 degree	1008/45	529-827/60	1008/45	2170-2159

Geological Formations and Porosity Zones:

A detailed lithological log was maintained from 3600 feet to 4530 feet (RTD). The following are formation tops, recoveries of drill stem tests, descriptions of reservoirs containing shows of oil and descriptions of reservoirs felt pertinent to the accumulation of hydrocarbons in the area. The depths are interpolated from drillers measurements and measured from the kelly bushing.

T/Anhydrite	Sample	774 + 1191
	E-Log	778 + 1187

B/Anhydrite	Sample	779 + 1186
	E-Log	782 + 1183

Lost circulation at 785 feet. Could not get returns.

Dry-drilled to 1054 feet.

Set 8 5/8" casing at 1050 feet with 150 sacks.

SL 3603-3607	Limestone, light buff, fine crystalline, fossiliferous,
EL 3606-3614	sucrosic. Good interfossiliferous porosity. No shows.
	Judged this zone to be of no commercial value.

SL 3610-3618	Limestone, light buff, fine crystalline, fossiliferous.
EL 3606-3614	Fair interfossiliferous porosity. No shows.

Geological Formations and Porosity Zones (Cont'd)

SL 3633-3667	Limestone, white to cream, fine crystalline, fossiliferous, sucrosic. Good intercrystalline porosity. No shows. Judged this zone to be of no commercial value.
EL 3634-3672	
SL 3698-3706	Limestone, light buff, fine crystalline, fossiliferous. Fair interfossiliferous porosity. No shows. Judged this zone to be of no commercial value.
EL 3698-3702	
SL 3729-3745	Limestone, white to light buff. Fine crystalline, fossiliferous, slightly chalky. Fair interfossiliferous and intergranular porosity. No shows. Judged this zone to be of no commercial value.
EL 3728-3736	
 Heebner	
	Sample 3785 -1820
	E-Log 3782 -1817
 Toronto	
	Sample 3800 -1835
	E-Log 3802 -1837
SL 3804-3812	Limestone, grey to buff, fine crystalline, fossiliferous. Poor to fair intercrystalline porosity. No shows. Judged this zone to be of no commercial value.
EL 3804-3810	
 Douglas Shale	
	Sample 3828 -1863
	E-Log 3826 -1861
 Brown Lime	
	Sample 3963 -1998
	E-Log 3960 -1995
 Lansing	
	Sample 3979 -2014
	E-Log 3976 -2011

Geological Formations and Porosity Zone (Cont'd)

SL 3984-3992	Limestone, buff to light buff, fine to very fine crystalline,
EL 3978-3986	fossiliferous, oolitic. Poor interfossiliferous and
	interoolitic porosity. No shows.
	Judged this zone to be of no commercial value.
SL 4019-4026	Limestone, light buff, fine crystalline, fossiliferous.
EL 4013-4026	Poor to fair intercrystalline and interfossiliferous
	porosity. <i>No free oil.</i> Very rare inert oil stain; very
	faint odor. No fluorescence.
	Judged this zone to be of no commercial value.
SL 4045-4054	Limestone, light buff, fine crystalline, very finely
EL 4044-4050	sucrosic. Poor to fair intercrystalline porosity.
	No shows. No odor. Good mineral fluorescence.
	Judged this zone to be of no commercial value.
SL 4087-4091	Limestone, light buff, fine crystalline, fossiliferous.
EL 4085-4088	Fair interfossiliferous porosity. No shows. No odor. No
	fluorescence.
	Judged this zone to be of no commercial value.
SL 4108-4116	Limestone, white to light buff, fine crystalline, oolitic,
EL 4108-4112	fossiliferous. Fair interoolitic porosity. <i>No show free</i>
	<i>oil.</i> Rare spotted light brown oil stain; fair odor. Good
	fluorescence. Tested this zone. (See DST #1) Due to the
	test results, this zone is not recommended for any further
	testing.
SL 4126-4142	Limestone, cream to light buff, fine crystalline,
EL 4124-4133	fossiliferous, sucrosic, good intercrystalline porosity.
	<i>Very rare show light brown gassy free oil.</i> Rare show gas
	bubbles in wet sample. Good odor, good fluorescence. Tested
	this zone. (See DST #1) Due to the test results, this zone
	is not recommended for any further testing.

Geological Formations and Porosity Zones (Cont'd)

DRILLSTEM TEST #1

Strong blow throughout.
Off bottom bucket in 3 min.
Recovered:

4105-4145

405' Gas in pipe
75' Oil/Gas cut mud
(5%G,14%O,26%W,55%M)
60' Slightly oil/gas cut
water (5%G,8%O,87%W)
360' Saltwater(Chl 80,000)
54# to 54# / 15 minutes
1421# / 45 minutes
119# to 227# / 60 minutes
1379# / 45 minutes
1944#
1933#
122 degrees

Initial Flow Pressures:
Initial Shut-In Pressure:
Final Flow Pressures:
Final Shut-In Pressure:
Initial Hydrostatic Pressure:
Final Hydrostatic Pressure:
Bottomhole Pressure:

SL 4161-4165
EL 4155-4158

Limestone, light grey, fine crystalline, fossiliferous, oolitic. Fair to good interfossiliferous interoolitic porosity. *Fair show brown live free oil.* Spotted to saturated brown live oil stain; good odor. Good fluorescence. Tested this zone. (See DST #2) Due to the log calculations and results of the test, recommend this zone be perforated and further tested.

SL 4170-4178
EL 4170-4175

Limestone, light grey, fine crystalline, fossiliferous, oolitic, fair to good interfossiliferous and interoolitic porosity. *Fair show brown live free oil.* Spotted to saturated brown live oil stain; good odor, good fluorescence. Tested this zone. (See DST #2)

Geolgoical Formations and Porosity Zones (Cont'd)

DRILLSTEM TEST #2

Strong blow throughout.
Off bottom bucket in 1 min.
Recovered:

4155-4175

1980' Gas in pipe
25' Clean gassy oil
20' Oil/Gas cut wtry mud
(8%G,10%O,19%W,63%M)
55' Slightly oil specked
water (trace of oil,
remainder, water)
Chlorides 77,000 ppm
21# to 21# / 15 minutes
1336# / 45 minutes
27# to 32# / 60 minutes
1955#
1944#
125 degrees

Initial Flow Pressures:
Initial Shut-in Pressure:
Final Flow Pressures:
Initial Hydrostatic Pressure:
Final Hydrostatic Pressure:
Bottomhole Temperature:

SL 4180-4184
(No Zone)

Limestone, light buff, fine crystalline, fossiliferous, poor
interfossiliferous porosity. No shows. No odor.
No fluorescence.
Judged this zone to be of no commercial value.

SL 4189-4198
(No Zone)

Limestone, light buff, fine crystalline, oolitic. Poor to
fair interoolitic porosity. No shows. No odor.
No fluorescence.
Judged this zone to be of no commercial value.

SL 4219-4228
EL 4216-4230

Limestone, light buff, fine crystalline, oolitic, cherty.
Poor to fair interoolitic and intercrystalline porosity.
No shows. No odor. No fluorescence.
Judged this zone to be of no commercial value.

Geological Formations and Porosity Zones (Cont'd)

SL 4250-4258	Limestone, white to cream, fine crystalline, fossiliferous, chalky. Fair interfossiliferous and intergranular porosity. No free oil. Very rare spotted light brown oil stain. No odor. Dull fluorescence. Judged this zone to be of no commercial value.			
EL 4250-4260				
SL 4292-4298	Limestone, light buff, fine crystalline, oolitic. Poor to fair interoolitic porosity. No shows. No odor. No fluorescence. Judged this zone to be of no commercial value.			
EL 4288-4294				
SL 4301-4306	Limestone, grey to light buff, fine crystalline, oolitic, cherty. Poor to fair interoolitic porosity. No free oil. Rare spotted brown oil stain. No odor. Good fluorescence. Judged this zone to be of no commercial value.			
EL 4298-4304				
	Base Kansas City	Sample	4347	-2382
		E-Log	4378	-2413
	Kinderhook	Sample	4385	-2420
		E-Log	4378	-2413
	Viola	Sample	4414	-2449
		E-Log	4408	-2443
SL 4414-4426	Limestone, buff to grey, fine crystalline, fossiliferous, cherty, dense. Poor interfossiliferous porosity. No free oil. Fair to good show inert oil stain. No fluorescence. No odor. Judged this zone to be of no commercial value.			
EL 4408-4420				
SL 4430-4437	Limestone, grey, fine crystalline, fossiliferous, cherty, dense. Poor intercrystalline and interfossiliferous porosity. No free oil. Fair show inert oil stain. Good fluorescence. No odor. Judged this zone to be of no commercial value.			
EL 4426-4433				

Geological Formations and Porosity Zones (Cont'd)

Simpson Shale	Sample	4446	-2481
	E-Log	4446	-2481
Simpson Sand	Sample	4461	-2496
	E-Log	4457	-2492

SL 4461-4478 Sandstone, light buff, fine subround quartz grains, clean,
EL 4457-4472 very friable. Good intergranular porosity. **No free oil.**
Saturated light brown oil stain; fair odor, good
fluorescence. Tested this zone. (See DST #3) Due to the
test results recommend this zone be perforated and further
tested.

SL 4478-4484 Sandstone, light buff, fine subround quartz grains, clean,
EL 4478-4484 very friable. Good intergranular porosity. **No show free**
oil. Saturated light brown oil stain; good odor, spotted
fluorescence. Tested this zone along with the zone above.
(See DST #3) Due to the log calculations it is believed
that most of the water in t he test came from this zone.
This zone is not recommended for any further testing.

DRILLSTEM TEST #3

4450-4485

Strong blow throughout.
Gas to surface in 14 minutes.
Recovered:

Gas to small to measure.
960' Muddy Gassy oil and
Gassy oil
1080' Saltwater
(Chl 63,000 ppm)
346# to 367# / 15 minutes
1008# / 45 minutes
529# to 827# / 60 minutes
1008# / 45 minutes
2170#
2159#
125 degrees

Initial Flow Pressures:
Initial Shut-In Pressure:
Final Flow Pressures:
Final Shut-In Pressure:
Initial Hydrostatic Pressure:
Final Hydrostatic Pressure:
Bottomhole Temperature:

Rotary Total Depth 4530 -2565

Log Total Depth 4532 -2567

Run WireTech Gamma Ray-Neutron-Guard Log with Compensated
Density Neutron Log.

Run 5 1/2" casing set at 4529 feet with 150 sacks.

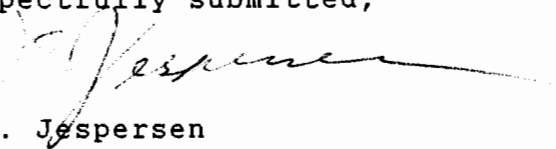
Remarks and Recommendations

Recommend casing be run and set at 4529 feet.

Perforate the Simpson Sand 4559 to 4561 feet (using electric log depths). This sand ran 10 feet structurally higher than the #1 Earlywine, the north offset, and 51 feet higher than the #3 Earlywine, the southeast offset.

Prior to abandonment of the well, the Lansing-Kansas City Zone 4155 to 4158 should be perforated and further tested. This zone was covered in Drillstem Test #2.

Respectfully submitted,


J.E. Jespersen